International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 21s, 2025
https://theaspd.com/index.php

The Role of Artificial Intelligence in Developing Strategic Management Functions Through The Strategic Management Process

Hanan Hasan Nazzal[1]
[1]Strategic Management, PhD, Faculty of Graduate Studies, Arab American University
The purpose of this publication is to fulfill the requirements for obtaining a PhD degree

Abstract
This study investigates the role of Artificial Intelligence (AI) in developing Strategic Management Functions (SMFs) through the Strategic Management Process (SMP). Drawing upon a theoretical framework integrating AI technologies (Machine Learning, Expert Systems, Big Data Analytics) and core strategic functions (planning, organizing, leading, and controlling), the research empirically examines how AI influences SMP (formulation, implementation, and evaluation) and, in turn, enhances SMFs. Data were analyzed using Structural Equation Modeling (SEM). The findings confirm that AI has a significant direct and indirect impact on the development of SMFs, mediated by the SMP. The model explains 84.1% of the variance in SMP and 71.3% in SMFs. This study contributes to strategic management literature by empirically validating the mediating role of SMP in AI-driven organizational development. Practical implications highlight the importance of integrating AI across strategy and operations to build dynamic, adaptive, and intelligent enterprises.
Keywords: *Artificial intelligence, machine learning, big data analytics, expert systems, strategic management.*

1. INTRODUCTION

The world has recently witnessed significant developments in digital technology tools. Artificial intelligence is one of the most prominent tools that has brought about change and impact in the field of management, particularly strategic management. Companies are facing many complex and uncertain situations, requiring them to respond quickly to changes occurring in the work environment and to be flexible and quick in making decisions based on qualitative and quantitative analysis characterized by high accuracy. (Peretz-Andersson et al., 2024).

Strategic management Strategic management as a scientific methodology and approach implies explanation, prediction, and assessment, a distinction that helps in the construction and comparison of theories of strategic management, including theories of individual strategy and organizational strategy. The potential disturbances or threats in the neighboring environment and opportunities have also to be taken into account. This system also involves the analysis of internal and external vision, goal setting, resource planning, and performance monitoring to permit flexibility and rapid market adaptability. (Sinnaiah et al., 2023).

One of the basics of corporate administrative processes is policy administration and management, which consists of three core processes, namely: policy formulation, policy implementation policy evaluation (Phiri et al., 2019). Artificial intelligence (AI), which is the backbone behind the above-mentioned functions, serves as a big data analyzer and provides intelligent solutions and enhancing the effectiveness and accuracy of a decision-making process. (Saha et al., 2023). The objective of this study is to concentrate on the impact of AI in its dimensions (e.g., machine learning, data analysis, expert systems) on the development of three strategic management functions (strategy formulation, strategy implementation, strategy evaluation) in Palestinian companies.

Organizations are being forced in today's global business environment to make high-stakes, time-sensitive, and information-based strategic choices. This is doubly applicable for economies-in-transition like Palestine, where businesses face a combination of recruitment problems, political instability, a shortage of the latest technology, and financial constraints. Strategic management Functions: Strategy formulation, implementation, and evaluation represent probably the most important strategic management functions because through them the enterprise adapts itself to its environment, allocates resources, integrates systems integration and team building, and manages an ongoing audit of internal and external factors.

Yet, most firms cannot sustain the flexibility and timeliness of their strategic processes as a result of the use of out-of-date tools and an inadequate linking of advanced technological systems. Artificial Intelligence (AI), its subdomains such as machine learning (ML), big data analytics (BDA), and expert systems, hold promising solutions to augment these strategic functions. Notwithstanding the worldwide trend toward adoption of AI in strategic management, empirical research in the Palestinian context is still in its infancy.

Local firms, especially in critical industries like telecommunications, banking, education, and energy, are still grappling with how to meaningfully incorporate AI technologies into their decision-making systems. Lack of clear knowledge of the degree to which AI impacts each strategic management component hampers both scholarly research and pragmatic development. The main issue that this study deals with is the limited empirical knowledge of how AI—through its different technologies—supports the development and efficacy of strategic management functions in Palestinian firms.

The study is important both theoretically and practically. Theoretically, the research adds to the emerging literature at the intersection of strategic management and artificial intelligence by using the framework of the Resource-Based View (RBV). Academically, the research contributes by empirically investigating AI technologies (machine learning, big data analytics, and expert systems) as strategic organizational assets that drive core strategic management functions. This way, the research answers recent calls in the academy to situate digital transformation theories in emerging economies as well as in risky business environments like Palestine. In practice, the research provides useful recommendations for Palestinian public and private sector decision-makers and strategists.

By determining which components of AI work best to support formulating, implementing, and evaluating strategies, the research can inform companies how to best invest in digital infrastructure, employee development, and data governance. It is especially important for firms in dynamic industries such as banking, energy, and education sectors, where operational efficiency and strategic agility ensure survival and success. Moreover, the research notes the need to create a climate of innovation and digital readiness in local companies in order to compete more successfully in regional and international markets. While illuminating the quantifiable contribution of AI to strategic decision-making processes, the research not only fills the gap in the academy but also acts as a roadmap for Palestinian institutions looking to harness intelligent technologies to achieve sustainable competitive advantage.

2. LITERATURE REVIEW

2.1Artificial Intelligence

Artificial Intelligence, widely abbreviated as AI, has increasingly been booming across sectors, transforming the functions of strategic management. The idea of artificial intelligence may be explained as a mechanism that simulates human intelligence; hence, machines or computer systems capable of learning, reasoning, solving problems, and making decisions (Russell & Norvig, 2021). As organizations find themselves dealing with complexity in their environment, the inclusion of AI in strategic processes facilitates enhanced capabilities in data processing, predictive analytics, and decision-making, interacting with various inputs relevant to strategy planning and implementation.

Strategic management, when viewed through the lens of traditional phases of strategic management processes (SMP) - strategy formulation, strategy implementation, and strategy evaluation - offers an insight into the role AI undertakes (Davenport & Ronanki, 2018). AI tools indeed assist in each of the stages and increase the pace and accuracy of information, and hence the level of decisions that strategic decision-makers make. Stage formulation identifies opportunities and threats in the environment where AI has the potential, assisted by advanced analytics and machine learning algorithms. AI can assist managers by enabling them to look beyond large datasets comprising market trends, customer behavior, and competitive movements to recognize even complex patterns and infer future scenarios (Shrestha et al., 2019). For gaining pertinent situational insights from unstructured data such as social media, news, and customer reviews, an NLP application is helpful (Chatterjee et al., 2021).

AI helps to implement the strategic plan through increased operational efficiency and alignment of strategic plans with actual organizational actions. Intelligent automation systems such as RPA reduce operational activities, thereby releasing managerial resources for higher-level strategic execution (van der Aalst, 2021). KPI monitoring in real-time can alert managers to strategic deviations, allowing for alarming, corrective measures to be taken. During the strategy evaluation period, perhaps AI makes its presence felt. AI-powered software can generate dynamic performance dashboards and establish a direct feedback loop, thus assuring continuous assessment of strategies and their prior recalibration (Brynjolfsson & McAfee, 2017). Predictive analytics models forecast the outcome of strategic decisions, thus allowing firms to institute a revision process for their strategies in anticipation. Such iterative learning allows for agility and responsiveness when that is essential in a volatile environment. Moreover, AI supports strategic intelligence: a crucial input into all strategic management functions. Actionable insights for implementation in decision-making can be unearthed via data mining and knowledge discovery, enhancing strategic foresight (reaching far ahead of scarce resources) and reducing uncertainty at least to some extent (Duan et al., 2019). AI-Wrapped big data analytics platforms can equip companies with strategic capabilities that, in the absence of such integration, were not feasible for consideration owing to the magnitude and complexity of data

Apart from technical functions, changes brought about by AI are being conferred upon human managers in strategic contexts. To some scholars, AI must be regarded as neither a mere tool nor a destroyer of traditional decision-making mechanisms; rather stands either in support of or in competition with these systems (Haefner et al., 2021). This invites us to consider how decision-making may evolve from human-human collaboration into human-AI collaboration. While AI will never share ethical judgments, contextual knowledge, and innovative ingenuity with its human counterparts, it may outperform humans in terms of computation speed and pattern recognition. , therefore, the balancing act of complementary strengths in strategic management under AI is placed between the human and the technology (Jarrahi, 2018).

Yet, the introduction of AI in strategic management is plagued with difficulties. Resistance to, and readiness for AI within organizations, data quality, and ethics may all serve to block its successful integration (Bughin et al., 2019). Hence, organizations must build the necessary infrastructure to have AI support strategic management functions, reskill and train their people for the new AI roles, and enforce transparency as well as accountability in the decision-making algorithms..

