

Artificial Intelligence Democratization in Developing Economies through the Lenses of Small Business Operations

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Abstract

The concept of artificial intelligence (AI) democratisation from the perspective of small business operations in developing economies was looked at in this study. While AI has become a transformative force across various sectors, its adoption among small and medium-sized enterprises (SMEs) remains relatively low due to multiple structural and operational barriers. The paper explored the key hindrances to AI democratisation, including economic and infrastructural constraints, high implementation costs, limited access to quality data, and inadequate digital and technical skills among business owners and employees. Additionally, organisational resistance, ethical concerns, and weak regulatory frameworks further limit the widespread adoption of AI in these contexts. Drawing on extant literature, the study identified strategic pathways for enhancing AI accessibility and usability among SMEs. These include policy-driven interventions such as subsidised access to AI technologies, development of shared computing infrastructure, and promotion of data-sharing initiatives. The paper also highlighted the importance of leveraging cloud-based solutions, low-code platforms, and Automated Machine Learning (AutoML) tools to simplify AI deployment. Furthermore, it emphasised the need for human capital development through digital literacy programs, upskilling initiatives, and participatory leadership approaches. The study concluded that AI democratisation is not merely a technological advancement, but a strategic imperative for improving the competitiveness and sustainability of small businesses in developing economies. It recommended, among others, that governments in developing countries need to provide financial support such as grants, tax incentives, and subsidised access to AI tools and cloud infrastructure to reduce the cost barrier for small businesses.

Keywords: Artificial Intelligence, Artificial Intelligence Democratisation, SMEs, Developing Economies, Machine Learning, Digital Literacy.

Introduction

Technology innovation is becoming more prominent in business operations lately, and chief among technologies taking centre stage in this regard is Artificial Intelligence (AI) (Arachie, Diba & Idigo, 2023). The concept of AI is presently ubiquitous in many respects. Different

sectors of the economy, including education, medicine, law, engineering and a host of others, have witnessed significant permeations of AI into their operations and existence. AI remains one of the most revolutionary modern methodologies implemented throughout many sectors, including business (Bharadiya, Thomas & Ahmed, 2023), finance (Goodell, Kumar, Lim & Pattnaik, 2021) and health (Ellahham, Ellahham & Simsekler, 2020).

Businesses that wish to grow and remain relevant in the ever-changing operational environment need to embrace technologies such as AI in what they do. To this end, Nwabuike, Onodugo, Arachie and Nkwunonwo (2020) assert that the advancement of technology in business operations is central to the suitability of those businesses. There are different forms of businesses, but the form that is closer to the people, playing a sterling role in the economic progression of nations, is Small and Medium Scale Enterprises (SMEs). SMEs are seen globally as being critical to economic growth and industrialisation around the world (Arachie, Nwosu, Ugwuanyi & Brahim, 2025a; Arachie, Nzewi, Emejulu & Kekeocha, 2020). Similarly, Okwudiri, Nwosu, Arachie, Ndum and Ibrahim (2025) opine that SMEs are critical in the economic growth and development dynamics of nations, hence, anything that can contribute to their sustainability is crucial.

Many big businesses have come to realise that the embeddedness of technology, including AI, in their operations is important, and SMEs are also realising this as well, albeit gradually. However, the level of operationalisation of AI by SMEs is relatively low, especially in developing economies. The complexity of AI adoption is one of the reasons some small businesses shy away from AI adoption, hence, the concept of AI democratisation. As AI becomes more integrated into various sectors, there is a growing movement to democratise it, ensuring that its benefits are not limited to a select few, but are distributed across society (Costa, Aparicio, Aparicio & Aparicio, 2024).

Artificial Intelligence (AI) is drastically moving away from being the exclusive preserve of experts in technology, coding and big businesses, into a more encompassing field, where everybody who wishes to play can do so. This is the effect of democratisation of AI, a concept that entails making AI less ambiguous and cumbersome for less technical individuals and businesses to adopt and adapt. Awasthi (2025) posits that the landscape of AI implementation in business is undergoing a profound transformation, marked by the democratization of sophisticated machine learning (ML) capabilities and algorithms.

