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ASSIGNMENT TITLE:

**INVESTIGATING THE APPROPRIATENESS OF AI-DRIVEN TOOLS FOR
SMALL BUSINESSES IN DEVELOPING COUNTRIES: *THE CASE OF
SMES IN PAKISTAN***

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Background: Why SMEs are important for Pakistan's Economy:

Small & Medium Enterprises are considered the backbone of Pakistan's economy due to their contribution to economic growth, job creation, and promoting industrial development. Recent studies confirm their extensive contribution to Pakistan's economic development. SMEs account for approximately 90% of all businesses in Pakistan, and SMEs contribute around 40% to the country's GDP, making them a key driver of Pakistan's economic activity (Matloob et al., 2023). In terms of employment, Small and Medium Enterprises provide approximately 75%-78% of non-agricultural jobs, making them the largest source of employment after agriculture (State Bank of Pakistan, 2024).

Furthermore, SME contributes approximately 25% of Pakistan's exports, especially in the manufacturing & textile sectors (State Bank of Pakistan, 2024). Recently, the SME sector in Pakistan has been observed to be flourishing, with a notable increase in the number of small businesses. Small and medium-sized enterprises have increased significantly from 5.2 million to over 7 million enterprises, reflecting a strong growth trend and showcasing the expansion of this sector (Pakistan Bureau of Statistics, 2023).

However, despite their significant importance and growing trend, SMEs face challenges & difficulties, particularly in digital adoption and transformation. Currently, only 23% of the SME sector is utilising technological advancements for their performance and progress, which showcases that there is a major gap in technological readiness (SMEDA, 2025).

Challenges Faced by SMEs in Developing Countries:

Small and Medium Enterprises play a vital role in the country's economy, supporting growth, generating employment, and driving innovation. However, they face numerous challenges, including issues related to infrastructure, finance & capabilities. These difficulties ultimately affect their performance, stability, and ability to adopt the new technologies, causing them to fall behind in gaining competitive advantages. In developing countries, these challenges are even more pronounced due to the limited infrastructure, a weak institutional environment, skill gaps, and restricted access to resources & financing.

Infrastructure Boundaries & Digital Readiness:

In developing countries, Infrastructure limitations are a fundamental issue that hinders the growth of the SME and impacts the digital transformation. While large businesses are adopting new technology and transforming their processes to remain competitive in the market, SME are at risk due to the insufficient technological infrastructure and limited cybersecurity capabilities. Armenia et al. (2021) argue that SME face many challenges & risks stemming from a lack of expertise & systematic capabilities. Additionally exiting risk management frameworks often provide static assessments, failing to capture the dynamic nature of cyber risk.

4.0. Khin and Kee (2022) explain that limitations in infrastructure affect the ability of SME to embrace technological advancements and undergo digital transformation. This is primarily due to a lack of technological readiness and organizational capabilities. Findings also highlight that technological advancement requires both investment and organizational acceptance in terms of processes, mindsets, and strategic orientation. SME often struggle in these areas or domains due to the limited resources and insufficient technical guidance.

Financial Constraints and Access to Capital:

Financial constraints are one of the most critical barriers facing the SME sector in developing countries. Small and Medium Enterprises often struggle to access financial loans due to various external factors, including information irregularities, lack of insufficient collateral, and the higher perceived risk by the financial institutions. According to Serrasqueiro et al. (2021) SME organizations primarily rely on internal cash flow to support their operations and activities. Limitations in accessing external financing hinder these enterprises from investing in technological advancement or adoption, innovation, and expansion.

The study also explains that debt can negatively affect the SME sector due to high interest rates and repayment obligations. As a result, SMEs often reduce investment activities, delay innovating projects, and operate below the optimal capacity.

These challenges are severe in developing countries where the financial market is less developed than in developed economies.

Skill Gap and Organizational Competences:

A recent Major gap study has revealed that SME are struggling with a lack of expertise and organizational capabilities that are necessary to adapt to stay competitive and implement effective business strategies. Due to budget constraints, SME often have limited access to skilled worker and employ fewer experts. Because of this, they encounter major challenges in adopting advanced technology and are restricted in their ability to innovate. Iqbal and Suzianti (2021) identified various key issues faced by the SMEs, such as weak strategic development, informal procedures, and inadequate technological competencies. All these limitations have hindered the capacity to engage in new product development process, innovate processes & policies, and compete effectively with large organizations.

Correspondingly, Khin and Khee (2022) emphasised the importance of organizational capabilities as necessary for digital transformation. Their study integrated both Resource-Based View (RBV) & Dynamic Capabilities theories, which effectively explain how a business requires resources, the ability to reconfigure, & investment in multiple capabilities to respond effectively to change in the environment

Innovation & Organizational Strategies as Resolutions:

Despite the above highlighted challenges, literature has emphasized the possible pathway for small and medium-sized enterprises in order to remain competitive in the marketplace. One

key strategy for adoption is to remain Open Innovative Practices, which allow them to collaborate with the partner and explore new technologies. Srisathan et al. (2023) demonstrate in their literature that Open Innovative Practice is beneficial for Small and Medium Enterprises and has a significant positive impact on the innovative performance and growth. Furthermore, through collaborative networks and knowledge-sharing activities, Small and medium enterprises can compensate for their internal resource limitations and enhance their competitive position in the market.

AI Capabilities and the Resource-Based View:

In this digital and AI era, rapid advancements in artificial intelligence have turned AI tools and technology into essential strategic resources for organizations (Enholm et al. 2022; Perifanis & Kitsios, 2023; Krakowski et al., 2023). Due to its exceptional capabilities, AI has established itself in the corporate world by generating value, assisting in strategy creation, and providing competitive advantages to firms (Wamba-Taguimdje et al., 2020; Kitsios & Kamariotou, 2021; Mariani et al., 2025). From the resource-based views, the sustainability and competitive advantages are achieved through technology and AI tools combined with the use of organizational efforts and efficiency. In this perspective, AI is understood as a competitive advantage for organizational growth. Although AI tools have removed the redundancy in the work and made some tasks more efficient, they also create new hybrid capabilities to enhance how firms compete (Mikalef et al., 2021; An et al., 2025).

As per the existing literature review, AI capabilities are playing a critical role in supporting the value creation within the organization (Enholm et al., 2022; Agunuru, 2025). AI enables capable firms to forecast trends and demand in order to make production accordingly. It significantly enhances decision-making and data analysis, empowering the company to make informed choices that drive growth and success (Rajagopal et al., 2022; Sharma & Dang, 2026).

The Capabilities of artificial intelligence enable firms to enhance their innovation, ultimately contributing to the company's performance and growth. Research shows that organizations focus on exploratory innovation, which helps in generating new ideas and opportunities for an organization and to improve the existing processes (Iqbal & Suzianti, 2021; Srisathan et al., 2023). There is no single best approach; sometimes, the capabilities of AI and internal resources can greatly benefit an organization. Additionally, AI contributes to performance enhancement directly through creativity, better decision-making, and exceptional managerial skills & practices (Wamba-Taguimdje et al., 2020; Mikalef et al., 2021). All of these show that adopting AI will benefit the organization.

