Educator Development Journal
Volume 3, Nomor 2, Seetember 2025

ISSN : 2985-718X DOI : https://doi.org/10.22373/edj.v3i2

Ai's Dawn And Unity's Call: Ecowas Weave Africa's Future

Ogbeta Kingsley Oghenekevwe [1)]
[1]Lecturer, Department of Management Sciences,
School of Business and Public Administration,
University of The Gambia
Abubakar FARUK[2)]
[2)]Department of Public Administration,
Faculty of Administration,
Ahmadu Bello University, Nigeria
Email:
kogbeta@utg.edu.gm

Article Info

Article Information
Received :
Revised :
Accepted :

Kata Kunci: Kecerdasan Buatan (AI), Integrasi Regional, Diversifikasi Ekonomi, ECOWAS, dan Transformasi Digital

Abstrak :

Studi ini mengkaji pengaruh kecerdasan buatan (AI) dalam mendorong integrasi regional di Komunitas Ekonomi Negara-Negara Afrika Barat (ECOWAS). Penelitian ini mencapai tiga tujuan. Penelitian ini mengkaji bagaimana kecerdasan buatan memengaruhi upaya integrasi regional, mengevaluasi pengaruhnya terhadap diversifikasi ekonomi, dan mengidentifikasi risiko serta tantangan penggunaan AI di subkawasan tersebut. Penelitian deskriptif-analitis dengan data sekunder diterapkan. Hasilnya menunjukkan bahwa kecerdasan buatan merupakan agen transformasi dalam perekonomian negara-negara anggota ECOWAS. Teknologi AI membantu pergeseran digital di sektor perdagangan, perawatan kesehatan, dan tata kelola, sekaligus membantu perekonomian mengurangi ketergantungan pada bidang-bidang tradisional seperti pertanian dan pertambangan. AI juga membantu upaya e-government, memudahkan pemerintah untuk berkomunikasi dengan warga negara dan meningkatkan tata kelola. AI penting untuk mengubah perekonomian dengan meningkatkan produktivitas dan inovasi di bidang pertanian, perawatan kesehatan, dan keuangan. AI meningkatkan pemanfaatan sumber daya, mendukung pengambilan keputusan berbasis data, dan membantu mengatasi tantangan terkait integrasi regional dengan meningkatkan transaksi dan komunikasi lintas batas. Selain itu, studi ini mengidentifikasi risiko-risiko signifikan, termasuk perpindahan pekerjaan, terutama di sektor berketerampilan rendah, kesenjangan digital, dan masalah kepercayaan dalam sistem AI. Isu-isu ini

menunjukkan perlunya program pendidikan untuk meningkatkan pengetahuan dan keterampilan digital AI. Studi ini menyimpulkan bahwa AI menghadirkan potensi yang sangat baik bagi pembangunan regional dan ekonomi di ECOWAS, tetapi keberhasilannya bergantung pada penanganan tantangan infrastruktur, keterampilan, dan tata kelola.

Abstract

Keywords: Artificial Intelligence (AI), Regional Integration, Economic Diversification, ECOWAS, and Digital Transformation

This study examined the influence of artificial intelligence (AI) in fostering regional integration in the Economic Community of West African States (ECOWAS). The research achieved three objectives. It examined how artificial intelligence affected efforts at regional integration, evaluated its influence on economic diversification and identified the risks and challenges of using AI in the subregion. Descriptive-analytical research with secondary data was applied. The results show that artificial intelligence is a transforming agent in the economy of ECOWAS member countries. AI technologies are aiding digital shift in trade, health care, and governance sectors while helping economies become less dependent on traditional fields like agriculture and mining. Also, AI aids e-government efforts, making it easier for governments to communicate with citizens and improve governance. AI is important for changing the economy by boosting productivity and innovation in farming, healthcare, and finance. It improves resource utilization, supports data-driven decision-making, and helps resolve challenges related to regional integration by enhancing cross-border transactions and communication. In addition, the study identified significant risks, including job displacement, especially in low-skilled sectors, the digital divide, and trust issues in AI systems. These issues show the need for educational programs to boost AI knowledge and digital skills. The study concludes that AI presents excellent potential for regional and economic development in ECOWAS, but its success depends on addressing infrastructure, skills, and governance challenges.