Artificial Intelligence (AI) democratisation seeks to provide more people with the opportunity to not just use, but understand the workings of AI (Allen et al., 2019). It empowers more people and organisations, who hitherto lack the competence of AI, so as to bring the benefit of AI adoption to wider groups (Rall, Fraunholz & Bauer, 2023). Democratizing AI usage holds potential for alleviating current power hierarchies within the socio-technical framework. Crucially, if AI is perceived as a potent instrument that enhances users' ability to perform diverse tasks, it follows that this formidable tool should not be concentrated in the hands of a privileged minority, as doing so would intensify existing societal power disparities (Lin, 2024). It is against this backdrop that this study seeks to

study AI democratisation through the lenses of small business operations. Specifically, however, the study seeks to:

1. Examine the hindrances to democratisation of AI for small businesses in developing economies.
2. Identify the steps that should be taken to democratize AI for small business operations in developing economies.

Review of Related Literature

Artificial Intelligence

Artificial Intelligence (AI) functions when machines, software and hardware start acting like intelligent humans. Arachie et al. (2025a) point out that AI is said to be operational when computers, apps, and software are configured to reason like humans, make intelligent decisions, and alleviate human burdens, hence enabling individuals to address more complicated jobs. It is the ability of machines to do what intelligent humans do (Arachie et al., 2023). So, for a machine or software to be said to be an AI, it has to be smart, reason, and make decisions that humans regard as intelligent. It is against this backdrop that Okereke, Arachie, Onah and Ndum (2025) aver that AI acts like a human, not just any human, but intelligent ones.

The whole essence of AI is for it to learn and make decisions independently, building on data and experience from the past. Duan, Edwards, and Dwivedi (2019) describe AI as the capacity of robots to learn from experiences and make decisions based on a series of historical data and performance. It empowers computers to analyse extensive data sets, derive insights, and execute choices with remarkable speed and precision (Shankar, 2018; Libai et al., 2020; Li & Xu, 2022). Machine learning (ML) and deep learning approaches allow systems to improve performance over time without being explicitly programmed for every scenario (Li & Xu, 2022).

Recent institutional definitions emphasise the adaptive and decision-making characteristics of AI. The Organisation for Economic Co-operation and Development (OECD) (2019) characterises AI systems as machine-based systems capable of making forecasts, recommendations, or judgments that affect real or virtual environments, depending on a specified set of human-defined objectives. This definition emphasises autonomy and influence, indicating that AI systems progressively function inside socio-technical environments where their actions have tangible repercussions.

In practical applications, the efficacy of AI is frequently assessed by its speed, scale, and accuracy in data processing. As can be observed, AI enables computers to swiftly examine extensive datasets and produce insights. Empirical research in management and information systems indicates that AI-driven analytics surpass conventional decision-support systems in intricate, data-rich contexts (Davenport & Ronanki, 2018; Libai et al., 2020). These findings bolster the assertion that AI is functional when it enhances or exceeds human cognitive capabilities in precision and efficacy.

Democratizing AI

The concept of AI has, over the years, been so technical, needing experts to be able to build and operate. However, in recent times, the complexity of the systems has been reduced, which has led to increased participation in the field. This reduced complexity is a result of the democratisation of AI. The concept of democratisation of AI, however, still suffers from a lack of definition unanimity. The use of “democratizing AI” is elusive, as it has been associated with multiple meanings and practices, with potentially conflicting goals (Rubeis, Dubbala & Metzler 2022; Seger et al. 2023). One thing that is, however, central in most definitions is the need to make AI understandable and usable by a good number of people who are not technically inclined.

Before now, the building and usage of AI has been the exclusive preserve of big corporations that have the competencies to do so. Costa et. al. (2024) points out that AI development and implementation have historically been concentrated within large corporations and academic institutions. This is seemingly as a result of the prohibit cost, complexities and expertise needed to build and operate it (Atta & Bandapati, 2025). With the inception of democratisation, however, this seems not to be so any longer.

At the centre of the conceptualization of AI democratization is increased access; making it more accessible to increased number of people. The first notion of democratizing AI, democratizing AI use, is about making AI accessible to a wider range of people that goes beyond AI specialists (Microsoft News Centre, 2016). The idea behind democratizing AI use is that such a potent tool should not be restricted to a select few who are already privileged; rather, it should be made more widely accessible, so that more people can use it directly or benefit from AI-assisted services (Seger et al. 2023).