An important perspective highlighted in the literature is the connection between organizational agility and dynamic capabilities (Al Jabri et al., 2024; Jaafar et al., 2026). Dynamic capabilities allow a firm to adapt its operations, strategic decisions, processes, production, resources, and human talent to meet the market demands. When applied to AI,

this means organizations should also integrate AI into their existing processes while maintaining flexibility, as organizational agility is all about flexibility and being adaptive (Shatila, 2025; Mikalef et al., 2021). Research shows that organizations that show agility can more easily survive and capitalize on their investment in AI.

Small and Medium enterprises (SMEs) are increasingly utilizing Artificial Intelligence and other digital tools to improve and innovate their operations in order to remain competitive (Badghish & Soomro, 2024; Sánchez et al., 2025). Their success largely depends on their ability to develop the right capabilities, but this can be challenging in environments with limited resources. SMEs must be very cautious when allocating financial and technological resources to ensure they achieve maximum returns from the digital transformation efforts (Serrasqueiro et al., 2021; Armenia et al., 2021).

While the literature highlights the increasing importance of digital technologies in SMEs, most studies in developed economies tend to focus primarily on large organisations, overlooking the unique challenges faced by SMEs (Yesuf & Fields, 2025; Singh Dubey et al., 2022). There is a significant gap in understanding how constraints such as limited resources, infrastructure challenges, and the institutional environment can substantially impact SMEs. These factors significantly impact a developing economy like Pakistan, where SMEs play an important role in economic development while facing unique challenges in adapting to advanced technologies.

Dynamic Capabilities & AI Adoption:

Organizational success depends not only on advanced technology but also on strong leadership and managerial effectiveness. What matters most is how to build the right capabilities and expertise while ensuring that the internal system and tools are sufficiently robust (Ayoub & Sopuru, 2026; Al-Okaily, 2025). This idea is supported by theories such as Dynamic Capabilities Theories and the Resource-based View. These theories explain that competitive advantages arise from the effective utilization of technologies and tools, combined with strong leadership. Simply having the tools alone will not make a significant difference (Enholm et al., 2022; Kitsios & Kamariotou, 2021) .

Research shows that AI contributes to the development of AI-enabled dynamic capabilities. This means that organizations become better at identifying the opportunities, making strategic decisions, and adapting or transforming their processes, policies, and operations according to the market needs (Ayoub & Sopuru, 2026; Gao et al., 2025). Studies also show that AI alone can't drive change. Its effective use creates a significant difference within an organization.

For example, nowadays companies require a data-driven culture where every decision is based on data and supported by insight. At the same time, employees should understand and effectively apply these insights. These two approaches are reshaping the company's

performance and helping to gain a competitive advantage (Chen et al., 2022; Perifanis & Kitsios, 2023).

Research indicates that effective Digital leadership enables organizations to become flexible and adaptive by improving their capabilities and strengthening their agility (Razzak et al., 2025; Shatila, 2025). Agility refers to an organization's ability to respond to changes, innovate effectively, and stay competitive in the marketplace by transforming according to the demands of the customers. So the leadership alone cannot drive positive difference, without the agility-Leadership fosters innovation, adaptivity through these qualities, and organizational performance can be improved.

AI and digital leadership are essential initial points, but they only generate better results when an organization cultivates strong capabilities and a flexible corporate culture, learning opportunities, and agility (Ayoub & Sopuru, 2026; Rajagopal et al., 2022). We can explain this in other words, the success and growth of an organization depend not only on digital tools & technology as well as effective leadership, but also on how well it utilizes its resource expertise to translate it into real-world actions, learning, and continuous improvement.

AI tools Appropriateness and Suitability:

The appropriateness of AI tools consists of multiple themes that need to be addressed, and there are several interconnected ideas that the literature has explained. Key themes in the appropriateness of AI tools include trustworthiness, Organizational readiness, user perspective, Contextual value, ethical responsibility, and task suitability (Crockett et al., 2021; Perifanis & Kitsios, 2023; Sánchez et al., 2025). Among these, the most prominent theme is ethical and responsible use, as the misuse of AI tools can pose significant risks and danger to humanity and the world.

If you misuse AI tools, it can lead to an increased reliance on technology, a loss of originality, and a reduction in creative thinking or brainstorming. The main purpose of AI tools like ChatGPT is to create ideas, assist with editing, and enhance or improve communication rather than replace human judgment and creativity (Alafnan, 2025; Moheno et al., 2024). These points highlight the importance of maintaining oversight and accountability in the use of AI in various processes or work.

The suitability of AI tools is highly context-dependent and closely linked to value creation. Nowadays, multinational organizations and even small and medium-sized enterprises are utilizing AI tools to improve efficiency, reduce costs, enhance decision-making, streamline processes, foster innovation, and transform their operations to seize market opportunities (Badghish & Soomro, 2024; Yesuf & Fields, 2025). However, many organizations struggle to realise these benefits due to high costs, poor data quality, integration challenges, and a lack of expertise. This highlights that the appropriateness of AI tools must align with the organization's goals, strategic needs, and available resources (Alkhatib et al., 2025).

In our research, we have identified a critical theme related to the appropriateness of task-based AI tools. Different AI tools have various strengths and limitations, which make them suitable for specific tasks (Agunuru, 2025; Niewiadomski et al., 2019). Each AI tool has a special feature that sets it apart from the others. For example, some tools are good for idea generation, communication context, and creativity, while others are better suited for data entry, formal applications, and structured technical outputs (Alafnan, 2025; Rajagopal et al., 2022). The selection of AI tools should depend on the nature of the task and its specific requirements, rather than relying on a one-size-fits-all approach.

Professional experience and user perceptions play a vital role in determining the suitability of an AI tool across different sectors. For example, AI tools can be highly beneficial in the educational sector, as they can increase the students' skills, creativity, confidence, and learning outcomes (Moheno et al., 2024). However, at the same time, it has raised concerns regarding the misuse and uncertainty regarding the proper usage. Therefore, user knowledge, experience, and awareness equally matter for the efficient and appropriate usage of the AI tools.

Organizational readiness and AI maturity are equally important for the successful adoption of AI tools. Research indicates that organizations need to possess the right knowledge, technology, expertise, and infrastructure to implement AI tools effectively (Khin & Hung Kee, 2022; Techanamurthy et al., 2025). Without these elements, the use of AI tools may lead to poor decision-making and unpredictable outcomes, which may negatively impact organizational goals. According to the literature, AI tools enhance speed and accuracy, but at the same time, this may lead to the risk of bias, lack of transparency, and reduced accountability (Machucho & Ortiz, 2025; Perifanis & Kitsios, 2023). It also tests the human decision-making skill and strategic decisions.

Finally, the appropriateness of AI also highlights the concept of ethical governance. It emphasizes the need for ethical governance. It emphasizes the need for ethical governance when using AI tools to ensure fairness, transparency, and accountability. The absence of these parameters can lead an organization to misinterpret information, face legal challenges, and harm its reputation with customers (Machucho & Ortiz, 2025).