INTRODUTOIN

Regional integration in the Economic Community of West African States (ECOWAS) presents significant economic, political, and social benefits, with artificial intelligence (AI) emerging as a transformative tool to address many of the region's challenges. Artificial intelligence acts like a spark for economic change—nudging economies away from old, commodity-focused sectors and into arenas where specialised know-how really takes centre stage—and it, in most cases, sharpens governance by anchoring decision making on solid,

authentic data (Androutsopoulou et al., 2019; Aoki, 2020). The African Union's Continental Artificial Intelligence Strategy (2024) further underscores the significance of AI for improving infrastructure and promoting digital economies across the continent. Within this context, AI serve as a crucial instrument in assisting ECOWAS in achieving its regional goals, particularly as the region seeks solutions to issues related to the digital divide, regulatory frameworks, and regional cooperation (Dentons, 2024; Bjerke-Busch & Thorp, 2024; Ben Abdelaziz et al., 2022).

The role of ECOWAS as a driver of regional integration and economic growth has been well-documented. However, despite its continued efforts, the speed of integration has been hindered by several factors, including insufficient collaboration between member states, reliance on traditional industries such as agriculture, and limited technological progress (Bala, 2017; Kleizen et al., 2023; Li et al., 2023). Artificial intelligence, now a critical tool in the global economy, offers new pathways to address these longstanding issues (Brandon-Jones & Kauppi, 2018; Chen et al., 2023; Dergaa et al., 2023). However, while AI's potential is well-recognized, its specific applications in enhancing regional cooperation and economic diversification within ECOWAS remain primarily unexplored (Mahama et al., 2024; Elouidani & Outouzzalt, 2023).

The African Union's Digital Transformation Strategy for Africa 2020–2030 (2020) outlines a vision where AI and other emerging technologies are central to the continent's digital transformation. However, within the ECOWAS sub-region, the adoption of AI remains inconsistent, with challenges such as infrastructure gaps, a lack of skilled human resources, and disparities in digital literacy impeding widespread implementation (Misra et al., 2023). These issues must be addressed to unlock AI's full potential in fostering integration and innovation across West Africa.

Although the potential for AI to transform governance, business, and public service delivery has been explored globally (Criado & Gil-Garcia, 2019; Aoki, 2020), there has been limited focus on how AI can drive economic diversification within ECOWAS. The region's heavy reliance on traditional sectors, such as agriculture and natural resource extraction, has limited its ability to transition towards a more diversified economy. As Ben Abdelaziz et al. (2022) and Bjerke-Busch and Thorp (2024) argue, AI could promote innovation and create new economic opportunities. However, comprehensive research on achieving this in ECOWAS is still lacking.

Furthermore, even if artificial intelligence presents chances for great social and economic development, it also poses risks, especially in areas like West Africa where digital governance and infrastructure are weak (Mahama et al., 2024). Effective application of

artificial intelligence in the area is seriously challenged by data privacy, legislative inconsistencies, and the digital divide. Examining these hazards and creating plans that minimize any obstacles will thus be required to maximize the advantages of artificial intelligence for regional integration and growth (Dentons, 2024).

This study seeks to address these gaps by (1) assessing the impact of AI on regional integration efforts within ECOWAS, with a focus on how AI technologies can strengthen cooperation among member states; (2) evaluating the role of AI in driving economic diversification within the ECOWAS sub-region, specifically in promoting innovation and reducing reliance on traditional economic sectors; and (3) investigating the risks and challenges associated with implementing AI in ECOWAS and proposing strategies to mitigate these challenges.

The Role of Artificial Intelligence in Regional Integration and Economic Diversification within ECOWAS through Digital Transformation

Artificial Intelligence (AI) rapidly transforms digital landscapes worldwide, significantly influencing the public and private sectors. Regarding the Economic Community of West African States (ECOWAS), AI plays a crucial role in driving regional integration and diversifying the economy. The African Union's (2024) strategy for AI focuses on how AI can help cooperation and economic growth in the region. The strategy indicates that AI can make processes easier, improve trade, and encourage new ideas, allowing ECOWAS countries to use technology to achieve their integration objectives.

