

Managerial Experiences with Artificial Intelligence in Strategic Decision-Making: Evidence from Zambia

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Abstract

Artificial Intelligence (AI) transformed strategic management allowing it to make decisions based on data, forecast via prediction and automate processes. This research paper explored how AI tools are influencing strategic management within the Zambian context, where companies were operating within economically unstable, underdeveloped, and developing digitalized environments. An interpretivist-based qualitative methodology was employed and secondary data analyzed through academic literature, policy documents and international report. The results showed that AI improved predictions, efficiency, risk management, and customer-centred strategies, which helped organisations become more competitive. But the cost was prohibitive, technical skills were limited, poor data ecosystems existed and there were gaps in the regulations. The researcher concluded that, when combined with organisational preparedness, capacity building, as well as empowering policies, AI might become a strategic resource contributing to sustainable growth. Government, businesses, and academia were advised to create a strong AI ecosystem, with further studies being recommended to utilise primary data and longitudinal analysis.

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Introduction

Artificial Intelligence (AI) has become a revolutionary force in the world of business and has changed the landscape of industries by automating and predicting analytics and providing data-driven insights. Within strategic management, AI technology helps

managers improve their abilities to forecast, plan scenarios, and make decisions (Azaroual, 2024). Around the world, organizations that used AI have reported higher efficiency in their operations, more effective customer engagements, and competitive advantage (Brynjolfsson and McAfee, 2017).

The implementation of AI in Zambia is taking off, but slowly. The landscape of digital in the country is marked with a high number of challenges and opportunities. By early 2024, there were around 6.51 million internet users in Zambia, which is 31.2 percent of the population. This implies a significant digital divide, with almost 69% of the population not having access to the internet (DataReportal, 2024). Most internet users are looking on mobile connections and the mode of access used is mostly mobile internet.

Nevertheless, Zambia is improving in terms of digital infrastructural development. With nearly 10 players who provide one type of connectivity or another, the country has one of the most vigorous terrestrial fiber markets in Southern Africa (Xalam, 2025). Moreover, the government is invested in digital transformation as seen in programs such as the Smart Zambia Project, which seeks to enhance ICT infrastructure, especially in the rural regions (GSMA, 2024).

The challenge of digital literacy is still a big challenge. According to a report by the Ministry of Technology and Science, the level of digital literacy is at 31% so specific educational initiatives should be implemented to promote digital literacy among the population (Mutati, 2025; HAmilandu, 2025).

Although AI is in its early years of use, some industries are starting to leverage its potential. However, recent surveys indicate that 60 percent of Zambian journalists and 44 percent of civil society organizations have already adopted AI tools in their work, most often to create content and analyze data (MJ

Consultants, 2024). This tendency indicates an increased recognition of AI and its ability to make work more productive and decisive.

The Zambian government has acknowledged the role of AI in economic development and has released a National AI Strategy 2024-2026. This plan seeks to capitalize on AI to drive changes in the public service, encourage innovation, and make Zambia a leader in AI-driven development in the region (CIPIT, 2025).

Literature Review

Strategic Management and Decision-Making

Strategic management is the process of developing, executing, and assessing cross-functional decisions that can be used to help an organisation to attain long-term objectives (Teece, 2018). It involves environmental scanning, resource allocation, competitive positioning and risk management. Historically, organisational strategic decision making has depended on managerial judgement, past data and industry standards. Although such a strategy may be useful in stable conditions, it is usually limited by human biases, incomplete information, and slow responsiveness to dynamic changes in the market (George, Haas, and Pentland, 2016). In Zambia, the business environment is very volatile with unstable exchange rates, inflationary pressures, and limited access to capital (Bank of Zambia, 2024). Such difficulties do emphasize the importance of increasingly advanced tools to assist in data-driven strategic decisions.

Artificial Intelligence in Strategic Management

Artificial Intelligence (AI) is an enhanced method of examining a vast amount of data and finding trends and providing insights that can be acted upon to assist in decision-making (Davenport and Ronanki, 2018). Machine learning and natural language processing (NLP), as well as big data analytics, are considered important AI tools. Machine learning algorithms enables companies to process historical and real-time data to forecast market tendencies, customer activity, and business risks, enhancing the quality of predictions and resource planning (Choi et al., 2018). NLP allows AI systems to analyze text in customer feedback, social media, and regulatory documents to assist managers to identify arising risks and determine the public mood (Bandyopadhyay et al., 2021). The big data analytics would enable organisations to combine data and information across many sources to make faster and better strategic decisions, especially in uncertain business environments (Duan, Edwards, and Dwivedi, 2019).