One thing we can conclude from all the articles is that AI tools cannot be considered completely appropriate or inappropriate; their suitability depends on their application and use. To make the most of the AI tools, their use must be ethically aligned with a clear strategy and well-defined goals (Alkhatib et al., 2025). The approach should be carefully balanced as the integrated perspective doesn't have a single element but rather a combination of ethical, functional, and contextual considerations balanced with the real-world applications.

The Role of AI tools for increasing Business Performance & Value Creation:

This literature review examines the impact of AI tools on business performance, providing the themes that explain how value creation can be enhanced through several interconnected

areas, including Process transformation, strategic alignment, value creation, organizational capability, and data-driven performance enhancement (Enholm et al., 2022; Perifanis & Kitsios, 2023; Sharma & Dang, 2026).

Many organizations believe that AI-driven tools can create significant value and offer benefits such as growth and increased profitability. These tools also enable organizations to develop better decision-making strategies, which can reduce operational costs and increase efficiency (Rajagopal et al., 2022; Agunuru, 2025). However, in reality, the situation can vary significantly. Some organizations struggle to translate their investment directly into tangible outcomes due to various challenges faced by the businesses, for example, adoption, integration, and capability development (Sánchez et al., 2025; Saif et al., 2022). These factors indicate that the value of AI is heavily influenced by an organization's readiness and its ability to incorporate new AI tools & technologies into existing processes.

Moreover, the Literature strongly demonstrates how AI enhances business value and performance through the transformation of organizational processes. AI tools have enabled organizations to automate processes, innovate operations, provide optimistic workflows, and enhance predictive capabilities (Moderno et al., 2024; Gao et al., 2025). This allows businesses to transform outdated business practices into intelligent, data-driven operations that promote greater productivity and operational efficiency. Such a transformation is necessary for businesses aiming to achieve a competitive advantage and sustain their performance and growth.

The Literature explains the concept and importance of strategic alliances in order to determine the effectiveness of AI tools. Research indicates that AI tools deliver the greatest value when combined with the corporate strategy and integrated with the IT functions and business operations (Al-Okaily, 2025; Perifanis & Kitsios, 2023). This demonstrates that AI tools are not used merely as isolated technologies, but they contribute to a broader organizational transformation that supports innovation, service development, and strategic decision-making.

The development of AI capabilities plays a key role in firm performance. Organisations that effectively combine AI technologies alongside technological resources tend to be capable and are better positioned to achieve improved results and effective outcomes. AI tools themselves are not sufficient; instead, their ability depends on how they are used in an organisational context according to the capability-based perspective. AI tools help in playing a key role in improving data performance and analytics capabilities, enabling organisations to process data in large amounts, generate better insights, and support evidence-based decision-making processes. These data-driven capabilities assist firms in improving forecasting, optimising resource allocation, and responding more effectively to the dynamics of market conditions (Gao et al., 2025; Perifanis & Kitsios, 2023).

As a result of these combined study outcomes, we can conclude that AI tools serve as both operational and strategic enablers within an organisation. These tools utilize automation and process optimisation to improve overall business performance while simultaneously

delivering value through strategic planning and capabilities management (Mariani et al., 2025; Ayoub & Sopuru, 2026).

The effectiveness of AI is influenced by several factors, including organisational readiness, alignment with business objectives, and the ability to efficiently manage and develop AI capabilities (Sánchez et al., 2025; Kulkarni et al., 2024). Therefore, AI tools should not be seen merely as technological solutions rather they should be considered an essential part of a broader organisational transformation that can lead to performance improvement and value creation.

AI Adoption in SME: Strategic Consequences from a TOE-TAM Perspective, Competences and Determinants:

The use of artificial intelligence (AI) tools in small and medium-sized enterprises (SMEs) illustrates that implementing these tools within an organization is not a simple task. The process is inherently complicated and multi-faceted, driven more by organizational capabilities than by just technical expertise and decisions.

In the studies reviewed, the Technology- Organisational Environment (TOE) Framework emerges as a prominent theoretical Model. It is often combined & integrated with the Technology Acceptance Model (TAM) (Neves and Pizzichini, 2024; Khan et al., 2024). This framework is also connected to entrepreneurial positioning and Knowledge absorptive capacity in order to explain the key driver behind the AI tools and their subsequent outcomes in the digital era.

From a technological perspective, several factors contribute to the adoption of AI, including perceived usefulness, capabilities, and ease of use. These elements play a significant role in convincing organizations to embrace AI solutions. In today's digital era, where the primary focus of every organization is to increase profitability and maximize shareholder value, companies will only adopt AI tools if they offer substantial benefits. These may include improved decision-making, innovation in processes or operations, cost reduction, gaining a competitive advantage, a data-driven culture, and supportive leadership (Agrawal et al., 2024; Khan et al., 2024)..

However, if the usage of AI tools is beneficial, but its very important for the adoption of the AI tools that the current SMEs technology should be compatible enough to accept the change in the existing system & business ecosystem, as per the perceived view, the SME sector has less technological advantage and operate in a very less sophisticated technological infrastructure due to various limitations (Neves & Pizzichini, 2024). The SME should use the user-friendly AI tools that are suitable for their need instead of choosing the highly advanced technology in order to remain competitive and responsive in this rapidly changing environment (SAGE Open, 2025).

Corporate Governance and Performance of SMEs:

Corporate governance is a well-known factor in the performance of SMEs, particularly in developing countries. Good governance, in simple terms, assists businesses to work in a more transparent manner, make improved decisions, and develop trust among the stakeholders. Research indicates that the better the governance practices are in place in SMEs, the higher the chances they will be able to perform better and access external finance (Dzomonda, 2022; Kyambade et al., 2025). Governance in most cases does not merely impact directly, but also the way other variables impact business performance, including sustainability. This area is however important and underdeveloped as opposed to large organisations where formal governance structures are found to be lacking.

Sustainability and Environmental, Social, and Governance among SMEs:

The concept of sustainability, especially concerning the environmental, social, and governance (ESG) schemes, has gained significance with SMEs. Businesses can no longer operate on the basis of simply making profits, but they have to think about their further influence on society and the environment. Studies indicate that SMEs that embrace sustainability are able to enhance their reputation, draw investors, and reinforce their long-term performance (Dzomonda, 2022). With that said, there are a number of challenges that SMEs in developing countries face that render sustainability a hard issue to tackle. Their capacity to effectively practice them is usually hampered by the problem of political instability, corruption, and economic unpredictability. This points out that sustainability is not only an issue of in-house endeavor but also the external environment where SMEs are established.

Artificial Intelligence and Business Innovation:

Artificial intelligence (AI) has a significant influence on business innovation and competition. It enables companies to enhance efficiency, make decisions, and come up with new products and services. Numerous articles emphasize the potential of AI to change the nature of business, increase strategic capabilities, and develop new opportunities to grow (Machucho & Ortiz, 2025). Nonetheless, the implementation of AI is not as simple, particularly to SMEs. It needs the appropriate skills, resources and organisational preparedness, which a number of smaller firms might not have. Studies indicate that SMEs tend to be impeded due to financial limitations, absence of technical skills, and inadequate infrastructure during the adoption of innovative technologies such as AI (Kulkarni et al., 2024). As a result, while AI offers significant benefits, not all businesses are equally able to take advantage of it, leading to disparities in innovation and competitive performance.