The democratisation of AI refers to a state in which all individuals and organisations have access to AI-powered technology (Sudmann, 2019) or the imperative that AI be made broadly accessible and usable, hence enabling individuals to build or utilise it (Costa, Aparicio, Aparicio, & Aparicio, 2024). With AI democratisation, training data should be accessible, affordable, and their use should be encouraged (Himmelreich, 2023). Others describe the democratisation of AI as providing widespread access to open data and AI models for non-technical individuals. That is, making AI technologies accessible and affordable, ensuring portability, explainability, credibility, and fairness (Costa, Aparicio, Aparicio & Aparicio, 2024)

Methodology

This study adopts a qualitative approach based on a systematic review of extant literature on artificial intelligence (AI) democratisation and small business operations in developing economies. The methodology primarily involved a structured literature search, selection, and synthesis of relevant scholarly works. A comprehensive literature search was conducted to identify relevant peer-reviewed articles, conference papers, and institutional reports. Keywords such as “artificial intelligence democratisation,” “AI adoption in SMEs,”

"developing economies and AI," "digital literacy and AI," and "barriers to AI adoption" were used individually and in combination. Boolean operators (AND, OR) were applied to refine search results and ensure relevance. The study sourced literature from reputable academic databases, including Google Scholar, Scopus, Web of Science, ScienceDirect, SpringerLink, and IEEE Xplore. Additional supporting materials were obtained from institutional repositories and policy publications (e.g., OECD and Microsoft reports) to provide contextual insights. The criteria that guided the selection of literature include studies published between 2018 and 2025 to ensure currency of data, peer-reviewed journal articles, conference proceedings, and credible institutional reports, studies focusing on AI, AI democratization, SMEs, or technology adoption in developing or emerging economies and articles written in English and with accessible full texts. Any article that failed to meet these criteria was omitted from the study. The selected studies were subsequently reviewed critically, compared, and synthesised to identify recurring themes, challenges, and strategic pathways relevant to AI democratisation in small business contexts.

Analysis and Findings

Hindrances to the Democratisation of AI for Small Businesses in Developing Economies

There still exist some bottlenecks to the democratization of AI especially for small businesses in developing economies, this is despite the great potential it holds for them. These challenges could be structural, technical, and economical, preventing them from effectively and efficiently adopting AI in their businesses (Vuppalapati, 2021; Arachie et al., 2025a).

Economic and Infrastructural Challenges

Many small businesses struggle to integrate technology and AI in their operations because of the substantial financial outlays required, at least initially (Ahmed & Wahed, 2020; Arachie et al., 2025a). Categorised under this challenge include:

1. **High cost of implementation and maintenance:** AI development in its inception was a capital-intensive (CapEx) endeavour, which requires expensive specialised hardware like Graphics Processing Units (GPUs) and Tensor Processing Units (TPUs) (Shamkura, 2025). Though cloud computing has shifted some of these to an operational expense (OpEx) framework, the initial costs of software licensing, integration, and ongoing maintenance still subsist, which is still challenging for small businesses in Africa (Arachie et al., 2025a; Shamkura, 2025).
2. **The "Compute Divide":** Modern AI research is increasingly compute-intensive, with requirements doubling every 3.4 months rather than every two years (Ahmed & Wahed, 2020). Large technology firms and elite universities have increased their dominance because they possess deep pockets financially to surmount this hurdle, effectively limiting the participation of small businesses in this process (Ahmed & Wahed, 2020; Shamkura, 2025).

3. **Infrastructural deficiencies:** lack of requisite infrastructure, especially in developing nations and emerging markets like Africa, has been a significant setback in the quest of small businesses to effectively integrate and operate with the help of AI in their business endeavours (Dosso et al., 2021; Nwagbala et al., 2025). Among the troubling infrastructural issues small businesses battle with are unreliable internet connectivity and penetration and erratic power supply (Vuppalapati, 2021; Nwagbala et al., 2025).

Skills and Human Capital Gaps

For AI to be effectively deployed in both big and small businesses in developing economies, there is a need for the workforce to have the right skill-set to be able to navigate their processes and operations appropriately; otherwise, it becomes an effort in futility. Hence, technological readiness is not just about having access to hardware; there is also a need for workforce readiness (Costa et al., 2024; Rall et al., 2023).