Global Evidence of AI in Strategic Management

The application of AI has proved to be of great benefit to strategic management all over the world. AI can help companies become more efficient by automating operations and increasing risk management through predictive models and sustain innovations by identifying business opportunities and market segments (Shrestha, Ben-Menahem, and von Krogh, 2019). MNCs like Amazon and Google use AI to streamline their supply

chains, improve customer experiences, and create data-based strategies (Brynjolfsson & McAfee, 2017). The examples above demonstrate the potential of AI to transform how organisations become more competitive and also strategic in their decision-making processes.

AI Adoption in Africa

The usage of AI is slowly gaining momentum in major sectors in Africa. Financial inclusion and operational risk reduction in banking are two applications of AI-based credit scoring and fraud detection (Okere et al., 2021). Climate forecasting, crop monitoring, and supply chain optimization are examples of how agricultural enterprises can implement AI to respond to food security challenges (Mwangi & Muchiri, 2020). Telecommunication companies use AI in customer services chatbots, predictive maintenance, and network optimization (Owusu et al., 2021). However, the challenges such as high costs of implementation, low level of digital literacy, insufficient infrastructure and regulatory gaps remain (Dwivedi et al., 2021).

AI in Strategic Management in Zambia

Strategic management in Zambia has yet to embrace the use of AI. Zanaco and Standard Chartered Zambia are some of the financial institutions that have already adopted AI technology to enhance their customer analytics, credit assessment, and fraud detection (MJ Consultants, 2024). With AI, agricultural businesses are looking into climate risk forecasting and supply chain. Nevertheless, its implementation is limited due to high costs, lack of qualified experts,

and ineffective regulatory frameworks (GSMA, 2024). Due to the economic volatility and digital infrastructure disconnects, the Zambian environment presents a beneficial opportunity and a difficult business venture to adopt AI.

Research Gap

Most existing studies focus on AI adoption in developed economies or in specific sectors

like finance and telecommunications. Few studies have explored the impact of AI tools on strategic management decision-making in Zambia, considering local constraints such as limited resources, regulatory uncertainty, and infrastructure challenges. This study aims to fill this gap by examining the adoption, benefits, and risks of AI in Zambian strategic management.

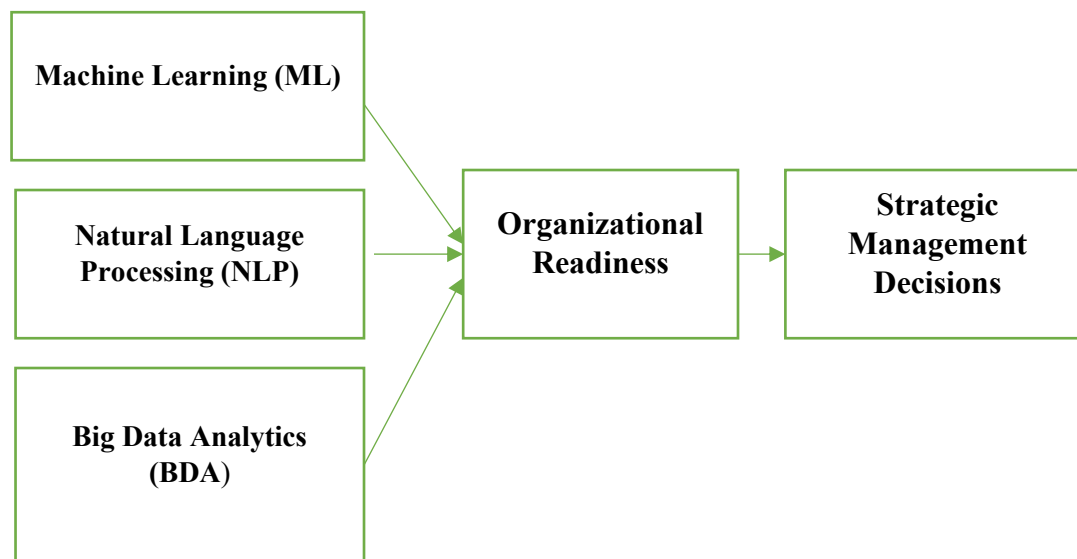


Figure 1; conceptual model.