Ethical Issues and Governance in AI:

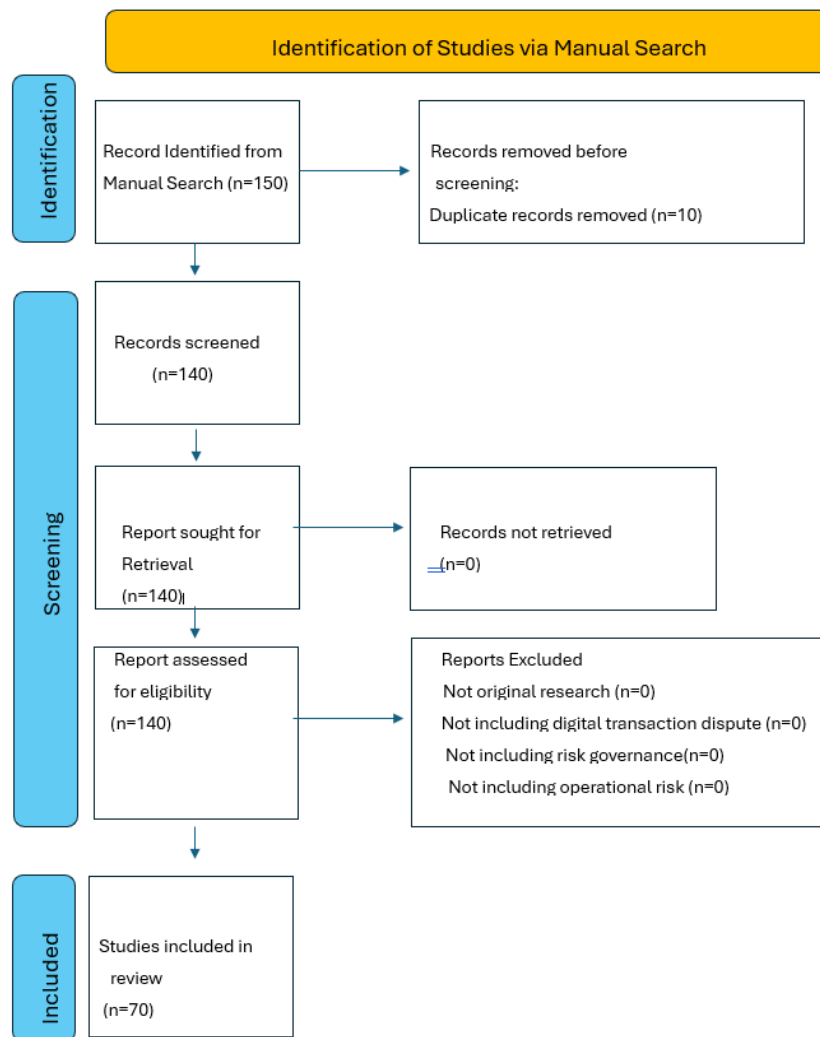
In addition to its advantages, there are also ethical and governance concerns that are significant with AI. Such issues as prejudice in algorithms, non-transparency, and non-accountability in making decisions are growing more topical. These problems are much more complicated in the case of SMEs since they frequently do not have the structures to handle

them. According to some studies, the willingness to use AI by a firm can have not only a positive impact on its performance but also on ethical conduct and social performance (Kulkarni et al., 2024). Beyond that, larger scans of AI adoption also reveal that ethical governance is necessary in gaining trust, having responsible innovation, and remaining competitively viable over the long term (Machucho and Ortiz, 2025). Nonetheless, the current literature is mostly based on large organisations, which means that the approach of SMEs to these issues is not well known. This renders AI governance and ethics a new field that is little explored.

Developing Country Contexts of SMEs:

The challenges that SMEs in developing countries experience are unique and have an influence on how they conduct business and develop. Their performance and sustainability can be significantly influenced by factors like lack of access to finance, poor institutions, political instability, and corruption (Abdissa et al., 2022). Such issues, too, affect the adoption of governance, sustainability, and AI into practice. Moreover, developing countries demonstrate that SMEs frequently experience technological preparedness-related issues and resource limitations, which also restrict their technological capability to implement advanced innovations like AI (Kulkarni et al., 2024). Due to these variations, the results of research on big companies or developed economies may not necessarily apply to SMEs in developing regions. This underscores the necessity of conducting further research that is based on the reality of these businesses.

Prisma Diagram:



Gap Matrix:

Sr #	Gap Type	Gap Statement	What Remains Unexplored	Reference/Article number
1	Theoretical+ Managerial	Studied AI Adoption widely, but AI value in the SMEs context is still weakly explained	There is a gap in the literature regarding how AI adoption is converted into measurable business value in SME.	55, 49, 19,20,21,36,43,40,45

2	Methodological	Most AI-SME literature is cross-sectional and Variance-based; Implementation over time is underexplored.	Less or limited longitudinal, processual, or mixed-method evidence explaining	55,49,51,52,53,50,48
3	Theoretical	Managerial microfoundations are underdeveloped in the AI adoption and value creation framework	Less explanation about how owner-manager cognition, leadership style, strategic judgement, and digital self-efficacy shape outcomes and AI adoption	11,17,31,27,53,34,58
4	Theoretical + Model Specification	Technology side frameworks remain under-specified	Lack of AI architecture, data quality, use-case maturity, process fit, explainability, and task-technology alignment.	55,49,54,51,52,48,56,42,37
5	Empirical +Contextual	SMEs are treated too simply/generically. Subgroup heterogeneity is insufficiently examined	Less is explained about the AI impact on firm size, ownership, sector, age, digital maturity, and business model. Practitioners need a contingent, not an average, recommendation.	55,17,53,19,22,25,51

6	Contextual +Empirical	Developing countries, especially Pakistan, have less evidence on AI adoption in SMEs.	Major contextual gap on how institutional voids, financing frictions, policy consistency, and digital capability constraints shape AI-enabled transformation in Pakistani SME.	12,13,14,15,16,7,9,61,63
7	Managerial + Strategic	Less literature is available on the strategic capability development issue; instead, they have focused on AI adoption	Underdeveloped, which strategic capabilities SME should build to leverage the AI under resource constraints	20,21,23,24,25,27,28,29,30
8	Theoretical+ Interdisciplinary	Open AI and innovation tools are insufficiently integrated in SME	Underexplored in the literature is how AI capabilities interact with open innovation mechanisms such as knowledge sourcing, co-creation, and absorptive capacity in SMEs.	1,2,55,23,22,20
9	Managerial+Operational	Process transformation mechanisms are still a blind spot	The literature does not fully explain which business process transformed first, how workflows are	18,44,40,45,35,47

			redesigned, and how process-level changes into firm level performance gains in SMEs.	
10	Theoretical+Managerial	Responsible AI, governance, ethics, and trust remain peripheral in the SME AI framework	Most SME AI adoption models do not integrate with the AI governance, trustworthiness, fairness, risk management, and compliance capabilities as a core explanatory variable.	32,61,63,64,51,48
11	Empirical+Resource-Based	The bridge between AI adoption and financial constraints is not fully developed	A strong underexplored area is how cyber risk, financial constraints, and capital scarcity condition AI adoption and its return in SME.	3,5,4,10,65,59
12	Human Capital/Managerial	Skill readiness is still treated as a background issue rather than a central mechanism	The literature does not explain how soft skills, digital skills, managerial AI literacy, and workforce adaptability contribute to successful SME AI implementation	9,8,10,61,33,55

			n and value creation.	
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Part 3rd: Preliminary Critical Literature Review:

Introduction:

Artificial intelligence (AI) has become a transformative force that is shaping many modern business environments, predominantly for the small and medium-sized enterprises (SMEs).