The relationship between AI and strategic alignment has further attracted the interest of researchers. In strategic alignment, there is complete coherence between business objectives and the technology infrastructure supporting those objectives. AI can be an enabler and a driver of strategic alignment by linking IT capabilities with changing strategic objectives (Tallon, 2007). Properly aligned AI systems with strategic intents can accelerate digital transformation and provide a competitive advantage. Recent empirical literature further stresses the importance of AI for strategic capabilities. For example, Wamba-Taguimdje et al. (2020) argued that AI-enabled analytics provide better decision-making capabilities and innovation performance, which are critical to strategic competitiveness. Likewise, Ghasemaghaei (2019) found that organizations that rely on AI for decision-making derive higher business value due to an enhanced speed and accuracy of decision-making..

2.2Strategic Management Process

Strategic management lies at the heart of the organization and centers upon creating an analytical environment for opportunities and threats, developing strategy, planning implementation, and monitoring results. The process was customarily divided into three primary stages: formulation, implementation, and evaluation. These stages enable organizations to align resources, capabilities, and objectives in the pursuit of a sustainable competitive advantage (Grant, 2021). The current digital era embraces an AI-driven movement where strategies themselves have gone through a paradigm change in terms of smart, fast, and recognized-on-the-fly type of decisions.

In the formulation phase, strategists study internal and external environments to create long-term strategies aligned with their mission. This mainly consisted of manual data collection and analysis, managerial intuition, and scenario planning. But this has changed with the onset of AI, especially machine learning and NLP. These tools can keep track of and synthesize huge volumes of data, structured and unstructured, across domains-varied data from customer behavior to geopolitical trends-at speeds unimaginable in human terms (Sahu et al., 2023). These tools allow executives to perform SWOT analyses in real-time, spot up-and-coming market opportunities, and model competitive threats with greater precision and accuracy (Kraus et al., 2022). The implementation phase, where strategic intent is translated into initiatives and actions, is also highly supported by AI. Implementation falls short because strategies are not translated into operational capabilities. AI technologies, such as predictive analytics, intelligent automation, and decision support systems, can help to close this gap by allocating resources and managing workflows and employee coordination efficiently (Tortorella et al., 2021). They can keep track of progress, monitor for bottlenecks, and update execution plans in real time. For instance, supply chain AI systems can trigger automatic rerouting of logistics operations due to external disruptions, ensuring maintenance of strategic continuity.

With AI, communication and coordination improve even further, especially in decentralized or hybrid work environments. Intelligent systems can customize dashboards for different levels of the organization to ensure that all stakeholders remain aligned with strategic goals at the apex level (Margherita, 2021). All ensures a smooth flow of strategic information, thus minimizing miscommunication and accelerating implementation with full accuracy. While evaluating strategies, AI is extremely crucial in monitoring performance and collecting insights for strategy recalibration. Traditionally, evaluations were subjected to periodic reports and retrospective data, causing late reactions when underperformance had to be dealt with. AI modifies this by tracking real-time performance using dynamic dashboards and algorithms for anomaly detection. These help management immediately identify the deviation from key performance indicator (KPI) metrics and analyze the reasons for the inefficiencies (Zameer et al., 2022). More importantly, AI is also capable of predicting future performance on the basis of present data trends, which allows strategies to be adjusted proactively, as opposed to reacting afterward.

Recent studies established that organizations that integrate AI into their SMP report higher strategic agility, which is described as the ability to quickly change strategy in response to market dynamic changes (Mikalef et al., 2022). Strategic agility is particularly relevant in today's environment, marked by volatility, where long-term plans mostly have to be iteratively refined. Through data-driven insights, AI empowers managers to continuously optimize their strategies, a capability much needed in uncertain or hypercompetitive contexts. Alignment between AI capabilities and strategic objectives is yet another emerging dimension. Research points out that AI must be affiliated not as a technology but as a core enabler of business strategy; if misaligned, AI initiatives can go to waste, disengage employees, or cause digital transformation initiatives to fail (Feki et al., 2023). Therefore, strategic managers ought to ensure that AI tools are picked and utilized in ways that directly complement the value creation logic of the organization.

Besides operationally induced benefits, AI is reshaping strategic roles and responsibilities. Traditional strategic managers are now expected to be data literate and work alongside data scientists, IT personnel, and other stakeholders to develop AI-based solutions (Aversa et al., 2021). This multidisciplinary collaboration fosters strategies that are more inclusive, informed, and adaptive. However, applying AI to SMP comes with its hurdles, like data privacy issues, algorithmic bias, stringent technological processes, and organizational culture resistance (Nadkarni & Prügl, 2021). Strategic leaders, therefore, must not only overcome technical hurdles but also deal with ethical and organizational ones. To ease such an integration, organizations are implementing AI governance frameworks that would maintain accountability and transparency and ensure that the AI concepts align with corporate values. Such frameworks would include clear-cut rules for data use, risk management standards, and ethical principles for the deployment of AI (Berente et al., 2021). With no governance in place, AI-enabled strategies run the risk of either becoming a black box or straying away from stakeholder expectations.

2.3Developing Strategic Management Function

Strategic management functions refer to the core managerial activities that facilitate the achievement of long-term objectives of organizations. Traditionally, these functions are identified to be planning, organizing, leading, and controlling (POLC), which determine the way strategies are implemented and monitored in an organization (Mintzberg et al., 2021). If these functions are well developed, the strategies are further aided in being well prepared, efficiently implemented, and looked upon for continuous improvement. Nowadays, AI is powering a major transformation in this sphere of managerial activity, giving more edge in decision-making, enhancing prediction capabilities, and promoting operational efficiencies.

Planning, another name for "strategic management function," is supposed to be the most essential one. It is the process involved in setting objectives, predicting expected future conditions, and adopting appropriate courses of action to accomplish conditions that are desired. Nowadays, with the presence of AI algorithms, the strategic planning processes have become much more data-driven and prospective. AI tools such as machine learning algorithms and predictive analytics help carry out scenario analyses, future trend forecasting, and resource allocation (Sahu et al., 2023). Since these systems analyze large volumes of data from many sources-economic indicators, social media sites, market trends, operational standards, etc.-strategists can simulate future states and even evaluate strategic alternatives for their feasibility (Mikalef et al., 2022). Thus, planning becomes more precise and reliable major leap in the reduction of uncertainties-aiding proactive decisions.

Strategizing organization involves structuring resources and activities that must take place in the firm to embrace strategic plans. It is about designing organizational hierarchies and structures of roles and responsibilities, and all resource allocations. Here comes the major role of AI, especially in optimizing organizational design for complex, global, or digital-first firms. AI-enabled platforms such as ERP systems and human resource analytics enable managers to dynamically arrange teams' composition, identify talent gaps, and automate workflows (Tortorella et al., 2021). For such instances, AI will predict which configurations of the team will be more likely to succeed for particular types of projects. It breaks down the silos within the organization, as the data is allowed to flow seamlessly across departments.
Further, AI tools for resource management ensure that the right resources are assigned for implementation in real time, so they are in line with their strategic objectives, where resources may be human, financial, or technical. A Cloud AI system could assess how well the resources are allocated and recommend reallocations due to changed internal or external conditions (Margherita & Braccini, 2023).
Leading, or leadership, involves motivating, directing, and influencing people toward strategic ends. Leadership, therefore, has been deeply affected by AI in terms of impact on decision-making and employee engagement. Leadership dashboards powered by AI offer real-time data on employee sentiment, engagement levels, and productivity trends to leaders, guiding their timely and targeted interventions (Wamba-Taguimdje et al., 2021). In addition, AI-based communication platforms like chatbots and intelligent assistants can assist in leadership by, for instance, automating mundane interactions, thereby enabling leaders to give full attention to high-strategic initiatives. The new studies also highlight augmented leadership, in which human leaders and AI systems collaborate in co-creating decisions for greater inclusiveness and in better meeting the needs of employees (Haefner et al., 2021). The flip side of this, however, would be concerns about trust and transparency, as AI-based recommendations must be explainable and ethically justifiable.
Evaluation consists of controlling for performance, verifying the results, and initiating corrective action if necessary. Traditionally, based on static reports and lagging indicators, this function has changed radically through the application of AI for real-time monitoring and adaptive control systems. AI allows for dynamic performance appraisal through dashboards supported by key performance indicators (KPIs), predictive metrics, and anomaly detection algorithms (Zameer et al., 2022). For example, AI can signal the managers in instances of any deviations from the expected financial performance or customer satisfaction benchmarks, along with suggestions for the actions to be taken to correct things. These systems help enhance responsiveness while also limiting human bias and errors. Furthermore, feedback loops powered by AI enable organizations to learn from failures and make adjustments much faster than those permitted by traditional control systems (Feki et al., 2023).
Strategic management functions enhanced through AI include the building of organizational capabilities, such as data governance, workforce upskilling, and AI ethics. It's important to promote data literacy among managers so those managers can interpret AI-generated insights and assimilate them operationally into decision-making (Berente et al., 2021); on the other hand, AI implementation has to be in strategic alignment with the overall direction of the firm, wherein subtle wiith the involvement of senior management and strategic managers should be sought.
AI's role in assisting the development of these processes extends far beyond mere automation; it embeds new cognitive capabilities into an organization. These include pattern recognition, language understanding, and autonomous decision-making, complementing human intuition and experience (Aversa et al., 2021). When strategically embedded, AI allows managers to transcend operational efficiency toward strategic innovation, and organizations compete and create value. There is no question that AI benefits strategic management function development; however, several challenges must be considered. Ethical dilemmas, like data privacy, algorithmic bias, and accountability for decisions, remain paramount concerns (Nadkarni & Prugl, 2021). Besides, resistance might develop against AI adoption, where employees feel threatened by the possible loss of jobs, while some managers might consider it too risky to forsake the conventional wisdom for algorithmic suggestions. For AI to gain acceptance, it must be accompanied by cultivating a culture of digital trust, transparency, and collaboration.