- **Shortage of specialised expertise:** globally, there is a general lack of AI talent, including data scientists and machine learning engineers (Ahmed & Wahed, 2020). This is why tech giants aggressively seek people with the right set of skills, and offer them mouth-watering incentives that small businesses in developing economies cannot (Ahmed & Wahed, 2020).
- **The digital literacy gap:** the owners or employees of small businesses in developing economies often lack the right digital literacy and technical expertise required to explore advanced AI tools (Arachie et al., 2025a; Nwagbala et al., 2025). This lack of knowledge often results in a "perception gap," where staff may have unrealistic expectations of what AI can accomplish or fail to understand how to apply it to their specific business needs (Finley, 2019; Arachie et al., 2025a).
- **Educational barriers:** Access to AI education has been greatly improved through Massive Open Online Courses (MOOCs), however, traditional technical terminology such as "hyperparameters," "batch size," and "encoders" remains an esoteric barrier for non-experts (Costa et al., 2024; Rall et al., 2023).

Technical and Data-Related Challenges

High-quality data and flexible architectures can be said to be the linchpin of AI systems; however, neither of these requirements is easy to come by, especially for small businesses in developing economies (Ahmed & Wahed, 2020; Rall et al., 2023).

- **Data availability and quality:** Training robust AI models, particularly deep neural networks, requires massive, qualified, and usable datasets (Ahmed & Wahed, 2020; Banifatemi et al., 2021). Small businesses in developing economies often struggle with fragmented records, poor data quality, or a complete lack of historical data, which severely limits the performance of AI applications like predictive analytics (Ahmed & Wahed, 2020; Arachie et al., 2025a).

- **Hardware constraints in the field:** For small firms operating in the agricultural sector, AI must often run on "Tiny IoT Edge" devices embedded hardware with low memory, Random Access Memory (RAM), and battery life (Vuppalapati et al., 2020; Vuppalapati, 2021). Traditional AI software paradigms are not designed for these resource-constrained environments, requiring specialised "lazy learner" algorithms that trade accuracy for battery longevity (Vuppalapati et al., 2020).
- **Integration complexity:** Adopting AI often calls for a complete change of existing business models and legacy systems (Kaddoumi & Tambo, 2022). The technical difficulty of ensuring interoperability, allowing different AI agents and existing databases to communicate, poses a major challenge for small businesses because they lack dedicated IT departments to handle such (Kaddoumi & Tambo, 2022; Montes & Goertzel, 2019).

Organisational, Cultural, and Ethical Barriers

Internal human factors can play a negative role in AI democratisation, even if there is access and infrastructure (Arachie et al., 2023; Cupač et al., 2024).

- **Resistance to change and fear of displacement:** the internal staff of small businesses in developing economies may want to continue with the old ways of doing things and, with a mindset of "this is how we used to do it" (Arachie et al., 2023). Similarly, there could be a fear among employees that when AI is brought into businesses, they will lose their jobs, hence the need to resist it by all means necessary (Arachie et al., 2023; Sarioguz & Miser, 2024).
- **Ethical and religious concerns:** due to religious and cultural inclination of some business owners and workers in developing economies, they may resist AI integration, even when it is fully democratised (Arachie et al., 2023).
- **Algorithmic bias and transparency:** AI systems provide a substantial risk of perpetuating current societal biases concerning gender, ethnicity, or class, due to their training on biased historical data (Ahmed & Wahed, 2020; Lin, 2024). The opaque "black box" character of these systems complicates confidence and accountability for small business owners about AI-driven results (Cupač et al., 2024; Rall et al., 2023).

Governance and Regulatory Challenges

For democratisation to take a foothold in business operations, government plays a central role, as they need to ensure that AI is developed for the public good, rather than being concentrated in the hands of a few (Lin, 2024; Cupač et al., 2024).

- **Regulatory capture and policy gaps:** there is a lack of regulatory frameworks in many developing nations, which is a challenge, as there are no policy direction as to how AI should be developed or deployed (Arachie et al., 2025a; Cupač et al., 2024). Furthermore, research has highlighted the concern of "regulatory capture,"

where regulators are co-opted to prioritize the interests of big industry constituents over small businesses and the middle class (Cupać et al., 2024).

- **Privacy and security risks:** the inability of small businesses to be able to mitigate frequent security and privacy concerns often raised when using AI poses a significant challenge to AI democratisation. This is because AI systems rely heavily on personal data, raising concerns about surveillance, unauthorised sales of data to third parties, and cybersecurity vulnerabilities (Elyoseph et al., 2024; Arachie et al., 2025a; Sarioguz & Miser, 2024).
- **"Democracy washing":** There is a growing danger that the label "democratizing AI" is used by big tech companies as a general slogan to block scrutiny of their practices, while in reality, they continue to implement systems that exacerbate power hierarchies (Lin, 2024).