The increase in digitalisation and competitive pressures made many organisations focus on AI technologies to enhance their productivity, decision-making, and value creation (Kitsios and Kamariotou, 2021; Badghish and Soomro, 2024). Many SMEs struggle to achieve AI investments into performance outcomes, irrespective of the artificial intelligence capabilities, which is referred to as the AI paradox in the latest literature (Ayoub and Sopuru, 2026; Mariani and Mancini, 2025)..

The AI paradox is where even high investment cannot assure efficient growth.

The research issue which is mentioned in this study is the lack of a comprehensive understanding of how AI capabilities determine the sustainable and financial performance outcomes in SMEs. The existing studies still tend to focus on isolated relationships such as AI and Innovation, AI and agility, or AI and firm performance, without integrating these models into a unified framework (Perifanis and Kitsios, 2023; Gao, Liu and Wu, 2025). Due to this, the mechanisms through which AI enables value generation remain fragmented and underdeveloped.

This issue is now very concerning because of:

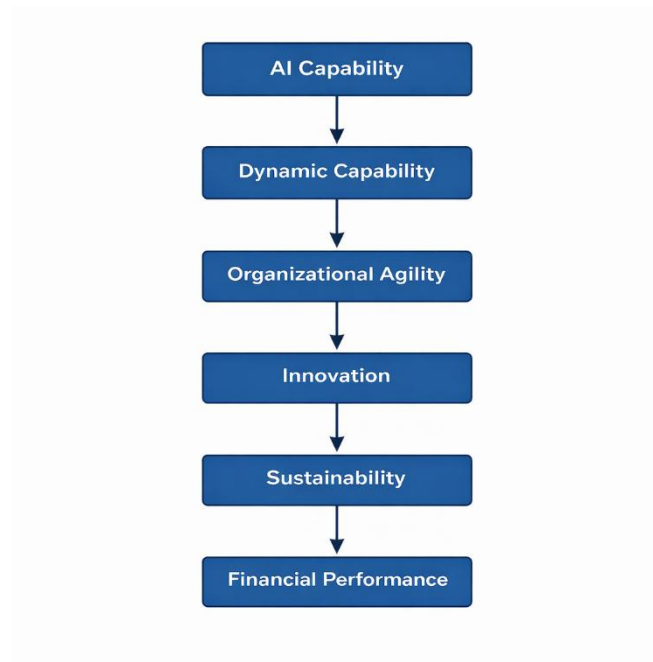
- Rapid acceleration of the digital transformation across industries (Sánchez, Calderón, and Herrera, 2025)
- Increase reliance on AI for strategic decision-making and competitive advantage (Krakowski, Luger, and Raisch, 2023)
- Growing emphasis on sustainability and term value creation in Organisational strategy (Chaudhuri, Subramanian and Dora, 2022)

The aim of the research is:

To advance and critically examine a combined framework explanation of how AI capabilities effect SME performance through intermediating mechanisms such as organizational agility, innovation, and sustainability.

Conceptual Framing:

This study focuses on the following core construct:



Independent Variable: AI Capability

Dependent Variable: Financial Performance

Mediator: Dynamic Capability, Organizational Agility, Innovation and Sustainability

Relationships:

Overall, the AI studies suggested that AI has an indirect relationship with:

- Dynamic Capabilities
- Organizational agility
- Innovation processes

Scope of the study:

This study emphasizes:

- SMEs
- Digital Transformation framework
- Multi-dimensional performance (innovation + sustainability + financial)

Thematic Literature Review:

Theme 1: AI Capabilities and Organizational Performance

Conceptual Foundations:

Following a critical analysis, the Resource-Based View theory suggested that AI capabilities are directly linked with the company's performance. The theory suggests that a firm can achieve a competitive advantage through creating value and possessing unique, scarce resources.

AI capabilities are conceptualized as a strategic resource that improves decision-making, operational efficiency, and innovative potential (Chen, Esperança, and Wang, 2022).

At the same time, the resource-based theory does not guarantee outstanding organizational performance. Instead, the theory suggests implementing the resource-based theory, the border organizational processes, and complementary capabilities (Ayoub and Sopuru, 2026). This concept is aligned with the Dynamic Capabilities theory, which elaborates the capacity of the organization to integrate and reconsider the firm's ability (internally & externally) to respond to the rapidly changing environment.

Moreover, Studies suggested that AI transforms the competitive advantage and also enhances the operational processes. AI basically shifts the operations from manual or human-centric capabilities to a Hybrid Human-AI system (Krakowski, Luger, and Raisch, 2023).

Empirical Evidence:

Empirical evidence shows that AI capabilities positively influence organizational performance in various ways. AI tools enhance the data processing, forecasting the demand, and decision making, which can lead to effective cost reduction and improved efficiency (Chen, Esperance, and wang 2022). AI tools also help organizations to optimize their operations, improve customer experience, and customize service delivery to their customers, which effectively contributes to the company's performance and financial benefits.

Empirical Evidence also reveals significant limitations. A substantial proportion of firms fail to realise the expected benefits of AI investment, reports indicating that many AI initiatives do not progress beyond pilot stages (Mariani and Mancini, 2025). This phenomenon is often attributed to the absence of complementary organizational capabilities, such as:

- Data-Driven Environment
- Organizational learning and growth
- Strategic alignment

Studies also show that AI capabilities have direct and indirect effects on organizational performance. There are mediating variables such as:

- Innovation capabilities

- Organizational agility
- Decision-making quality

AI Capabilities enhance firm performance through creativity and AI-driven decision-making processes (Chen, Esperance, and Wang, 2022). Additionally, other studies examine the mediating role of agility in interpreting AI capability into project value (Mariani and Mancini, 2025).

Contradictions:

Literature demonstrates the importance of AI capabilities; at the same time, they present many contradictions.

First, Literature shows a disagreement that if AI has a direct and indirect effect on firm performance. Some literature argues that AI directly enhances performance through gained efficiency and automation, while others argue that its effects are mediated through organizational agility and innovation (Gao, Liu, and Wu, 2025).