3. Hypothesis Development

3.1Role of Artificial Intelligence and Developing Strategic Management Functions

Strategic management functions—planning, organizing, leading, and controlling (POLC)—constitute the backbone of organizations that operate in pursuit of long-term objectives. These functions will guide the development, implementation, monitoring, and adjustment of a strategy, interfacing with ever-changing environments. The emergence of Artificial Intelligence (AI) has transformed management processes into data-driven, timely, and efficient approaches.

In the planning function, AI can be applied to data analysis, forecasting, and scenario modeling. While planning might have been dependent in the past on historical data and managerial practices, which often drifted into subjective or late decisions, AI will now help to put an end to this. Contrary to humans with differing decision-making capabilities, machine learning algorithms allow a software program to analyze very large data sets in the shortest time and derive meaningful insight. For example, AI can be used to forecast consumer demand trends or simulate market conditions, enabling strategic planners to make better decisions in a timely way (Dwivedi et al., 2021).

Similarly, those businesses that use advanced AI tools can plan more efficiently in the planning function. Intelligent systems act as dynamic resource allocators by continually tracking operational demand and recommending changes to resource planning in real time. AI-powered platforms, such as human capital analytics or intelligent ERPs, optimize team composition, predict skills gaps, and automate mundane administrative tasks (Margherita & Braccini, 2023). Thus, coordination is enhanced, waste is eliminated, and project duration is shaved off.

With that in mind, AI highly influences leading functions by reinforcing leadership effectiveness. Through real-time behavioral and engagement analytics, AI tools help managers track employee sentiment, identify burnout risks, and fine-tune communication strategies that best fit each individual. This contributes to the development of a more responsive and empathetic leadership style that is aligned with organizational goals. Hence, AI tools for communication and decision support systems help seamless interaction across layers, promoting transparency and speeding up decision-making (Jha et al., 2023).

In the controlling function, AI makes it possible for the organization to track key performance indicators (KPIs) incessantly and to react quickly to any anomaly. Traditional control systems would rely on periodic reports, whereas AI now enables real-time dashboards and predictive alerts. An algorithm, for instance, might recommend corrective actions when it detects some abnormal financial trends or inefficiencies in operations, thus being able to take steps much earlier on behalf of risk management when the execution of operations is aligned with strategic intent (Popovič et al., 2022).

Indeed, AI operates at two levels: that of task automation and that of augmented managerial decision-making. AI enriches the strategic manager's perspective of internal operations and external environments, enhancing the quality of managerial decisions. Kraus et al. (2023) assert that intelligent automation, decision intelligence, and other related AI capabilities have a positive effect on managerial efficiency, innovation, and agility.

However, the integration of AI into strategic functions also demands careful consideration of organizational readiness, ethical implications, and workforce skills. Organizations must invest in digital infrastructure, develop governance frameworks, and promote data literacy among managers to fully leverage AI's potential. Without such foundations, the introduction of AI may result in fragmented processes or resistance from employees concerned about automation and job security (García-Murillo & Annabi, 2022).

Hypothesis H1: Artificial Intelligence has a positive impact on the development of strategic management functions.

3.2Role of Artificial Intelligence and Strategic Management Process

The Strategic Management Process (SMP) is a structured approach through which organizations develop, implement, and evaluate strategies to achieve long-term goals. Traditionally comprising three core stages—formulation, implementation, and evaluation—the SMP enables decision-makers to align resources with organizational vision and environmental dynamics (Grant, 2021). However, the increasing complexity and speed of business environments have exposed limitations in traditional SMP models. While AI has emerged in a transformative manner to empower strategic agility, precision, and adaptability, this stage requires organization data acquisition-either internal or external identify it. AI assists in the strategic formulation through data mining, machine learning, and predictive analytics. These technologies help analyze both structured and unstructured data, such as financial reports, customer reviews, social media, and market trends, to draw deep strategic insights (Jarrahi, 2023). Sometimes, NLP provides an additional layer of analysis by extracting customer sentiment and competitor intelligence, allowing decision-makers to better understand their business environment. Speed and depth put this analysis ahead of many others in the market, allowing firms to place evidence-based, future-oriented decisions into strategy-building steps.

During the final phase of strategy implementation, the focus shifts to the execution of plans and alignment of organizational processes. AI enables this by providing intelligent automation, workflow optimization, and performance monitoring. AI-powered systems are dynamic in resource allocation, organizing cross-functional teams, and detecting delayed implementations or inefficiencies occurring in real time (Wamba et al., 2021). For instance, AI-embedded supply chains adjust inventory and reroute shipments autonomously based on demand variations or disruptions. This improves not only efficiency but also strategic coherence that operational actions stay in alignment with the formulated strategies.

Strategy evaluation checks outcomes and ensures the organization remains on course. Previously, evaluation was done through backward-looking reports, which lacked relevance in time. With AI, there is provision for real-time performance dashboards, anomaly-detection algorithms, and forecasting mechanisms to continuously assess strategies. Any sudden drop in meeting KPIs could be detected by these systems while also suggesting corrective measures and forecasting the impact of those strategic pivots (Ali et al., 2022). This responsiveness is crucial in today's dynamic business environments, where delays in strategic adjustment can result in significant losses.

On a higher note, AI fosters strategic learning by allowing feedback loops through all SMP stages. AI systems can, in a way, learn from past results through reinforcement learning and adaptive algorithms and, therefore, can make better future recommendations in the strategy (Margherita & Berente, 2022). This creates a learning loop, where decision-making is improved over time, thus institutionalizing agility and continuous improvement. Strategically, AI supports the breakdown of silos in the SMP. Its ability to handle data and communicate allows silos to be broken down so that different departments can share knowledge and coordinate actions more effectively (Aversa et al., 2021). This integration is especially critical in global or digital-first organizations where coordination is complex and decentralized.

However, AI's integration into the SMP requires careful governance. Without ethical frameworks and clear accountability structures, AI-driven decisions may lack transparency or be biased. Organizations must ensure that AI tools complement, rather than replace, human judgment, especially in strategic contexts involving ambiguity or ethical trade-offs (García-Murillo & Annabi, 2022).

Hypothesis H2: Artificial Intelligence has a positive impact on the Strategic Management Process.

3.3Strategic Management Process and Developing Strategic Management Functions

The Strategic Management Process (SMP) and strategic management functions are closely interconnected elements that collectively drive organizational performance and strategic alignment. The SMP, encompassing formulation, implementation, and evaluation, serves as the procedural framework through which strategies are developed and executed. In contrast, strategic management functions, planning, organizing, leading, and controlling (POLC) represent the operational mechanisms through which strategies are translated into actionable tasks and continuously managed. An effective SMP lays the foundation for the systematic development and refinement of these functions, ensuring organizations are structurally and behaviorally aligned with strategic goals.

At the strategy formulation stage, organizations set long-term objectives, identify internal capabilities, and analyze external environments. This phase directly informs the planning function by shaping how objectives are structured, priorities are set, and resource needs are forecasted (Grant, 2021). The clarity and quality of formulation directly impact how managers develop departmental plans and operational schedules. Research shows that organizations with a formalized strategic planning process are more likely to have structured management practices and better performance metrics (Margherita & Braccini, 2023).

The implementation stage of the SMP is where formulated strategies are operationalized. This process activates the organizing and leading functions. Organizing involves defining roles, allocating resources, and designing workflows that align with strategic initiatives. Strategic implementation thus provides rationale and direction for organizational structuring. Leadership, meanwhile, becomes essential for motivating teams, communicating goals, and managing resistance to change during implementation (Mikalef et al., 2022). The SMP ensures that leadership is not reactive but is embedded in the process of strategy execution, allowing leaders to take a proactive role in managing change and fostering innovation.