ECOWAS has always underscored regional integration, as in plans like the African Union's Digital Transformation Strategy for Africa 2020-2030 (African Union, 2020). This plan shows how digital technologies, particularly AI, can significantly improve trade across borders, enhance governance, and make ECOWAS economies more competitive. AI can be leveraged to create more efficient and intelligent government systems, making e-procurement and cross-border trade systems more transparent and accessible (Brandon-Jones & Kauppi, 2018). Integrating AI in government functions, such as using AI-driven chatbots, can also enhance communication between citizens and governmental bodies, as Androutsopoulou et al. (2019) observed.

ECOWAS member states face the challenge of economic diversification, with many economies still heavily reliant on agriculture and natural resources. AI can help diversify economies by creating new industries and increasing productivity in current ones. Bjerke-Busch and Thorp (2024) state that AI is important for resolving productivity issues in the public sector, which is vital for growth over time. AI innovations in areas like agriculture, manufacturing, and

services can lessen reliance on finite resources, thus expanding the economic base of ECOWAS nations.

With regard to governance, artificial intelligence (AI) is absolutely essential for streamlining government agency decision-making procedures. Particularly pertinent for ECOWAS countries trying to improve trade and logistics, Mahama et al. (2024) examined how artificial intelligence affected supply chain management and decision-making. By leveraging AI to analyse data and automate tasks, governments can make more informed decisions that support regional integration and strengthen economic policies. This argument is consistent with the work of Criado and Gil-Garcia (2019), who highlighted how AI supports government data-driven decision-making.

However, the practical application of artificial intelligence in ECOWAS nations hinges on overcoming major legal and policy obstacles. Dentons (2024) underlined the need to implement thorough artificial intelligence rules in Africa to guarantee the ethical application of AI systems. Likewise, Ben Abdelaziz et al. (2022) opined that creating strong policies is essential to promote innovation while tackling certain risks, like data privacy concerns and prejudices. Therefore, responding to this issue, including artificial intelligence in ECOWAS's regional and economic systems, calls for group efforts to develop policies supporting technology development and reducing related risks.

In addition, AI is essential in tackling issues across borders in ECOWAS. Bala (2017) asserts that artificial intelligence can help combat cross-border crimes, boost security, and encourage regional integration through better surveillance, data exchange, and border management. Maintaining regional peace depends on addressing security issues and economic diversity; hence, this technology is especially important in both respects.

Finally, artificial intelligence can influence change efforts at economic diversification and regional integration in ECOWAS. Member states may better govern, boost regional cooperation, and increase economic performance by adopting AI-driven digital transformation. However, to fully unlock this potential, it is essential to develop strong regulatory frameworks, invest in necessary infrastructure, and ensure the ethical implementation of AI technologies.

Empirical Studies Review

Artificial intelligence (AI) has transformed regional integration; significant progress is clearly visible in Europe, Asia, and the BRICS countries. AI has been critical in Europe in helping to improve the European Union's (EU) economic cooperation. Ben Abdelaziz et al. (2022) claim that AI-driven decision-making systems have enhanced the efficiency of economic governance, thereby increasing efficiency in trade, finance, and accountability. Criado and Gil-Garcia (2019) opined that projects including AI-powered digital infrastructure

have sped e-governance and public service delivery. AI's role in the EU has also improved cross-border collaboration and trust among member states (Bjerke-Busch & Thorp, 2024). Moreover, Brandon-Jones and Kauppi (2018) underline how AI-based e-procurement systems have streamlined regional supply chains, reducing costs and improving efficiency in intra-regional trade.

Comparatively, AI has driven substantial economic integration in Asia, mainly through digital finance and governance. Fan and Pan (2023) highlight how AI-enhanced e-government systems have increased governmental performance by improving public trust and service delivery. Moreover, He and Xue (2023) point out that artificial intelligence has optimized digital financial systems, raising sectoral economic efficiency, including energy. This integration has promoted regional collaboration and interdependence by easing seamless contact between countries. Aoki (2020) also addresses how artificial intelligence chatbots help to improve transparency, trust in public sector services, and communication between governments and citizens.

Within the framework of BRICS (Brazil, Russia, India, China, and South Africa), artificial intelligence has similarly been a potent driver of regional cooperation. Kumar et al. (2023) averred that AI has been critical in integrating blockchain technology into business operations, enhancing cross-border trade and financial inclusion. Ermolayeva et al. (2023) further demonstrate how BRICS countries have leveraged AI to boost regional competitiveness in global AI research, particularly in China. This development has enabled BRICS nations to increase their influence in global technology and innovation networks. Gera et al. (2024) opined that AI has empowered fintech solutions to drive financial inclusion across member countries. In the same vein, Elouidani and Outouzzalt (2023) argue that AI’s role in sustainable finance has advanced economic collaboration within the BRICS bloc, contributing to long-term economic sustainability.