Strategic Steps to the Democratisation of Artificial Intelligence for Small Business Operations in Developing Economies

The importance of AI adoption is well known by both big and small firms, however, there still exists a significant gap between awareness and implementation, a phenomenon known as the "Awareness-Usage Gap" (Arachie, Okwudiri, Anagwu & Okeke, 2025b; Arachie et al., 2023). Therefore, a multifaceted strategy is required to bridge this gap, including policy interventions, technological abstraction, human capital development, and ethical governance.

Economic and Policy Interventions

High cost and lack of technical experts represent one of the most significant encumbrances to AI democratisation (Ahmed & Wahed, 2020; Shamkura, 2025). Addressing these pressing challenges requires targeted economic and policy-driven steps, including.

- **Establishment of a national research cloud:** there is a need to establish a form of collaboration between the governments and academic institutions to provide a "National Research Cloud" or shared high-performance computing (HPC) infrastructure to counter the "compute divide" (Ahmed & Wahed, 2020). This will effectively allow small businesses to access the massive processing power required for deep learning without the high cost associated with it (Ahmed & Wahed, 2020; Shamkura, 2025).
- **Subsidising access and infrastructure development:** subsidised access to AI software and high-speed internet connectivity should form part of the policy interventions, especially in emerging economies where infrastructure still presents a significant challenge (Arachie et al., 2025a; Nwagbala et al., 2025). This intervention could come in the form of financial incentives and grants, specifically for AI adoption, as this can empower small businesses to experiment with these

technologies without risking financial insolvency (Michael, 2025; Arachie et al., 2023).

- **Data democratization initiatives:** Steps need to be taken to promote "Data Commons" trusted public repositories where government and anonymised private sector data are shared to help small firms train accurate models, as access to high-quality training data remains a significant issue (Banifatemi et al., 2021; Costa et al., 2024).

Leveraging Cloud-Based and Low-Code Technologies

Technological abstraction is a primary driver for lowering the entry barriers to AI for non-experts (Awasthi, 2025; Rall et al., 2023).

- **Utilisation of AutoML solutions:** business owners and users without specialised skills and competencies in data science are allowed to build and deploy predictive models effectively through the use of Automated Machine Learning (AutoML) (Awasthi, 2025). Research has shown that AutoML can reduce model development time by up to 67%, effectively enabling small businesses and teams to iterate quickly on marketing strategies or customer churn predictions (Awasthi, 2025).
- **Adoption of Cloud-Native AI APIs:** Small firms need to take advantage of pre-built AI services and Application Programming Interfaces (APIs) provided by major cloud platforms such as AWS, Azure, and Google Cloud (Atta & Bandapati, 2025; Shamkura, 2025). These "plug-and-play" tools for natural language processing, computer vision, and speech recognition remove the requirement to have in-house model training and complex infrastructure management for small businesses and end users (Atta & Bandapati, 2025).
- **Edge computing and TinyML frameworks:** For small businesses in sectors such as agriculture, AI should be deployed via "Tiny IoT Edges" low-cost hardware designed to run in resource-constrained environments (Vuppalapati et al., 2020; Vuppalapati, 2021). These frameworks prioritise battery longevity and offline processing, ensuring that even remote small-scale operations can benefit from real-time analytics (Vuppalapati et al., 2020; Vuppalapati, 2021).

Human Capital and Workforce Development

True democratisation requires moving beyond "formal access" (simply having tools) to "substantive access" (having the capacity to use them) (Lin, 2024).

- **Comprehensive digital literacy programs:** to ensure AI democratisation achieves its mandate, regular workshops, trainings and conferences on AI literacy and usage must be organised by organisations and government agencies, small business owners and staff (Arachie et al., 2025a; Nwagbala et al., 2025).
- **Upskilling and reskilling initiatives:** people usually fear for their jobs when AI is integrated. To assuage these fears, there is a need for businesses to invest in upskilling programs, so as to prepare their workforce to collaborate with, rather

than compete against, it in their operations (Sarioguz & Miser, 2024; Gallego & Kurer, 2022). Human-Machine Synergy should be the focus of such programs, where AI handles routine automation while humans focus on strategic, high-value decision-making (Sarioguz & Miser, 2024; Awasthi, 2025).

- **Participatory leadership:** the AI integration processes must be done in conjunction with the employees, this is to avoid push back (Sarioguz & Miser, 2024; Lin, 2024) and to give employees a sense of belonging and importance in the whole integration process, as people tend to fight what they are not part of (Sarioguz & Miser, 2024).