Methodology

Research Approach

The research methodology was qualitative, given the fact that it aimed at exploring the role of Artificial Intelligence (AI) tools in strategic management in Zambia. A qualitative methodology was chosen, as it offers detailed and contextual information about social and organisational phenomena, as it does not measure anything numerically,

but focuses on meanings, perceptions, and experience (Creswell and Poth, 2018; Silverman, 2020). This was especially applicable considering that data on AI implementation in Zambia is still at its early phases and is scattered.

Underpinning Philosophy

An interpretivist philosophy informed the study assuming that reality is a social construct and can be understood best through

the lens of individuals and groups (Saunders, Lewis, and Thornhill, 2019). Interpretivism enabled the researcher to observe the finer interpretations of AI adoption, in addition to the subjective interpretations, which were assigned to the integration of AI in strategic management decision-making. This was an apt philosophical position, as the study aimed to reveal not only how AI is used, but also how its stakeholders view the advantages and obstacles.

Time Horizon

This study took a cross-sectional time horizon. The study used secondary literature such as policy documents, journal articles, and reports as these were available at a specific time, and they reflect adoption of AI in Zambia at a single moment. It was believed that this was adequate to fulfil the aim of the study because the interest was to study the existing trends and views as opposed to tracking the change over an international time (Bryman, 2016).

Research Method and Justification

The research design adopted was the exploratory research design, which suitably applies in research that explores new problems in areas where the existing knowledge is insufficient (Stebbins, 2001). Exploratory designs allow flexibility to explore dynamic and sophisticated phenomena like AI adoption, without strict theory frames. Using secondary data was explained by the fact that it allows covering a wide range of information and allows access to the expertise of specialists, and triangulation with other sources (Njovu & Lawson, 1997; Johnston, 2017).

Reliability, Validity, and Generalisability of Research Findings

To establish credibility, peer-reviewed journals, government policy documents and other reliable international reports on the same topic were critically chosen as the source of secondary data. Thematic analysis helped increase validity by making it possible to find patterns across sources in a systematic manner to ensure that the findings were a true reflection of the data (Braun & Clarke, 2006). Although qualitative research does not intend to establish statistical generalisability, the transferability of findings was enhanced by use of a detailed contextual description of AI adoption in Zambia that would allow other researchers or practitioners to determine applicability to other settings (Lincoln and Guba, 1985).

Sampling Frame and Sample Size

Since the research relied on the analysis of secondary data, the sampling frame included academic articles, government reports, and international organisational publications that were publicly available and related to the topic of the use of AI in Zambia and Africa. The sample size here was the number of documents analysed. The inclusion criteria included that the sources were recent (published in the past 10 years), relevant to the context of Zambia or sub-Saharan Africa, and focused on the intersection of AI and strategic management.

Data Collection and Analysis

Secondary sources such as academic databases, government portals, and international organization repositories were

systematically reviewed as a part of data collection. The sources were filtered based on relevance and credibility. To analyze the data, the study used thematic analysis, which is a method of identifying, coding, and synthesizing common themes (Braun and Clarke, 2006). Themes were grouped by the role of AI in strategic decision-making, its perceived advantages (i.e., efficiency and improved predictive capacity) and challenges (i.e., infrastructural deficits, skills shortages, and ethical concerns). This method of analysis gave structure and flexibility, enabling the harmonisation of various perspectives in a consistent interpretation of the role of AI in strategic management in Zambia.

Findings

The results of the research show that the implementation of Artificial Intelligence (AI) tools in strategic management in Zambia is associated with both tremendous opportunities and significant challenges, and the strategic implications of the use of AI tools in strategic management have far-ranging implications for both organisations and policymakers. The conclusions presented below help to generalize these findings in the context of the management literature, the model of technological adoption, and the socio-economic reality of Zambia.