The evaluation phase, most often ignored in practice, is a crucial one in the controlling function. SMP frameworks that adopt continuous evaluation provide a chance to give feedback and monitor performance in real-time, strengthening the ability of the organization to implement changes in strategy

and functions with agility. The outputs of evaluation procedures-KPI, benchmarking, and performance auditing-constitute inputs for controlling activities, which enable managers to spot variances, take corrective measures, and update operational policies (Ali et al., 2022). Hence, evaluation sustains the assessment of the success of the strategy while promoting the evolution of control systems.
More importantly, the SMP creates the interconnectivity among the different management functions. Formulation of strategy can refine the planning process; implementation is going to define how resources are organized; and evaluation is going to strengthen control systems. This cyclical relationship fosters functional coherence, which is vital for complex, dynamic environments (Kraus et al., 2023). If no well-defined SMP exists, strategic functions can get fragmented, inconsistent, and reactive.
Furthermore, strategic alignment research posits that superior performance is attained when integration takes place between SMP activities and functional realization. According to Soto-Acosta et al. (2022), perpetuated interaction between SMP phases and managerial functionalities generates a virtuous circle of organizational learning, adaptability, and resource optimization. Such an integration aids the building of dynamic capabilities, thus enabling organizations to adapt not only the strategies themselves but also the managerial competences needed to realize these strategies effectively.
Hypothesis H3: The Strategic Management Process has a positive impact on the development of strategic management functions.

3.4Artificial Intelligence and Developing Strategic Management Functions Through the Strategic Management Process

Previously, AI-powered applications could focus on individual facets of strategic management or discrete steps in the SMP. These applications, however, can now enable synergies between these two components. Once AI technologies are embedded in SMP, an organization could effectively develop, coordinate, and optimize the four basic strategic management functions (planning, organizing, leading, and controlling) at every strategic level. The integration into AI, therefore, makes more than just households or analytics support. It represents a strategic metamorphosis in which, for a short while, AI ensures the fluid cohesion from strategy formulation, through implementation and evaluation, down into functional development. The result is a closed-loop system where AI continuously guides decision-making, enables adaptive planning, and ensures functional alignment with organizational goals (Mikalef et al., 2022).
For instance, in the formulation phase, AI helps generate strategic insights by analyzing environmental data and forecasting market shifts. These insights directly influence planning by allowing managers to set realistic and data-driven objectives. Simultaneously, AI enables organizations to allocate resources and structure teams (organizing) in a way that aligns with those strategies. In this sense, strategy formulation does not operate in isolation but actively informs and shapes organizational functions through AI support (Margherita & Berente, 2022).
During strategy implementation, AI continues to reinforce functional development. Intelligent systems automate workflows, monitor progress, and coordinate cross-functional activities, thus improving operational control and decision-making (Jöhnk et al., 2021). AI-powered project management platforms ensure that day-to-day operations remain in sync with strategic priorities. This alignment strengthens the leading and controlling functions by providing real-time insights into performance, employee engagement, and operational deviations.
In the evaluation stage, AI facilitates feedback mechanisms that inform both strategic refinement and functional improvement. For example, AI can detect underperformance in implementation and suggest functional changes, such as process redesign or resource reallocation. These adjustments enhance planning accuracy, improve organizational structure, and increase managerial responsiveness, thus enabling continuous development of strategic management functions through iterative strategy cycles (Tortorella et al., 2021).
Moreover, based on the dynamic capability perspective, an organization attains a competitive advantage when it senses, seizes, and swiftly transforms resources. AI embedded in SMP augments these dynamic capabilities in that it enhances strategic learning and functional adaptation at the same time (Vial, 2021). AI supports decisions, but it also learns from the consequences of those decisions, changes its predictions, and coordinates changes in strategic direction and functional execution. Empirical studies support this integrative viewpoint. Soto-Acosta et al. (2022) found that organizations need to leverage AI in strategic planning and evaluation while they develop operational and leadership functions in a more coordinated

way. Another study by Kazan et al. (2021) showed firms applying AI across SMP stages were significantly more efficient in managerial control systems, innovation processes, and structuring of resources.
Yet, notwithstanding these opportunities, there is a need for governance, digital maturity, and alignment between technological capabilities and strategic intent to handle the successful integration of AI into both SMP and strategic functions. Organizations must ensure that AI systems are ethically designed, transparent in their logic, and flexible enough to adapt to contextual needs (Dwivedi et al., 2021).
Hypothesis H4: Artificial Intelligence positively influences the development of strategic management functions through the Strategic Management Process.

4. METHODOLOGY

In this study, a quantitative research method was adopted to investigate the role of AI in strengthening the strategic management functions in private and public enterprises in Palestine. Thus, three fundamental AI technologies, namely Machine Learning (ML), Big Data Analytics (BDA), and Expert Systems, were chosen as independent variables, whereas strategic processes, i.e., strategic formulation, implementation, and evaluation, were treated as mediators, and the development of strategic management functions (SMFs) served as the dependent variable. Data were collected via a structured electronic questionnaire, distributed to professionals working in key economic sectors—telecommunications, banking, education, and energy—which are at the forefront of digital transformation. Participants were selected using a convenience sampling method, targeting individuals involved in strategic planning and digital innovation. In total, 384 questionnaires were distributed electronically via Google Forms, with sufficient responses collected to ensure statistical reliability, as per Sekaran and Bougie's (2013) guidelines. The instrument was developed based on an extensive review of relevant literature. The scale included 13 AI-related items (4 for ML, 5 for BDA, 4 for Expert Systems) and 13 items for SMP (4 for formulation, 5 for implementation, 4 for evaluation), measured using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). For analysis, descriptive statistics (mean, SD), Pearson correlation, and multiple regression were employed. Reliability was tested using Cronbach's alpha, and normality, multicollinearity, and variance inflation factors (VIF) were also assessed to ensure model validity.

5. RESULTS

5.1Demographic characteristics of respondents

Table 2 displays the demographic characteristics of the respondents (N = 385). The gender distribution is nearly even, with 194 males (50.4%) and 191 females (49.6%), showing balanced participation from both sexes. Regarding age, the largest group of respondents is aged 25–34 years (n = 110, 28.6%), followed by those aged 35–44 years (n = 100, 26.0%), 45–54 years (n = 70, 18.2%), less than 25 years (n = 60, 15.6%), and 55 years and above (n = 45, 11.7%).In terms of educational level, most participants hold a Bachelor's degree (n = 169, 43.9%), followed by those with a Diploma (n = 105, 27.3%), Master's degree (n = 96, 24.9%), and Doctorate (Ph.D.) (n = 15, 3.9%). Concerning years of experience in strategic management, 134 respondents (34.8%) have less than 5 years of experience, 119 (30.9%) have 5–10 years, 54 (14.0%) have 11–15 years, and 78 (20.3%) have more than 15 years. As for current job positions, the largest portion is Analysts (n = 147, 38.2%), followed by consultants (n = 123, 31.9%), Department Heads (n = 77, 20.0%), and Strategic Managers (n = 38, 9.9%). Finally, participants work in a variety of industry sectors, including Information Technology (n = 100, 26.0%), Services (n = 90, 23.4%), Healthcare (n = 70, 18.2%), Education (n = 65, 16.8%), and Manufacturing (n = 60, 15.6%). This distribution reflects a diverse and representative sample in terms of demographic and professional backgrounds.

Table 2: Descriptive statistics of respondents' demographic data

Variables	Category	Frequency	Percent
1. Gender	Male	194	50.4
	Female	191	49.6
2. Age	Less than 25 years	60	15.60
	25 – 34 years	110	28.60
	35 – 44 years	100	26.00

	45 – 54 years	70	18.20
	55 years and above	45	11.70
3. Educational Level	Diploma	105	27.3
	Bachelor's Degree	169	43.9
	Master's Degree	96	24.9
	Doctorate (Ph.D.)	15	3.9
4. Years of Experience in Strategic Management	Less than 5 years	134	34.8
	5 – 10 years	119	30.9
	11 – 15 years	54	14
	More than 15 years	78	20.3
5. Current Job Position	Strategic Manager	38	9.9
	Department Head	77	20
	Analyst	147	38.2
	Consultant	123	31.9
6. Industry Sector	Manufacturing	60	15.60
	Services	90	23.40
	Information Technology	100	26.00
	Healthcare	70	18.20
	Education	65	16.80

5.2Model Assessment

The model assessment was conducted through an evaluation of the measurement model's reliability and validity using key indicators: factor loadings, mean, standard deviation, Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE). All constructs met the required thresholds, confirming internal consistency, reliability, and convergent validity.