In contrast, ECOWAS is still in the developing stages of using AI for regional integration. The African Union (2024) points out that Africa’s Continental AI Strategy aims to harness AI for regional development. However, ECOWAS lags behind regions like the EU and BRICS in fully integrating AI technologies. While ECOWAS deals with problems, including poor digital infrastructure and regulatory frameworks, Bala (2017) averred that artificial intelligence could be transformative in addressing these obstacles by improving cross-border cooperation and smooth trading processes. Furthermore, in line with the achievements shown in the EU, Asia, and BRICS countries, the Digital Transformation Strategy for Africa 2020-2030 (2020) underlines the possibility of artificial intelligence promoting digital governance and public service delivery.

In conclusion, artificial intelligence is a major driver of world regional integration since Europe, Asia, and the BRICS use it for political and economic benefits. Though ECOWAS has not yet fully embraced artificial intelligence, its continuous digital transformation ambitions present a bright future for integration projects. Therefore, learning from the strides made in other regions can serve as a blueprint for enhancing AI's role in promoting regional integration in West Africa.

Conceptual Framework

The conceptual framework for the study looks at how Artificial Intelligence (AI) might solve problems with its adoption in the ECOWAS sub-region, boost regional integration, and support economic diversification. First, artificial intelligence is vital in regional integration and has become a strong driver in encouraging cooperation among ECOWAS members. The Digital Transformation Strategy for Africa (2020-2030) underscores how digital tools, including AI, can improve communication and decision-making across governments, strengthening regional cooperation (African Union, 2020). Moreover, according to Androutsopoulou et al. (2019), AI technologies, such as chatbots, have transformed citizen-government interactions by encouraging transparency and building trust. Likewise, within ECOWAS, AI can facilitate cross-border communication, boost policy alignment, and support addressing regional issues, including cross-border crimes and trade facilitation (Bala, 2017; African Union, 2020; Dentons, 2024). In addition, Davis's Technology Acceptance Model (TAM) (1989) stresses that AI technologies' perceived usefulness and ease of use are critical to their adoption, particularly for improving regional governance. Through data-driven decision-making and policy integration, AI may thus greatly help to harmonize data sharing among ECOWAS member nations, hence supporting cooperation (Androutsopoulou et al., 2019; Criado & Gil-Garcia, 2019; Dentons, 2024; Davis, 1989). Moreover, AI's contribution to economic diversification inside ECOWAS offers a workable means to lower reliance on conventional economic sectors like mining and agriculture. The application of AI is seen as a key driver of innovation and productivity.

The Public Management Review by Bjerke-Busch and Thorp (2024) underscores how AI has the potential to overcome productivity challenges by enabling deliberate learning and promoting the implementation of innovative technologies. Consequently, in the ECOWAS context, AI can spearhead innovation in fintech, digital services, and smart agriculture, which is important for enlarging economic bases and promoting diversification (Ben Abdelaziz et al., 2022). Furthermore, the African Union's Continental AI Strategy (2024) underscores AI's transforming power in promoting innovation in many spheres, so it supports higher AI research and development funding. This approach fits very nicely with ECOWAS's demand for more creative, data-driven economies to realize diversification and sustained economic growth (Bala,

2017). However, despite AI's potential, significant risks and challenges are associated with its implementation within ECOWAS. These include concerns over data privacy, ethical considerations, and the lack of adequate digital infrastructure in many member states. Misra et al. (2023) point out that government efforts to adopt AI often encounter organizational and technical challenges. Similarly, disparities in digital readiness across ECOWAS states exacerbate these challenges (Bala, 2017; Dentons, 2024; African Union, 2020). In light of these challenges, the Technology-Organization-Environment (TOE) Framework presents a thorough knowledge of how organizational capabilities and environmental factors influence the adoption of AI technologies (Fan & Pan, 2023). Therefore, to overcome these risks, ECOWAS must develop regional AI governance frameworks, invest in digital infrastructure, and implement capacity-building initiatives (Dentons, 2024). Additionally, the Gambia Digital Economy Master Plan (2023) set a model of how individual ECOWAS states plan to address these challenges by strengthening digital infrastructure and AI policy development. The conceptual framework uses the TOE and the Technology Acceptance Model (TAM) to investigate how artificial intelligence might solve related issues in ECOWAS, boost regional integration, and drive economic diversification. This paradigm ultimately emphasizes how artificial intelligence might enable ECOWAS to create a more varied, linked, creative economic future. This is demonstrated further in the conceptual model in figure 1.