Benefits of AI in Strategic Management

The research found that AI implementation has a positive impact on strategic management in a variety of aspects. Firstly, AI allows better prediction of market trends, commodity prices, and customer behaviour, which enhances the ability of organizations

to make proactive rather than reactive decisions. This is like previous works that emphasize the predictive ability of AI-driven analytics to improve the ability of the strategist to have a more farsighted vision (Brynjolfsson and McAfee, 2017). In the context of Zambia, where economic fluctuations and unstable commodity prices are still major issues, AI-powered prediction could assist in enhancing more robust strategic planning.

Secondly, AI improves the efficiency of the work because it automatizes repetitive tasks. Organizational process management can be simplified, and operational costs can be minimized by simplifying operations like inventory, reporting and customer service interactions, and redeploying human capital to more productive work. That aligns with the conclusion of Teece (2018), who argues that organisational agility and efficiency are driven by dynamic capabilities like automation and digital transformation.

Thirdly, AI adoption helps in risk management by detecting fraud, monitoring compliance, and detecting anomalies in financial and operational systems. Financial institutions and government bodies struggle with issues of governance and accountability in Zambia, but through AI solutions, they get a chance to make their operations more transparent and enhance institutional integrity (Chiyaba, 2003).

Lastly, AI helps to enable targeted strategic initiatives by using consumer data analytics, allowing organisations to customise products and services based on changing customer preferences. Personalization is a competitive

advantage in age-old economies like Zambia, where urbanisation and digitalization are causing people to shift their behaviour at a fast pace (Chui et al., 2018).

Challenges of AI Adoption in Zambia

Despite these advantages, the research revealed various obstacles preventing successful adoption of AI. The first of these is the great expense of infrastructure and implementation. AI systems need a substantial amount of computing power, cloud technology, and data storage, and this is something many Zambian organisations cannot afford, especially small and medium enterprises (SMEs). Such an observation echoes the works by previous researchers, who have highlighted financial limitations as a major barrier to the implementation of AI in the developing world (World Bank, 2020).

The second significant issue is the lack of qualified specialists in the field of AI, data science, and other related areas. The education system and the labour market in Zambia are not fully responding to the increased demand of high-level digital skills, hence the current dependence on foreign expertise or poor local capacity. This is a limitation because it restricts the ability of organisations to internalise AI capabilities and make them part of long-term strategic frameworks (Pandey et al., 2012).

Another challenge identified in the study is the inaccessibility to quality and integrated data. The quality of AI systems depends on the quality of data the system is trained on, and in Zambia, the quality of such data collection is still random, though inconsistent and unreliable in some instances. The

potential of AI to provide actionable insights is highly limited without strong data ecosystems.

Moreover, research has found that there are ethical and regulatory issues associated with the use of AI, such as data privacy issues, the bias in algorithms, and the lack of a detailed legal framework to regulate newly emerging technologies. These issues are reflected globally in discussions of the dangers posed by AI but are further enhanced in Zambia by less strong institutions and less regulation (UNESCO, 2021).

Strategic Implications

The results imply some strategic organizational and policy implications. First, companies embracing AI tools are more adaptive and competitive, especially when dealing with unpredictabilities in the market and customer demand. This underpins the thesis statement of digital transformation as a growing factor of competitive advantage in developed and emerging economies (Teece, 2018).

Second, AI implementation in Zambia follows the national digital transformation plan, such as projects within the Smart Zambia Master Plan and the Ministry of Technology and Science driving digital innovation. Such congruence indicates that AI utilization does not only positively impact and transform the lives of individual organizations but also plays a role when it comes to helping countries develop in terms of diversifying economies and enhancing service delivery (Pandey, Njovu, Lai, 2004).

Third, the research emphasizes the value of partnership between the government, academia and the privatized sector in meeting the gap in capacity. Government should take part in the development of enabling policies and infrastructures, academia should work on curriculum reform and developing skills, and the private sector should invest in innovation and practical implementation. A triple-helix model of collaboration has been identified internationally as a useful tool in driving technological innovation (Etzkowitz, 2024), and it is especially applicable in the Zambian context where resources and expertise are scarce.