Machine Learning (ML) was measured by four items, with loadings ranging from 0.803 to 0.919. The construct reported a mean of 3.988 and a standard deviation of 0.915. Cronbach's alpha was 0.904, while the CR and AVE were 0.933 and 0.779, respectively. These values exceed the acceptable thresholds, supporting the reliability and convergent validity of the ML construct. Artificial Intelligence (AI) comprised 13 items, with factor loadings ranging from 0.736 to 0.951. The construct had a mean of 4.138 and a standard deviation of 0.790. It showed excellent internal consistency, with a Cronbach's alpha of 0.971 and a CR of 0.975. The AVE was 0.749, indicating that the construct explains a substantial portion of the variance in its indicators. Big Data Analytics (BDA) included five indicators, all demonstrating high loadings between 0.824 and 0.957. The construct had a mean of 3.847 and a standard deviation of 0.914. It also demonstrated strong reliability with α = 0.934 and CR = 0.951. The AVE value of 0.794 confirmed good convergent validity. Expert Systems (ES) was measured using four items, with loadings between 0.907 and 0.931. The mean score was 3.963, with a standard deviation of 1.022. Cronbach's alpha was 0.937 and CR was 0.955, with an AVE of 0.841, all indicating excellent reliability and validity.

Strategy Evaluation (SE) included four items with loadings ranging from 0.758 to 0.965. It recorded a mean of 4.055 and a standard deviation of 0.784. The construct's reliability was confirmed with α = 0.873 and CR = 0.914. Its AVE was 0.728, exceeding the minimum threshold for convergent validity. Strategy Formulation (SF) was assessed with four items, showing high loadings between 0.891 and 0.974. The mean was 4.038, and the standard deviation was 0.908. Cronbach's alpha (0.953) and CR (0.966) indicated strong reliability, while the AVE of 0.877 demonstrated excellent convergent validity. Strategy Implementation (SI) comprised five items, with loadings ranging from 0.736 to 0.971. The mean was 4.133, and the standard deviation was 0.847. The reliability measures were satisfactory (α = 0.938, CR = 0.954), and the AVE of 0.808 further supported the construct's validity.

Finally, Developing Strategic Management Functions (DSMF) included 13 indicators with loadings from 0.732 to 0.953. The mean score was 3.847 with a standard deviation of 0.976. The construct demonstrated excellent internal consistency with α = 0.981 and CR = 0.983. The AVE of 0.820 confirmed a high level of shared variance among the indicators. In conclusion, all constructs in the measurement model exhibited high factor loadings, strong internal consistency (α > 0.70), high composite reliability (CR > 0.70), and adequate AVE (> 0.50). These results validate the reliability and convergent validity of the model, establishing a strong foundation for the subsequent structural model analysis.

Table 3: Construct reliability, validity, and descriptive analysis

Constructs	Codes	Loadings	Mean	Std.	α	CR	AVE
Machine Learning	ML1	0.889	3.988	0.915	0.904	0.933	0.779
	ML2	0.919					
	ML3	0.803					
	ML4	0.913					
Artificial Intelligence	AI1	0.951	4.138	0.790	0.971	0.975	0.749
	AI2	0.868					
	AI3	0.798					
	AI4	0.886					
	AI5	0.851					
	AI6	0.940					
	AI7	0.946					
	AI8	0.882					
	AI9	0.912					
	AI10	0.736					
	AI11	0.770					
	AI12	0.891					
	AI13	0.784					
Big Data Analytics	BAD1	0.824	3.847	0.914	0.934	0.951	0.794
	BAD2	0.957					
	BAD3	0.866					
	BAD4	0.915					
	BAD5	0.888					
Expert Systems	ES1	0.931	3.963	1.022	0.937	0.955	0.841
	ES2	0.907					
	ES3	0.910					
	ES4	0.919					
Strategy Evaluation	SE1	0.820	4.055	0.784	0.873	0.914	0.728
	SE2	0.758					
	SE3	0.856					
	SE4	0.965					
Strategy Formulation	SF1	0.918	4.038	0.908	0.953	0.966	0.877
	SF2	0.961					
	SF3	0.891					
	SF4	0.974					
Strategy Implementation	SI1	0.884	4.133	0.847	0.938	0.954	0.808
	SI2	0.935					
	SI3	0.949					
	SI4	0.971					
	SI5	0.736					
Developing Strategic Management Functions	DSMF1	0.732	3.847	0.976	0.981	0.983	0.820
	DSMF2	0.953					
	DSMF3	0.951					
	DSMF4	0.942					
	DSMF5	0.887					
	DSMF6	0.830					
	DSMF7	0.928					
	DSMF8	0.882					

	DSMF9	0.883					
	DSMF10	0.912					
	DSMF11	0.950					
	DSMF12	0.948					
	DSMF13	0.950					

5.2.1 Discriminant Validity

Discriminant validity was assessed using two complementary approaches: the Fornell-Larcker criterion and the Heterotrait-Monotrait ratio (HTMT). The results from the Fornell-Larcker criterion confirm that each construct in the model is empirically distinct from the others. Specifically, the square root of the average variance extracted (AVE) for each construct exceeded the corresponding inter-construct correlations. For example, the square root of AVE for Artificial Intelligence (0.865), Big Data Analytics (0.891), Developing Strategic Management Functions (0.906), Expert Systems (0.917), Machine Learning (0.882), Role of Artificial Intelligence (0.843), Strategic Management Process (0.807), Strategy Evaluation (0.853), Strategy Formulation (0.936), and Strategy Implementation (0.899) all surpassed their correlations with other constructs. This indicates that each construct shares more variance with its indicators than with those of other constructs, thereby meeting the Fornell-Larcker requirement and supporting discriminant validity.

However, the HTMT analysis revealed more stringent insights into potential construct overlap. While most HTMT values remained below the recommended threshold of 0.90, a few pairs slightly exceeded this limit, suggesting possible concerns. Notably, the HTMT value between Artificial Intelligence and Role of AI was 1.006, between Strategy Formulation and Machine Learning was 1.016, and between Strategy Implementation and Strategic Management Process was 1.032. These values suggest a high degree of conceptual similarity between these constructs, which may indicate an overlap in measurement or conceptual ambiguity. Despite these instances, most of the construct relationships exhibited HTMT value well within acceptable limits, further affirming discriminant validity across most constructs. Nevertheless, further investigation into the constructs with elevated HTMT values is recommended to ensure conceptual clarity and independence in future model refinements.

Table 3: Discriminant Validity

Fornell	AI	BDA	DSMF	ES	ML	RAI	SMP	SE	SF	SI
AI	0.865									
BDA	0.896	0.891								
DSMF	0.828	0.755	0.906							
ES	0.837	0.93	0.72	0.917						
ML	0.935	0.84	0.79	0.765	0.882					
RAI	0.985	0.952	0.826	0.906	0.939	0.843				
SMP	0.924	0.812	0.827	0.773	0.923	0.917	0.807			
SE	0.696	0.705	0.764	0.681	0.594	0.71	0.802	0.853		
SF	0.909	0.758	0.717	0.691	0.945	0.888	0.889	0.477	0.936	
SI	0.858	0.726	0.754	0.711	0.893	0.851	0.978	0.748	0.847	0.899
HTMT	AI	BDA	DSMF	ES	ML	RAI	SMP	SE	SF	SI
AI										
BDA	0.937									
DSMF	0.845	0.78								
ES	0.859	0.988	0.737							
ML	0.998	0.913	0.834	0.818						
RAI	1.006	0.993	0.835	0.935	0.995					
SMP	0.955	0.864	0.858	0.813	0.988	0.944				
SE	0.74	0.777	0.818	0.746	0.666	0.757	0.893			
SF	0.947	0.803	0.737	0.718	1.016	0.917	0.914	0.507		
SI	0.895	0.776	0.788	0.751	0.97	0.883	1.032	0.825	0.884	

5.3Structural Equation Model Assessment and Hypothesis Result

The structural equation modeling (SEM) assessment was conducted to examine the relationships proposed in the research model, focusing on the role of Artificial Intelligence (RAI) in developing strategic management functions (DSMF) through the strategic management process (SMP). Figure 1 visually illustrates the path coefficients, while Table 4 summarizes the direct path effects, including β-values, standard deviations (STDEV), t-values, p-values, and the significance of each hypothesis.

The first hypothesis (H1) tested the direct relationship between the Role of Artificial Intelligence (RAI) and Developing Strategic Management Functions (DSMF). The results revealed a significant and positive path coefficient ($\beta = 0.426$, $t = 5.511$, $p < 0.001$), confirming that RAI has a substantial direct effect on the development of strategic management functions. This indicates that AI technologies directly contribute to enhancing organizational capabilities such as planning, organizing, leading, and controlling.