Open-Source and Ethical Governance

Transparent and accountable governance frameworks are a requirement in ensuring that AI is developed for the public good (Lin, 2024; Cupač et al., 2024).

- **Supporting Open-Source development:** the encouragement of the usage of open-source libraries and pre-trained models allows small firms to get the benefit of collective global innovation (Lin, 2024; Moreau et al., 2019). Steps, therefore, need to be taken to improve the discoverability and documentation of these open resources, to make for usability by independent developers (Moreau et al., 2019)
- **Ensuring transparency and accountability:** access to Explainable AI (XAI) must be given to small business owners. This access gives clear rationales for algorithmic decisions (Cupač et al., 2024; Rall et al., 2023). This transparency is significant if trust must be built in AI-driven outcomes (Cupač et al., 2024; Atta & Bandapati, 2025).
- **Mitigating algorithmic bias:** "Human-first AI" that actively detects and solves the biases in training data must be the watchword, if democratisation must be achieved (Rall et al., 2023; Lin, 2024). Small business owners and their employees must be given direct access to tools used in auditing their AI applications to ensure they do not perpetuate societal inequalities related to race, gender, or class (Lin, 2024; Ahmed & Wahed, 2020).

Conclusion

The global digital experience has witnessed a transformation through the democratisation of AI, which seeks to transfer sophisticated computational power, hitherto domiciled with more wealthy and technology-savvy firms, to smaller firms that have struggled with adoption and deployment till very recently. The move toward accessible AI, which is made possible through AI democratisation, is not merely a technological upgrade, but a strategic necessity for maintaining a competitive advantage and ensuring long-term sustainability in a business environment that is increasingly dependent on technology and automation of processes. Before now, small businesses in developing economies have had to struggle with a host of challenges, including economic and infrastructural issues, the complexity of the

whole process, and a lack of technical expertise to spearhead it. To ensure that these challenges are surmounted, different approaches are required that prioritise technological abstraction and inclusive human capital development. The adoption of cloud-native infrastructures and low-code platforms comes in handy in this regard, as they allow firms to bypass prohibitive capital expenditures, transforming AI from a high-cost investment into a scalable operational resource. Also significant in effectively breaking the stranglehold of bigger and more technical firms in the AI environment and operationalisation is bridging the digital literacy gap. However, it is pertinent to note that for democratisation of AI to be as effective as it is supposed to, there needs to be a handshake among various key stakeholders, such as government, educational institutions, industry players and experts. As this is the only way, the process of democratisation of AI can make a significant impact on the operations of small businesses in developing economies.

Recommendations

The study makes the following recommendations:

1. Governments in developing countries in Sub-Saharan Africa need to provide financial support, such as grants, tax incentives, and subsidised access to AI tools and cloud infrastructure, to reduce the cost barrier for small businesses.
2. Regular training programs, workshops, and short courses on AI and digital tools should be organised for SME owners and employees in developing countries. This will help in bridging the digital literacy gap existing in developing countries.
3. Small businesses in developing economies need to adopt user-friendly AI platforms (e.g., AutoML and cloud-based APIs) that require little or no technical expertise, making AI integration easier and faster for their operations.
4. There is also a need for public and private stakeholders to partner and invest in reliable internet access and stable power supply to create an enabling environment for AI adoption.
5. Governments in developing economies such as Nigeria should do more in terms of establishing regulatory frameworks and promoting data-sharing platforms ("data commons") to ensure safe, affordable, and ethical use of AI among small businesses in their nations.

Limitation of the Study

Despite the rigour applied in the literature review process, this study is subject to several limitations. First, the study relies solely on secondary data obtained from existing literature, which limits the ability to capture real-time experiences and practical insights from small business operators in developing economies. This made findings dependent on the scope, quality, and perspectives of the selected studies. Also, the restriction of included studies to between 2018 and 2025, while ensuring currency, may have led to the exclusion of earlier seminal studies that could provide foundational insights into AI development and adoption. There could be studies written in languages other than English, but this study was restricted

to English-written studies, effectively introducing language bias and potentially excluding relevant studies in other languages. Finally, the broad focus on developing economies may limit the depth of context-specific analysis, as variations across countries in terms of infrastructure, policy environments, and technological readiness are not fully explored. Therefore, caution should be applied while generalising the findings from this study, and future studies are by this, encouraged to incorporate primary data and country-specific inputs.

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