Conclusions and Recommendations

Overall Findings

The paper aimed to investigate the relevance of Artificial Intelligence (AI) tools to strategic management in Zambia with reference to secondary data analysed with thematic analysis. The results also indicate that AI deployment offers considerable advantages, such as better prediction, greater operational effectiveness, better risk control, and the ability to design tailored approaches, depending on consumer analytics. All of this makes organisations more flexible and more competitive and helps support the wider digital transformation agenda in Zambia. Nonetheless, other obstacles including high infrastructural prices, lack of skilled experts, inappropriate access to credible and integrated information, and unaddressed ethical and regulatory issues were also noted in the study. The strategic implications aspect indicates that multi-stakeholder partnership with government, academia, and the private

sector is required to ensure a sustainable AI ecosystem.

Research Limitations and Implications

Although this study has contributed a lot, it has its limitations. First, secondary data use can limit the breadth of information, since the results are limited by the amount and quality of the literature and reports available. Second, the time horizon used to analyse the data was cross-sectional, which provided a picture of AI adoption in Zambia without tracking trends over time. Third, since the research was qualitative with an interpretivist philosophy, it is not focused on the statistical generalisability of the findings but on depth and contextual understanding. These drawbacks suggest that upcoming studies must include primary data gathering, including interviews with administrators, policymakers, and AI professionals, to produce more contextualized and rich findings. Furthermore, longitudinal research would allow observing how AI gets implemented in Zambia over the years to have proof of both short-term and long-term strategic effects.

Originality and Value

This study is unique in its contextual specificity to Zambia as a developing country, in which AI adoption is still in its early phases, and where the strategic implications of AI usage have rarely been studied. Unlike most of the literature available, which focuses on AI within the framework of developed economies, this paper identifies the specific risks and opportunities of organisations in sub-Saharan Africa. The paper can add value to both

theoretical and practical discussions of technology adoption and the specific policy making in emerging markets by synthesizing its benefits, barriers and strategic implications. This is two-fold; it offers both conceptual evidence on the effects of AI tools on strategic management and also provides practical advice to organisations and policy makers to use AI to gain a competitive edge and ensure sustainable growth.

Recommendations

Based on the findings, some recommendations are put forward to enhance the adoption of AI, in the context of Zambian strategic management. The government must focus on digital infrastructure (such as broadband development and data centres) and also design a strong regulatory framework to deal with moral issues and data management. Meanwhile, universities and technical institutes should include AI and

data science in their programmes, and organisations must invest in the upskilling of their workforce to lessen their dependence on expertise abroad. Both the government and the business sector should also work together to develop standardised, dependable, and unified data systems because it is acknowledged that quality data is a condition to successful AI implementation. Moreover, to share resources, skills, and research towards sustainable technological development, government, academia, and industry are highly advised to implement a triple-helix model of innovation. Lastly, organisations are advised to implement AI in a strategic manner, starting with pilot projects in high impact areas like customer analytics or risk management, and then proceed to roll out AI in all core business processes to achieve maximum competitiveness and flexibility.

References

Agrawal, A., Gans, J., & Goldfarb, A. (2019). *Prediction machines: The simple economics of artificial intelligence*. Harvard Business Review Press.

Azaroual, F. (2024). *Artificial intelligence in Africa: Challenges and opportunities*. Policy Center for the New South. https://www.policycenter.ma/sites/default/files/2024-09/PB_23_24%20%28Azeroual%29%20%28EN%29.pdf

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>

Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.

Brynjolfsson, E., & McAfee, A. (2017). *Machine, platform, crowd: Harnessing our digital future*. W. W. Norton & Company.

C. Njovu and M. T. Ibrahim, "A design pattern approach to bitemporal data modeling," 14th International Workshop on

Database and Expert Systems Applications, 2003. Proceedings., Prague, Czech Republic, 2003, pp. 758-761, doi: 10.1109/DEXA.2003.1232112.

Chui, M., Manyika, J., & Miremadi, M. (2018). What AI can and can't do (yet) for your business. *McKinsey Quarterly*. <https://www.mckinsey.com>

Pandey, S.R., Ma, J., Lai, CH., Njovu, C. (2013). A Fuzzy Logic-Based Decision Support System for the Diagnosis of Arthritis Pain for Rheumatic Fever Patients. In: Bramer, M., Petridis, M. (eds) Research and Development in Intelligent Systems XXX. SGAI 2013. Springer, Cham. https://doi.org/10.1007/978-3-319-02621-3_18

CIPIT. (2025). *Zambia's National AI strategy: Balancing progress with responsibility*. <https://cipit.strathmore.edu/zambias-national-ai-strategy-balancing-progress-with-responsibility/>

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.