The second hypothesis (H2) examined the effect of RAI on the Strategic Management Process (SMP). This relationship exhibited the highest standardized path coefficient ($\beta = 0.917$, $t = 73.800$, $p < 0.001$), suggesting a very strong and statistically significant influence. The findings imply that AI-driven technologies significantly enable the formulation, implementation, and evaluation of strategies, thereby strengthening the overall strategic process.

The third hypothesis (H3) evaluated the direct impact of the Strategic Management Process (SMP) on Developing Strategic Management Functions (DSMF). The path coefficient was also significant and positive ($\beta = 0.436$, $t = 6.025$, $p < 0.001$), supporting the hypothesis. This indicates that as organizations strengthen their strategic processes, their core management functions become more developed, efficient, and aligned with strategic goals.

The fourth hypothesis (H4) tested the indirect effect of RAI on DSMF through SMP, assessing the mediating role of the strategic management process. The path analysis revealed a significant mediating effect ($\beta = 0.400$, $t = 5.819$, $p < 0.001$). This result demonstrates that the influence of AI on management functions is not solely direct but is also channeled through the structuring and optimization of strategic management processes. In other words, AI improves SMP, which in turn facilitates the enhancement of strategic management functions.

The coefficient of determination (R^2) values further validate the model's explanatory power. The SMP construct explained a significant proportion of variance ($R^2 = 0.841$), while the DSMF construct also showed a strong explanatory value ($R^2 = 0.713$), indicating that the model effectively captures the dynamics between AI, SMP, and DSMF.

These results collectively confirm all four hypotheses (H1–H4), with all relationships demonstrating strong statistical significance ($p < 0.001$). The findings underscore the pivotal role of AI not only in directly influencing strategic capabilities but also in indirectly shaping them through the optimization of strategic processes. This highlights the importance of integrating AI into both functional operations and strategic frameworks to enhance organizational performance and adaptability.

Table 4: Direct hypotheses testing results

Hypothesis	Direction	β	STDEV	T-value	P-value	Result
H1	RAI -> DSMF	0.426	0.427	0.077	5.511	0.000
H2	RAI -> SMP	0.917	0.917	0.012	73.800	0.000
H3	SMP -> DSMF	0.436	0.435	0.072	6.025	0.000
H4	RAI -> SMP -> DSMF	0.400	0.400	0.069	5.819	0.000

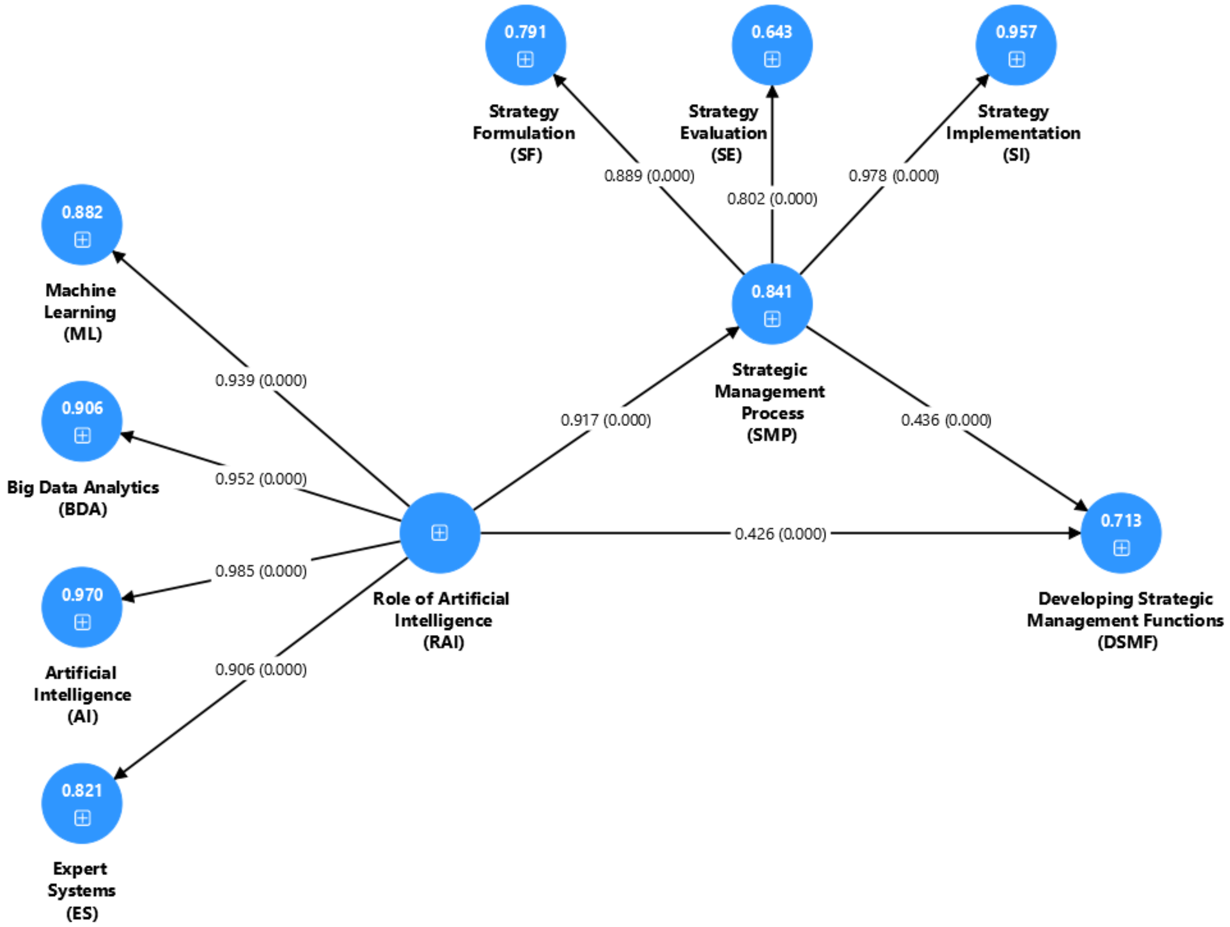

Figure 1: Structural model results

6. DISCUSSION

The results of the study support the contention of the strategic centrality of AI in contemporary management. A positive and significant relationship was found in this study between AI and the SMFs (H1); thus, the study supported the argument of previous literature that AI technologies synthesize operational efficiencies and organizational capabilities. The tools of Machine Learning (ML), Expert System (ES), and Big Data Analytics (BDA) enable managers to better plan, create structures automatically, gain predictive insights for leading, and provide control means in real-time (Dwivedi et al., 2021; Jöhnk et al., 2021), which is in line with the POLC framework, stating that AI aids all areas of management- it helps with task automation and better decision-making, while it decreases uncertainty.

Notably, the strongest effect observed was between AI and the Strategic Management Process (SMP) (H2), indicating that AI significantly influences how strategies are formulated, implemented, and evaluated. This supports existing evidence that AI enables data-driven strategy formulation through predictive analytics, scenario modeling, and trend detection (Margherita & Braccini, 2023). AI tools such as Natural Language Processing (NLP) and intelligent recommendation systems aid in identifying market shifts, customer behavior, and competitor movements, enhancing strategic foresight (Jarrahi, 2023). In the implementation phase, AI technologies allow for better project management, intelligent workflow coordination, and automated operational decision-making, all of which reduce strategy-execution gaps (Wamba et al., 2021). For evaluation, AI enables real-time tracking of KPIs, early warning systems, and dynamic performance dashboards—enhancing adaptability and reducing the latency between strategic deviation and correction (Ali et al., 2022).

The relationship between SMP and SMFs (H3) further emphasizes the critical link between process and capability. Through continuous strategization and implementation, an organization with an adaptive SMP can expect its management functions to continue evolving. For example, the implementation of a good strategy may allow for proactive organizing and leading, while real-time evaluation may entail agile planning and better control. Thus, this corroborates the Italian perspective on SMP as not just a strategic routine but a capability-development engine (Mikalef et al., 2022). In the same vein, dynamic capability

theory postulates that in turbulent environments, sustainability advantage comes to those organizations able to learn, integrate, and reconfigure their internal competencies (Teece, 2021).
Most importantly, the mediating role of SMP between AI and SMFs (H4) exposes that AI's strategic impact is not only about functional automation or analytics; rather, SMP becomes the channel of AI to impact the organization at structural levels. AI enriches each phase of SMP, which in turn enables the strategic functions to work in a more aligned and agile manner. This finding substantiates the earlier argument of Vial (2021), whereby digital technologies should be incorporated into strategy processes as a catalyst for transformation, not used as tools alone. The integrated planning for strategic management ensures consistency in AI SMP at all levels of management, thus bridging the divide between vision at top management and execution on the floor (Kraus et al., 2023).
Collectively, these findings emphasize the paramount nature of holistic AI adoption. While it is sufficient to deploy AI tools in various operational functions, the real strategic value only arises when AI becomes integral to the entire management system, from strategic development through strategic implementation. Installation of AI in SMP should strictly be governed along with standard frameworks for data infrastructure and managerial capability acquisition. Only then will the SMPs enhanced by AI realize the meaningful development of strategic functions (Soto-Acosta et al., 2022).
On the other hand, this research offers immense value to theory and practice in revealing that AI positively impacts not only strategic processes but also the core management functions. Since it proves the mediating nature of SMP in this relationship, the study elevates the importance of embedding AI technologies strategically to achieve the higher transformational potential.