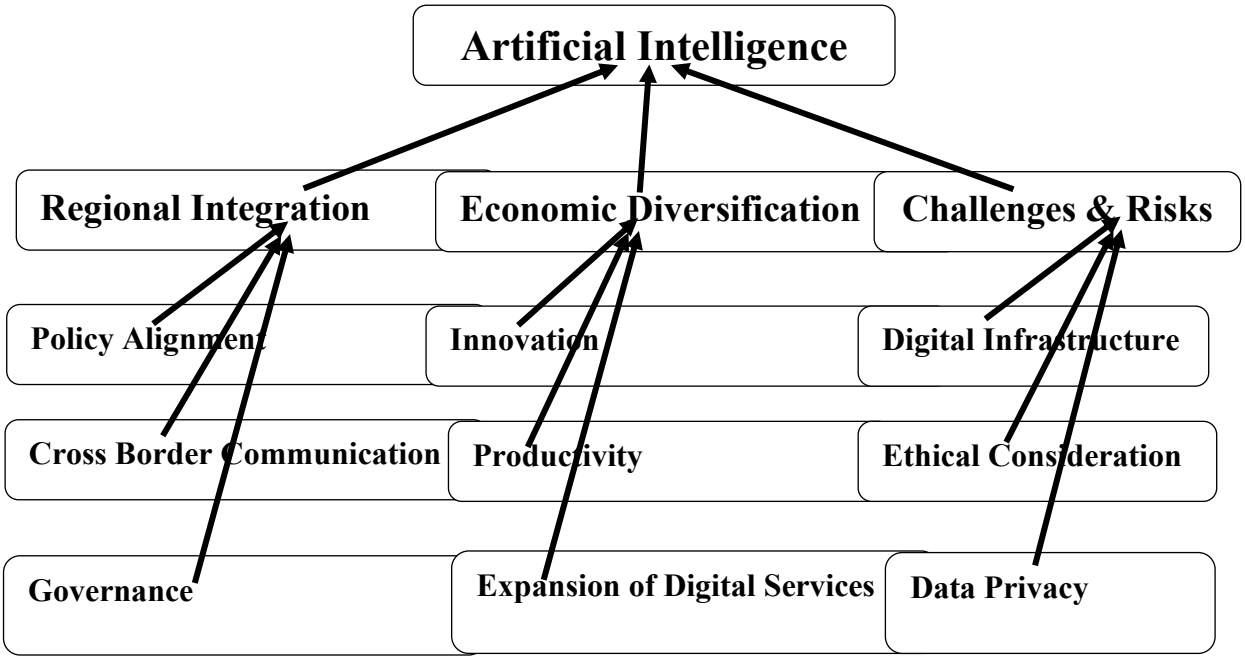

Figure 1: Conceptual Model, Researcher, 2025.

METHODOLOGY

This study uses a descriptive-analytics research design to explore the role of artificial intelligence (AI) in fostering regional integration and economic diversification within the ECOWAS sub-region. Relying entirely on secondary data, it draws from various sources such as government reports, academic journals, international organizations, and industry white papers. Consequently, these sources provide thorough insights into AI's impact on regional integration, technological innovation, and economic growth.

In gathering data, the study systematically reviews literature, analyzes policy documents, and compiles quantitative and qualitative data relevant to the research objectives. As a result, this allows the research to capture existing information on AI's adoption and economic trends in the ECOWAS region. Thematic, trend, comparative, and content analysis methods are applied to analyze the data. Notably, the analysis is structured to identify key trends in AI adoption, economic integration, and the challenges associated with implementing AI-driven policies.

However, the research is limited by the accuracy and timeliness of the secondary data, as some reports may not reflect the most current developments. Additionally, gaps in the data across ECOWAS member states might restrict a complete understanding of AI implementation efforts. Nevertheless, the descriptive-analytical approach broadly explores AI's role, presenting valuable insights for policymakers.