DataReportal. (2024). *Digital 2024: Zambia*. <https://datareportal.com/reports/digital-2024-zambia>

Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard Business Review*, 96(1), 108–116.

Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data – evolution, challenges and research agenda. *International Journal of Information Management*, 48, 63–71. <https://doi.org/10.1016/j.ijinfomgt.2019.01.021>

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., ... & Williams, M. D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 57, 101994. <https://doi.org/10.1016/j.ijinfomgt.2019.101994>

Etzkowitz, H. (2024). *The triple helix model: A framework for innovation in developing economies*. *Innovation Policy and Practice*, 11(1), 241–247. <https://doi.org/10.1080/23311975.2024.2411447>

George, G., Osinga, E. C., Lavie, D., & Scott, B. A. (2016). Big data and data science methods for management research. *Academy of Management Journal*, 59(5), 1493–1507. <https://doi.org/10.5465/amj.2016.4005>

GSMA. (2024). *Driving digitalisation of the economy in Zambia*. https://www.gsma.com/about-us/regions/sub-saharan-africa/wp-content/uploads/2024/10/GSMA_Zambia-Report_Oct-2024_Final.pdf

Johnston, M. P. (2017). Secondary data analysis: A method of which the time has come. *Qualitative and Quantitative Methods in Libraries*, 3(3), 619–626.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications.

MJ Consultants. (2024). *The rise of AI tools in Zambia: How ChatGPT and emerging technologies are transforming workflows*. <https://mjconsultants.co.zm/the-rise-of-ai-tools-in-zambia-how-chatgpt-and-emerging-technologies-are-transforming-workflows/>

Mutati, H. (2025). Digital literacy still a challenge among Zambian innovators. *Lusaka Times*. <https://www.lusakatimes.com/2025/05/28/digital-literacy-still-a-challenge-among-zambian-innovators-mutati/>

Njovu, Chiyaba (2003) *Teaching, learning and assessment in MSc. Databases units at University of Greenwich*. In: Teaching, Learning and Assessment of Databases (TLAD) [Proceedings]. LTSN (Learning and Teaching Support Network) / BCS (British Computer Society), Newtonabbey, Antrim, Northern Ireland, UK, pp. 89-93. ISBN 0954192737

SR Pandey, C Njovu, CH Lai (2004) A decision support system for diagnosis of rheumatic fever in Nepal,

Pandey, Sanjib Raj, Lai, Choi-Hong and Njovu, Chiyaba (2012) *A fuzzy decision support system for rheumatic fever in Nepal*. In: EGH2012 Workshop on Applied and Numerical Mathematics, 7-8 Jun 2012,

University of Greenwich, London, UK. (Unpublished)

Proceeding of 7th Asia Pacific Medical Informatics Conferences, Beijing, Njovu, C., & Lawson, T. W. (1997). Modeling Temporal Behavior at the Conceptual Level. In *ER'97 Workshop 4 Proceedings*.

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education Limited.

Silverman, D. (2020). *Interpreting qualitative data* (6th ed.). SAGE Publications.

Stebbins, R. A. (2001). *Exploratory research in the social sciences*. SAGE Publications.

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40–49. <https://doi.org/10.1016/j.lrp.2017.06.007>

UNESCO. (2021). *Recommendation on the ethics of artificial intelligence*. UNESCO Publishing. <https://unesdoc.unesco.org>

World Bank. (2020). *Harnessing artificial intelligence for development in Africa*. World Bank Group. <https://documents.worldbank.org>

Xalam. (2025). *Zambia data center market briefing*. https://cms.d4dhub.eu/assets/Initiatives/Data-Governance-in-Africa/Digital-Investment-Facility/2507_Country-Market-Briefs/Data-Center-Market-Brief-Zambia.pdf

Zambia Ministry of Technology and Science.
(2022). *Smart Zambia Master Plan (Phase II): E-Government Development Strategy*

2022–2026. Government of the Republic of Zambia.