Secondly, there are conflicting findings regarding the extent of AI's impact. Some literature reports performance development while others highlight minimal effects, particularly in SMEs. This discrepancy has led to the identification of the "AI paradox", where a high level of investment does not necessarily produce an increase in performance gains (Ayoub and Sopuru, 2026).

Third, there is a debate if the AI contributes as a substitute or a complement to human capabilities. Some experts argue that AI capabilities have replaced the traditional skills and reduced the human expertise, whereas others believe AI capabilities have enhanced the decision-making through augmentation (Krakowski, Luger and Raisch, 2023).

Critical Evaluation:

The following Critical contradictions are highlighted:

- Modification in the measurement of AI capabilities
- Distinction in Organizational Willingness
- Deficiency of an integrated theoretical framework

Synthesis Insight:

AI capabilities' influence is conditional rather than universal; it depends on the mediating mechanism and the context.

Contextual Variation:

The relationship between AI capabilities and Performance is highly context dependent. It is influenced by many factors, including firm size and geographical environment. All these elements contribute to the adoption of AI and determine how effectively it translates into performance outcomes.

The capabilities of AI differ across industries due to digital maturity, data availability, and technological infrastructure. Sectors such as digital agencies, e-commerce businesses, and information technology typically achieve higher performance.

These industries have advanced digital capabilities, a large volume of structured and unstructured data, and integration of digital technologies into core operations.

Unlike traditional industries such as agriculture, small-scale manufacturing, and service-based small to medium-sized enterprises (SMEs) which often lack access to advanced technology, these sectors struggle to effectively translating AI investments.

The size of a firm significantly influences its performance in AI implementation. Large organizations possess greater financial resources, access to technical expertise, and established data management systems. In contrast, SMEs often face limited financial capabilities, insufficient investments in AI infrastructure, a lack of skilled personnel, and weaker data governance and analytical skills. As a result, SMEs often struggle to realise the full benefits of AI investments. However, SMEs do enjoy greater organizational flexibility, Lower bureaucratic barriers, and faster decision-making processes.

Geographical importance significantly influences AI adoption and its impact on firm performance, such as in the UAE and China. Developed economies offer economic advantages such as Strong institutional support, well-defined regulatory policies & frameworks, and advanced technological infrastructure. In contrast, developing economies face challenges such as uncertain infrastructure, irregular policies, Unclear Standard operating procedures (SOP), and limited access to skilled labor.

Emerging economies have significant opportunities for growth. For instance, rapid digitalisation, supported by government initiatives, can accelerate AI adoption in developing countries. Literature has shown that institutional support has strengthened the relationship between the AI capabilities and willingness to adopt AI and Investment (Ameen et al., 2024).

Critical Evaluation:

There is a limitation in the literature regarding the adoption of AI in the traditional sectors. This creates a sectoral bias in the literature; findings are in favour of digitally advanced industries.

The literature presents the dual perspective that SMEs have limited resources, but they have the agility to take the competitive advancement. This highlights the need for research that examines how SMEs can overcome capabilities gaps in order to maximize the AI value.

Geographical variation exists and is acknowledged; most literature is context-based and focuses on a single country database. This gap limits the generalization of findings and prevents the development of universal models.

Theme 2: AI Capabilities and Innovation

Conceptual Foundations:

Innovation is a central mechanism for using AI capabilities to generate organizational value. The theoretical perspective is that AI enhances innovation by improving the data processes, Knowledge creation, and decision-making capabilities, which help in finding new opportunities and optimising the existing processes. As per the Resource-Based support innovation, through which AI capabilities leverage the organization to take data-driven decisions (Chen, Esperanca, and Wang, 2022).

The relationship between innovation and AI has been discussed in detail via Dynamic Capability Theory, which says that a firm should react according to the demand of the market and the firm should integrate, deploy, and reconfigure resources in response to the market demand. AI acts as a bridge that enables technology that strengthens Knowledge-based Dynamic Capabilities, such as knowledge creation/generation, Knowledge acquisition, and market sensing (An, Lin, and Benitez, 2026).

AI technology can be an exploratory innovation in which you develop a new product, market, and knowledge. Whereas, Exploitative Innovation in which you improve/enhance the existing processes and capabilities.

AI supports both dimensions by enabling organizations to analyse large datasets, identify patterns, and generate actionable insights. However, Recent literature shows that AI cannot drive innovation; it is dependent on the integration with organizational capabilities and strategic alignment (Gao, Liu and Wu, 2025)

Critical Insight:

While RBV and Dynamic Capability theory provide a strong foundation and support the Innovation and AI Capabilities. The existing research treats AI as a standalone technological resource rather than a system integrated with the organizational processes, which highlights and indicates the need for more integrated theoretical frameworks.

Empirical Evidence:

Empirical studies largely supported the AI capabilities and innovation outcome. AI enhances firms' ability to: Evaluate complex data and provide data-driven decision making, which is according to the trend and market demands. AI has improved the product development process, also optimised operational efficiency and facilitated knowledge sharing and collaboration.

For Instance, research has also demonstrated that AI capabilities have enhanced product innovation through data-driven insights and improved business intelligence processes (Gao, Liu, and Wu, 2025). Literature shows that when AI is combined with the knowledge-based dynamic capabilities leads to exploratory and exploitative innovation (An, Lin, and Benitez, 2026)

AI-driven innovation is not limited to new product development but extends to: improvement of existing processes (innovating the business model), and personalizing service innovation.

Empirical findings show that the relationship between AI and innovation is indirect in the presence of mediating variables such as:

- Knowledge management capabilities
- Organizational learning
- Data-driven culture

Evaluation:

All in all, the evidence points to the idea that AI has a beneficial impact on innovation support. Most of the studies, however, are cross-sectional, which can only give a picture in time. This complicates the issue of determining whether AI truly drives innovation or innovative firms are merely more likely to use AI in the first place. Moreover, the long-term effect of AI on innovation is still unknown, and there are very few studies that follow organisations in the long-term.

Contradictions:

Even though the literature mostly concentrates on the positive aspects of AI in terms of innovation, certain key contradictions have to be mentioned.

To start with, although numerous studies show a high level of positive impacts, others demonstrate that the adoption of AI does not necessarily result in innovation. In the real world, most companies have invested in AI yet fail to translate it into a tangible product. This can be because of practical difficulties like:

- limited organisational readiness
- inadequacy in technical know-how.
- weak systems of governance and poor quality of data.

Second, it remains debated whether AI is the primary source of innovation, or its value is related to its integration with other organisational capabilities. Other researchers consider AI a driver on its own, but others believe that innovation is only achieved when AI is combined with knowledge-based capabilities and effective organisational processes (An, Lin and Benitez, 2026).

Third, there is an inconsistency in terms of the type of innovation that AI supports. Other studies highlight its importance in exploratory innovation, like new product development or new market entry. Conversely, other researchers indicate that AI has a better application in exploitative innovation, including efficiency and optimisation of the current processes.

Critical Evaluation:

These contradictions combined indicate that the influence of AI on innovation is not clear-cut. Rather, it seems to be contingent, contingent on factors like organisational preparedness, the existence of complementary capabilities, and strategic alignment.