CONCLUSION

One of the tricky things to research now is the study providing compelling evidence of the role of Artificial Intelligence (AI) in transforming the Strategic Management Functions (SMFs), both directly and through the Strategic Management Process (SMP). The study confirms that AI is, indeed, not just for operational automation but rather a strategic enabler that optimizes how organizations plan, organize, lead, and control. AI tools such as machine learning, expert systems, and big data analytics certainly enhance data-driven decision-making along with improving strategic agility and responsiveness (Dwivedi et al., 2021; Jarrahi, 2023).
The results reveal a stronger and significant direct link between AI and SMFs, suggesting that when organizations apply AI across strategic domains, they see significant enhancements to managerial functions. These functions, long weighed to be the very spine of strategy execution, are now made further flexible, intelligent, and data-informed with AI. This supports prior research suggesting that AI improves internal capabilities and enables real-time, evidence-based management (Margherita & Braccini, 2023; Kraus et al., 2023).
Moreover, AI empowers and operationalizes the Strategic Management Process, particularly during formulation, implementation, and evaluation. These stages take advantage of the massive data processing, scenario simulation, continuous performance monitoring, and dynamic corrective action recommendation capabilities bestowed by AI (Ali et al., 2022; Mikalef et al., 2022). To that effect, the SMP gets more efficient, but it also becomes more predictive and adaptive, maintaining strategic continuity in volatile environments.
More critically, the study identifies the Strategic Management Process as a mediating mechanism through which the strategic value of AI can be realized in full. Whereas AI can impact strategic functions in its own right, the strategic function of AI will be maximized if it is embedded into a formal SMP. This fully supports the dynamic capabilities suite of views, stating that for an organization to sustain competitiveness, it must have the capability of integrating and reconfiguring its tangible and intangible assets into strategic workflows (Teece, 2021; Vial, 2021).
The very high explanatory power of the structural model (R^2 values higher than 0.70 for crucial constructs) gave the shaking evidence for robust theoretical grounding and relevance. The validated hypotheses prove the combined effect of AI and SMP to be vital for the development of strategic functions, particularly in evolving data-based contexts.

Contribution

This study makes notable contributions to theory, methodology, and practice in the field of strategic management and digital transformation, particularly to the integration of Artificial Intelligence (AI) into organizational processes.

- **Theoretical Contribution**

The scholars have contributed to strategic management theory by empirically validating SMP's mediation role between AI and Strategic Management Functions. While prior scholarship has acknowledged AI as affecting operational tasks and decision-making (Dwivedi, Ismagilova, Gupta, et al., 2021; Vial, 2021), this study positions SMP to constitute a strategic enabler through which AI capabilities are translated into long-term functional development. It offers a solution to the lacuna in the literature by specifying the process-oriented pathway through which AI impacts managerial effectiveness.

Furthermore, the study extends Dynamic Capabilities Theory (Teece, 2021) by evidencing that AI, when embedded in the strategic process, is what allows firms to sense changes in the environment, seize opportunities anew, and reconfigure their internal functions dynamically. It sets up AI beyond merely an external enabler to being an internal core enabling capacity that allows agility and adaptability along strategic layers.

- **Practical Contribution**

This study clarifies, but in the manner of the paradigm prescribed by evidence-and offers insight to practitioners-doers in the hopes of integrating AI into strategic decision-making. It brings forth more evidence, stating that essentially the value of AI would never be realized in isolation, but rather through strategic embedding wherein AI would help in the formulation of SMP itself at every level and equally improve React-SPying on actual strategic management functions (Ali et al., 2022). Managers will thus need to relate their investment decisions in AI with redesigning strategic processes, developing leadership, and promoting a change in organizational climate towards data-centered thinking. The findings indicate how AI tools should be coupled with managerial functions for innovation, resilience, and operational excellence; more importantly, by showing the mediation role of SMP, the study calls attention to the need for executives to consider not just what technologies to adopt, but how these technologies fit into existing strategic frameworks.

Recommendations

- Strategic Integration of AI: Organizations should embed AI technologies into all phases of the strategic management process—not just operational workflows—to maximize their transformative potential.
- Leadership and Governance: Senior management should develop AI governance structures that support ethical, transparent, and purpose-driven AI deployment aligned with strategic objectives.
- Capability Building: Firms should invest in developing data literacy, analytical skills, and change management competencies among strategic managers to fully leverage AI tools.
- Continuous Evaluation: Implement real-time performance dashboards powered by AI to monitor strategic progress and quickly adapt to environmental changes.
- Scalable AI Architecture: Develop scalable AI infrastructures that can evolve alongside changing strategic goals and management practices.

REFERENCES

1. Ahmad, A. Y. B., Kumari, D. K., Shukla, A., Deepak, A., Chandnani, M., Pundir, S., & Shrivastava, A. (2024). Framework for Cloud Based Document Management System with Institutional Schema of Database. International Journal of Intelligent Systems and Applications in Engineering, 12(3s), 672-678.
2. Ahmad, A. Y. Bani ahmad , (2019). Empirical Analysis on Accounting Information System Usage in Banking Sector in Jordan. Academy of Accounting and Financial Studies Journal, 23(5), 1-9.
3. Peretz-Andersson, E., Tabares, S., Mikalef, P., &Parida, V. (2024). Artificial intelligence implementation in manufacturing SMEs: A resource orchestration approach. International Journal of Information Management, 77, 102781, 1-23.
4. Phiri, W., Ng'andwe, E., Mukutu, I., Moono, D., &Kapapi, P. (2019). A critical analysis of strategic management process. International Journal of Commerce and Management Research, 5(1), 138-142.
5. Saha, C., Menon, R., Paulin, S. M., Yerasuri, S., Saha, H., & Dongol, P. (2023). The impact of artificial intelligence on business strategy and decision-making processes. European Economic Letters, 13(3).
6. Sekaran, U. and Bougie, R. (2013) Research Methods for Business: A Skill-Building Approach. 6th Edition, Wiley, New York.
7. Sinnaiah, T., Adam, S., & Mahadi, B. (2023). A strategic management process: the role of decision-making style and organisational performance. Journal of Work-Applied Management, 15(1), 37–50.
8. Ali, M., Iqbal, M., & Shahzad, A. (2022). Artificial Intelligence in Strategy Evaluation: Enhancing Strategic Responsiveness. Technological Forecasting and Social Change, 180, 121697. https://doi.org/10.1016/j.techfore.2022.121697
9. Aversa, P., Cabanelas, P., & Parraguez, P. (2021). Artificial Intelligence and Strategy: A Research Agenda. Journal of Business Research, 124, 389–400. https://doi.org/10.1016/j.jbusres.2020.10.014

10. Berente, N., Gu, B., Recker, J., & Santhanam, R. (2021). Managing AI. MIS Quarterly, 45(3), 1433–1450. https://doi.org/10.25300/MISQ/2021/16274
11. Brynjolfsson, E., & McAfee, A. (2017). Machine, Platform, Crowd: Harnessing Our Digital Future. W. W. Norton & Company.
12. Bughin, J., Seong, J., Manyika, J., Chui, M., & Joshi, R. (2019). Notes from the AI frontier: Modeling the impact of AI on the world economy. McKinsey Global Institute.
13. Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). The Next Step for Artificial Intelligence in Tourism and Hospitality: A Systematic Review. Journal of Business Research, 128, 129–143.
14. Davenport, T. H., & Ronanki, R. (2018). Artificial Intelligence for the Real World. Harvard Business Review, 96(1), 108–116.
15. Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial Intelligence for Decision Making in the Era of Big Data – Evolution, Challenges and Research Agenda. International Journal of Information Management, 48, 63–71.
16. Dwivedi, Y. K., Hughes, D. L., Ismagilova, E., et al. (2021). Artificial Intelligence (AI): Multidisciplinary Perspectives on Emerging Challenges, Opportunities, and Agenda for Research, Practice and Policy. International Journal of Information Management, 57, 101994. https://doi.org/10.1016/j.ijinfomgt.2019.08.002
17. Feki, M., Kamoun-Chouk, S., & Slimani, S. (2023). Strategic Alignment of Artificial Intelligence Capabilities with Business Strategy: A Contingency Perspective. Technovation, 122, 102656. https://doi.org/10.1016/j.technovation.2023.102656
18. García-Murillo, M., & Annabi, H. (2022). Managing AI Ethics and Transparency in Strategic Decision-Making. Information Systems Frontiers, 24, 97–110. https://doi.org/10.1007/s10796-021-10123-7
19. Ghasemaghaei, M. (2019). Augmenting the Decision-Making Capacity of Artificial Intelligence with Big Data Analytics: The Role of Human Factors. Journal of Strategic Information Systems, 28(4), 395–411.
20. Grant, R. M. (2021). Contemporary Strategy Analysis: Text and Cases Edition (11th ed.). Wiley.
21. Haefner, N., Wincent, J., Parida, V., & Gassmann, O. (2021). Artificial Intelligence and Innovation Management: A Review, Framework, and Research Agenda. Technological Forecasting and Social Change, 162, 120392.
22. Jarrahi, M. H. (2018). Artificial Intelligence and the Future of Work: Human-AI Symbiosis in Organizational Decision Making. Business Horizons, 61(4), 577–586.
23. Jarrahi, M. H. (2023). Artificial Intelligence and Strategic Thinking. California Management Review, 65(2), 98–118. https://doi.org/10.1177/00081256231157105
24. Jha, S., Goyal, N., & Rana, N. P. (2023). Exploring the Role of Artificial Intelligence in Strategic Leadership: A Review and Future Research Agenda. Technological Forecasting and Social Change, 187, 122207. https://doi.org/10.1016/j.techfore.2022.122207
25. Jöhnk, J., Weißert, M., & Wyrtki, K. (2021). Ready or Not? Artificial Intelligence for Strategic Management: Insights from Organizational Readiness. Business & Information Systems Engineering, 63(5), 457–472. https://doi.org/10.1007/s12599-020-00672-7
26. Kazan, E., Tan, C. W., Lim, E. T. K., Sørensen, O. J., & Damsgaard, J. (2021). Disentangling Digital Transformation: The Role of AI in Strategic Renewal. Information Systems Frontiers, 23(4), 989–1005. https://doi.org/10.1007/s10796-020-10031-3
27. Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2022). The Role of Artificial Intelligence in Business Model Scalability. Journal of Business Research, 146, 228–237. https://doi.org/10.1016/j.jbusres.2022.03.063
28. Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2023). Artificial Intelligence in Business: From Research to Strategy. Journal of Business Research, 158, 113652. https://doi.org/10.1016/j.jbusres.2023.113652
29. K. Daoud, D. . Alqudah, M. . Al-Qeed, B. A. . Al Qaied, and A. Y. A. B. . Ahmad, “The Relationship Between Mobile Marketing and Customer Perceptions in Jordanian Commercial Banks: The Electronic Quality as A Mediator Variable”, ijmst, vol. 10, no. 2, pp. 1360-1371, Jun. 2023
30. Kai, Z., Sharaf, M., Wei, S. Y., Al Shraah, A., Le, L. T., Bedekar, A. A., & Ahmad, A. Y. B. (2024). Exploring the asymmetric relationship between natural resources, fintech, remittance and environmental pollution for BRICS nations: New insights from MMQR approach. Resources Policy, 90, 104693
31. Liang, P., Guo, Y., Nutakki, T. U. K., Agrawal, M. K., Muhammad, T., Ahmad, S. F., ... & Qin, M. (2024). Comprehensive assessment and sustainability improvement of a natural gas power plant utilizing an environmentally friendly combined cooling heating and power-desalination arrangement. Journal of Cleaner Production, 436, 140387.
32. Liang, P., Guo, Y., Chauhdary, S. T., Agrawal, M. K., Ahmad, S. F., Ahmad, A. Y. A. B., ... & Ji, T. (2024). Sustainable development and multi-aspect analysis of a novel polygeneration system using biogas upgrading and LNG regasification processes, producing power, heating, fresh water and liquid CO2. Process Safety and Environmental Protection, 183, 417-436..
33. Margherita, A., & Berente, N. (2022). AI as a Strategic Catalyst: Capability Building Through Integrated Management Processes. Information Systems Frontiers, 24, 45–63. https://doi.org/10.1007/s10796-021-10111-x
34. Margherita, A., & Braccini, A. M. (2023). Strategic Planning in the Age of AI. Journal of Business Research, 158, 113745. https://doi.org/10.1016/j.jbusres.2023.113745
35. Margherita, E. (2021). Digital Transformation and Business Model Innovation: A Systematic Review of the Literature. Journal of Business Models, 9(1), 1–27. https://doi.org/10.5278/ojs.jbm.v9i1.6473
36. Mikalef, P., van de Wetering, R., & Krogstie, J. (2022). Building Dynamic Capabilities by Leveraging Big Data Analytics: The Role of Organizational Inertia. Information & Management, 59(5), 103639. https://doi.org/10.1016/j.im.2022.103639
37. Nadkarni, S., & Prügl, R. (2021). Digital Transformation: A Review, Synthesis and Opportunities for Future Research. Management Review Quarterly, 71, 233–277. https://doi.org/10.1007/s11301-020-00185-7
38. Popovič, A., Hackney, R., & Simonič, M. (2022). Artificial Intelligence and Management Control Systems: Enhancing Strategic Responsiveness. Journal of Strategic Information Systems, 31(2), 101712. https://doi.org/10.1016/j.jsis.2021.101712
39. Russell, S., & Norvig, P. (2021). Artificial Intelligence: A Modern Approach (4th ed.). Pearson.

40. Sahu, G., Singh, A., & Jain, R. (2023). Artificial Intelligence Adoption in Strategic Management: A Resource-Based View Perspective. International Journal of Information Management, 71, 102658. https://doi.org/10.1016/j.ijinfomgt.2022.102658
41. Shrestha, Y. R., Ben-Menahem, S. M., & von Krogh, G. (2019). Organizational Decision-Making Structures in the Age of Artificial Intelligence. California Management Review, 61(4), 66–83.
42. Soto-Acosta, P., Cegarra-Navarro, J. G., & Wamba, S. F. (2022). Exploring the Role of AI in Strategic Alignment and Functional Synergy. Journal of Business Research, 144, 328–339. https://doi.org/10.1016/j.jbusres.2022.02.015
43. Tallon, P. P. (2007). A Process-Oriented Perspective on the Alignment of Information Technology and Business Strategy. Journal of Management Information Systems, 24(3), 227–268.
44. Teece, D. J. (2021). Dynamic Capabilities and Strategic Management: Organizing for Innovation. Oxford Research Encyclopedia of Business and Management. https://doi.org/10.1093/acrefore/9780190224851.013.136
45. Tortorella, G. L., Fogliatto, F. S., & Mac Cawley Vergara, A. (2021). The Mediating Role of AI Integration in Enhancing Strategic Management Functions. Computers & Industrial Engineering, 156, 107263. https://doi.org/10.1016/j.cie.2021.107263
46. Van der Aalst, W. M. (2021). Process Mining: Data Science in Action (2nd ed.). Springer.
47. Vial, G. (2021). Understanding Digital Transformation. Journal of Strategic Information Systems, 30(2), 101618. https://doi.org/10.1016/j.jsis.2020.101618
48. Wamba, S. F., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2021). The Business Value of AI in Strategic Implementation: An Empirical Study. Journal of Strategic Information Systems, 30(3), 101632. https://doi.org/10.1016/j.jsis.2021.101632
49. Wamba-Taguimdje, S. L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of Artificial Intelligence (AI) on Firm Performance: The Business Value of AI-Based Transformation Projects. Business Process Management Journal, 26(7), 1893–1924.
50. Yahiya Ahmad Bani Ahmad (Ayassrah), Ahmad; Ahmad Mahmoud Bani Atta, Anas; Ali Alawawdeh, Hanan; Abdallah Aljundi, Nawaf; Morshed, Amer; and Amin Dahbour, Saleh (2023) "The Effect of System Quality and User Quality of Information Technology on Internal Audit Effectiveness in Jordan, And the Moderating Effect of Management Support," Applied Mathematics & Information Sciences: Vol. 17: Iss. 5, Article 12.
51. Zameer, H., Wang, Y., Yasmeen, H., & Ahmed, W. (2022). The Impact of AI-Powered Technologies on Supply Chain Strategy: An Empirical Investigation. Technological Forecasting and Social Change, 174, 121273. https://doi.org/10.1016/j.techfore.2021.121273