Synthesis Insight:

This suggests that AI is not to be considered a driver of innovation. Instead, it is a facilitator, the success of which is determined by its level of support by organisational capabilities and its integration into business processes.

Contextual Variation:

The correlation between the technological capability of AI and innovation does not exist in all organisations. Rather, it is context-based on such factors as firm size, technological preparedness and industry factors.

The overall innovation outcomes of AI are stronger in large organisations. This is mostly due to the fact that they have:

- greater financial resources
- availability of expertise in specialisation.
- well-developed data infrastructure
- established R&D capabilities

These benefits provide them with an opportunity to invest in AI and make it a part of their innovation processes.

Conversely, SMEs are usually difficult to deal with. They may not be able to exploit AI to its fullest due to limited funds, not being tech-savvy, or having poorer data systems. Nevertheless, there are also some strong points of SMEs, including:

- greater flexibility
- faster decision-making
- less bureaucracy

This brings about an intriguing paradox: SMEs might be nimbler and be able to adapt to changes faster, but they are in many ways under-equipped to make the most of AI.

Another key factor is technological readiness. Companies that already possess good IT infrastructure, data management systems, and talented workforce are far more equipped to utilize AI in creating innovations.

Conversely, organisations that are not technologically prepared are usually challenged by:

- poor data or fragmented data.
- challenges in adapting AI to the current systems.

- low scaling capability of AI solutions.

Because of this, despite these firms adopting AI, they might not achieve substantial outcomes related to innovation.

The context of an industry is also significant. AI is more likely to contribute to innovation in those business sectors that are data-intensive, like manufacturing, finance, and e-commerce. The reason is that the following sectors:

- produce big data.
- need a great deal of automation.
- are already computerized.

Conversely, the development of traditional industries is usually slower. Digital maturity, resistance to change, and exposure to advanced technologies should be lower to decrease the potential of AI in fueling innovation.

Critical Insight:

Such differences, on the whole, demonstrate that AI-driven innovation is not universal. Its effectiveness lies in the degree of alignment between the AI capability and the organisational resources, technological preparedness, and external environment.

Theme 3: AI Potential and Organizational Agility

Conceptual Foundations:

The connection between AI potential and organizational responsiveness is based largely on the Dynamic Capability Theory, according to which the adaptation of firms to the fast-evolving environment occurs because of the integration, reorganization, and renewal of the available resources. In this context, organizational agility can be thought of as the capability of the firm to feel the opportunities, react fast, and redesign operations to suit the external change.

AI capability can be critical to facilitate this process. AI enables organisations to react better to market changes and uncertainty by improving decision-making in real-time and predictive analytics, enabling them to respond more effectively to market changes (Mariani and Mancini, 2025). In that regard, AI can be regarded as a basic facilitator of agility, helping to respond to strategic changes faster and more knowledgeably.

Nonetheless, recent studies indicate that agility is not a natural result of AI adoption. Rather, it is determined by how well the firm can match AI technologies with organisational practices and strategies (Al Jabri et al., 2024). This signifies the relevance of complementary capabilities, including IT alignment and organisational learning, to convert AI investments into agile outputs.

Critical Insight:

Dynamic Capability Theory offers a good conceptual foundation, although it tends to presume the existence of an inherent relationship between technological capabilities and agility. However, in practice, this relationship is more complicated and needs integration and capacity building in organisations, which is not covered exhaustively in current models.

Empirical Evidence:

The notion that AI capability increases organizational agility is normally backed by empirical studies. AI helps companies to:

- process high amounts of data in real time.
- enhance predictive and forecasting decisions.
- react faster to customer demands and changes in the market.

To illustrate, the research indicates that AI potential can enhance organizational responsiveness and flexibility considerably, enabling companies to adjust to the dynamic environment more efficiently (Mariani and Mancini, 2025). Likewise, it has been shown that AI-based dynamic capabilities improve agility by increasing IT alignment and reconfiguring of resources (Al Jabri et al., 2024).

Notably, the concept of agility is frequently found as an intermediate between AI capacity and company performance. This implies that AI does not make performance better per se, but does so by facilitating organisations to be more agile, which consequently makes them more innovative and competitive.

Nevertheless, this evidence is not that strong. The majority of the studies are based on cross-sectional surveys and methods based on SEM, which limits the possibility of establishing causality and long-term effects. Also, very little empirical research analyzes the agility changing with time due to the adoption of AI.

Evaluation:

Although empirical evidence is mostly in line with the AI-agility relationship, it is limited in terms of methodology and is not long-term validated.

Contradictions:

Although the overall results of the literature are positive, there are various contradictions on whether organizational agility plays a role.

To begin with, the question of whether agility is to be considered a mediating variable or an independent outcome is disputable. Other studies place agility as a fundamental process by which AI is associated with performance, whereas others regard agility as a consequence of AI implementation without taking into account the greater context of how it contributes to the value creation process (Mariani and Mancini, 2025).

Second, we have inconsistencies when it comes to the contribution of AI to agility. Whereas certain studies indicate that there is a substantial advancement in responsiveness and flexibility, other studies argue that the implementation of AI is not enough, especially when organisations do not have the cultural and structural resources that they need.

Third, the conceptualisation and measurement of agility itself are disparate in the literature. The speed and efficiency of operations are studied in some studies, and the long-term adaptability and innovation are the ones studied in the other studies. This failure to formulate conceptual clarity helps to produce inconsistent findings.

Critical Evaluation:

These conflicting results show that the correlation between AI capability and agility is not always consistent. Rather, it relies upon:

- definition and measurement of agility.
- complementary capabilities.
- the organisational context

Synthesis Insight:

Instead of being a single, fixed phenomenon, organizational agility must be seen as a result of AI capability and a process by which AI can bring value.

Contextual Variation:

The influence of AI capability on organisational agility in various contexts differs greatly, especially concerning industry dynamics, environmental uncertainty and organisational characteristics.

Agility is more likely to be a critical factor in fast-paced and technology-intensive sectors when a company needs to constantly adjust to changing market trends. In these types of organizations, AI is a major strength as it allows analyzing data in real-time, making decisions more quickly, and responding to change proactively (Krakowski, Luger and Raisch, 2023).

Conversely, in more predictable or traditional industries, agility might not be of the same significance. Companies in these industries might not have the same urgency to innovate swiftly, so the short-term worth of AI-driven flexibility is decreased.

The degree of environmental uncertainty also affects the effectiveness of AI in increasing agility. Agility is one of the most important predictors of performance in highly dynamic environments that are characterised by a high rate of technological change and market volatility. AI can help firms deal with this uncertainty by enhancing their capabilities to:

- anticipate changes
- be fast to react to disruptors
- exploit emerging opportunities

Nevertheless, the advantages of agility might be less apparent in less dynamic environments, as companies do not have as many external forces to adjust to.

Cultural, leadership, and structural aspects of organisations are also important. Firms with:

- strong data-driven cultures
- flexible organisational structures
- supportive leadership

They have a higher chance of effectively transferring AI capability to agility. Conversely, inflexible structures and the unwillingness to change may reduce the success of the implementation of AI.

Critical Insight:

Based on these results, organizational agility is situational. The usefulness of AI in promoting agility is determined by the correspondence between the technological capacity and the external and internal environment of the organisation.

Theme 4: AI Potential and Sustainability

Conceptual Foundations:

The issue of sustainability is gradually becoming a primary focus of organisations, especially regarding digital transformation. Theoretically, the concept of sustainability is associated with the capacity of a firm to reconcile between economic, environmental, and social goals. In this context, AI capability is perceived as a possible facilitator of sustainable practices because it will enhance efficiency, minimize waste, and aid in making better decisions.

AI helps to ensure sustainability through the data-driven optimisation of resources, including energy use, supply chain effectiveness, and environmental implication minimisation (Chaudhuri, Subramanian and Dora, 2022).

Nevertheless, there is still conceptual underdevelopment between AI and sustainability. Although the literature on digital transformation tends to believe that technology enhances sustainability, this notion is not necessarily critically analysed. In a lot of situations, AI is viewed as a neutral instrument, without paying attention to its environmental expenses, including energy use and data processing requirements.

Critical Insight:

The current conceptual frameworks generally simplify the AI-sustainability relationship, emphasizing benefits and disregarding possible trade-offs. This shows the necessity of more balanced and integrated theoretical approaches.

Empirical Evidence

In comparison with other domains like innovation and performance, empirical studies that directly relate AI capacity to sustainability results are relatively few. According to some studies,

AI can promote sustainability by increasing operational efficiency and facilitating environmentally friendly practices. As an illustration, digital technologies have been revealed to assist with circular economy activities and sustainable business models among SMEs (Chaudhuri, Subramanian and Dora, 2022).

The general evidence base is, however, still disjointed. Numerous researchers concentrate on the concept of digital transformation in general, and not on the particular effect of AI. Consequently, it becomes hard to ascertain the level at which AI has a distinct contribution to the sustainability outcomes.

Evaluation:

The empirical data is small and scattered, with a massive deficiency in knowledge about the role of AI capacity in sustainability in a systematic and quantifiable way.

Contradictions

The existing literature contains various contradictions about the role of AI in sustainability.

On the one hand, there are studies saying that digital technologies, such as AI, are essential in facilitating sustainability through efficiency enhancement and making practices more eco-friendly. Conversely, there is no explicit or direct correlation according to other studies, which points to a possibility of overestimating the AI benefits.

The first concern is that the results of sustainability are frequently based on the implementation process of AI, but not on the technology itself. To illustrate, AI can decrease the waste in supply chains, yet it may also raise energy consumption because of the extensive data processing.

The other contradiction is the short-term and long-term impact. Although AI can provide short-term efficiency, its long-term sustainability effect is less evident, especially when taking into account the cost to the environment and ethical considerations.

Critical Evaluation:

These paradoxes indicate that AI does not necessarily result in sustainability. Rather, it is influenced by organisational priorities, implementation strategies, and external conditions.

Synthesis Insight:

The AI capability is not to be considered as the sustainability enabler but as the possible enabler of sustainability, which needs to be aligned with sustainability strategies and organisational goals.

Contextual Variation

The interaction between AI potential and sustainability differs greatly in various settings, especially in relation to geographical areas, regulatory settings, and practices in the industry. Organisations in places where the regulatory frameworks and environmental policies are strong are more likely to adopt AI to facilitate sustainability efforts. Conversely, in areas where

regulations are weaker, companies can put efficiency and cost saving above the environment. Institutional support and government policies are important to influence the sustainability outcomes. Carbon emissions regulations, data governance, and environmental regulations can impact the firm adoption and adoption of AI technologies.

The industries also vary in terms of sustainability results. For example:

- AI can be used by manufacturing industries to optimise the use of resources and minimise waste.

Service industries can pay more attention to digital efficiency and customer experience.

Critical Insight:

These differences underscore the fact that the results of sustainability are contextual and influenced by institutional, regulatory and industry-specific results.

Synthesis of Findings

1. Patterns

There are a number of patterns that are consistent across the literature.

First, AI capability can hardly affect performance directly. Rather, it tends to have an indirect impact and can act via mediating processes, including organizational agility and innovation.

Second, innovation and agility are continuously mentioned as the ways in which AI can generate value. These processes help companies to actualize the technological capabilities.

Third, the relevance of complementary organisational capabilities is reiterated several times. AI should not be used alone; its success is determined by organisational learning, data-driven culture, and strategic alignment.

2. Relationships

It has been proposed in the literature that AI capability has a multi-stage relationship, where it can drive performance via a set of interrelated processes:

AI Capability → Dynamic Capability → Organizational Agility → Innovation → Sustainability → Performance

In this process:

- Dynamic capabilities allow the firms to reorganise resources.
- Agility enables companies to react to change.
- Value creation is a result of innovation.

Sustainability and financial performance are the last results.

Notably, such relations are affected by the internal organisational factors as well as the external environmental conditions.

3. Mechanisms

AI generates value in several distinct ways:

- Evidence-based decision-making, to make strategic decisions more accurate and timely.
- Creation of knowledge, underpinning innovation and learning.
- Reconfiguration of resources where firms can adjust to changing circumstances.
- Process optimisation, enhancing efficiency and lowering the costs.

Nevertheless, the mechanisms are hardly combined into one, consistent framework in the current studies. Rather, research is more likely to deal with single pathways, resulting in piecemeal knowledge.

Critical Insight:

A coherent system that unites these processes into a coherent account of AI-driven value creation is evidently needed.

Research Gaps

There are a number of significant gaps in the literature:

Theoretical Gap: The absence of integrated frameworks that can unify AI, innovation, sustainability, and performance.

- Empirical Gap: scanty longitudinal and multi-dimensional research.
- Contextual Gap: Absence of cross-country and cross-industry studies.
- Methodological shortcoming: Excessive use of cross-sectional surveys.

Draft Research Questions

1. What impact do AI capabilities have on the performance of SMEs due to organizational agility and innovation?
2. How is sustainability related to the connection between AI capability and financial performance?
3. What is the influence of contextual factors (firm size and institutional support) on these relationships?

Theoretical Contribution

This research adds to the theory in that it:

- A combination of RBV, Dynamic Capability Theory, and the digital transformation perspectives.

- Creating a multi-dimensional performance system.
- Expanding on the current models with sustainability.
- Determining important mediation and moderation processes.

Managerial Implications

The study provides useful information to managers:

- Organizational capabilities have to support AI investments.
- Agility and innovation processes should be prioritised by firms.
- Managers should strike a balance between strategic flexibility and data-driven decisions.
- AI must be in line with sustainability goals, not efficiency only.

Conclusion

The review indicates that although AI capability holds great potential in improving the performance of SMEs, the effect is not automatic. Rather, it is determined by various organisational and contextual factors.

Through literature synthesis, this study brings out the necessity of an integrated framework that describes how AI generates value via interlinked processes. The suggested model fills this gap and serves as a solid base for future empirical studies and contributes to theory and practice.

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