A Qualitative Perspective of AI's Dawn and Unity's Call: ECOWAS Weaves Africa's Future

The rise of Artificial Intelligence (AI) brings unique paradigm shift in the economy and society in the Economic Community of West African States (ECOWAS). This study examines the important aspects of AI's impact on the region's future, focusing on three main objectives. First, it examines how AI can improve regional unity by encouraging teamwork among ECOWAS member countries. Second, it assesses how well artificial intelligence promotes innovation, helps to diversify the economy, and lessens reliance on conventional sectors. Finally, it evaluates the risks and problems associated with using artificial intelligence and suggests solutions.

The Impact of AI on Advancing ECOWAS Economic Transformation

Artificial Intelligence (AI) is now an important factor for economic change in ECOWAS, with the potential to change important sectors, improve regional unity, and encourage economic variety. The African Union (2024) states that AI can help with digital change efforts, supporting trade between countries, healthcare, and teamwork

in governance. AI technologies can smoothen operations, aid decision-making, and present new solutions, significantly impacting regional integration in ECOWAS (Ben Abdelaziz et al., 2022; Chen et al., 2023). AI is driving the diversification of economies by reducing reliance on traditional sectors such as agriculture and mining, opening pathways for innovation in technology and services (Bala, 2017).

Also, Androutsopoulou et al. (2019) point out that AI helps e-government services, improving communication between governments and citizens and leading to better governance in the ECOWAS region. As AI becomes more embedded in public administration and service delivery, it also promises to address inefficiencies and ensure more responsive governance (Criado & Gil-Garcia, 2019). ECOWAS must deal with infrastructure, regulations, and public trust issues to benefit from AI's potential. Bjerke-Busch and Thorp (2024) averred that unique plans are needed to help use AI and lessen the risks that come with it. AI is an important tool for changing the economy in ECOWAS, helping the region move to a future that is more varied, connected, and driven by technology.

AI's Role in Driving Economic Transformation in ECOWAS

Artificial Intelligence (AI) drives economic transformation within the Economic Community of West African States (ECOWAS). According to the African Union's Continental Artificial Intelligence Strategy (2024) and the Digital Transformation Strategy for Africa (2020-2030), AI is integrated into multiple sectors, including agriculture, healthcare, and finance, among other sectors, to enhance productivity and innovation across the region. AI solutions like data analytics and machine learning improve how resources are used, improve government work, and enhance decision-making (Mahama et al., 2024; Fan & Pan, 2023).

Additionally, AI can help address many issues related to regional integration (Bala, 2017). It supports communication, reduces inefficiencies, and assists with cross-border transactions, which supports the goals of ECOWAS for economic unity. Additionally, using AI in public services, as mentioned by Androutsopoulou et al. (2019), aids governments in better addressing citizen needs, increasing public trust and involvement. In summary, AI's capacity to improve operations and support data-driven decisions makes it important for economic change in West Africa, helping ECOWAS to reach better regional integration and steady economic growth.

Risks and Challenges of Implementing AI in ECOWAS

Using artificial intelligence (AI) in the Economic Community of West African States (ECOWAS) has potential to improve governance, public services, and regional cooperation. However, there are significant risks and issues related to job loss, the gap between digital access, and problems with trust and infrastructure readiness. It is important to look at these concerns and suggest ways to overcome them.

A major concern is job loss. AI may automate many tasks, especially in agriculture, manufacturing, and public service areas, possibly leading to large employment disruptions, particularly among low-skilled workers. For example, the use of AI chatbots in public services, as mentioned by Androutsopoulou et al. (2019), might replace jobs in customer service and administration, which are crucial in many West African economies. This change can significantly affect the workforce, especially in countries with high unemployment. Additionally, there is a risk of widening inequality, as certain groups may not have the skills needed for new AI-related jobs, deepening the gap between skilled and unskilled workers (Bjerke-Busch & Thorp, 2024).

To tackle this issue, training and skill development programs should be a priority. According to the African Union's (2024) Continental AI Strategy, investing in educational programs focused on AI literacy and digital skills is crucial for ensuring the workforce is prepared for AI-driven changes. This can be achieved through collaborative efforts between governments, educational institutions, and the private sector to develop training programs tailored to the needs of the evolving job market. Furthermore, governments should create frameworks for social protection to support workers displaced by AI, helping them transition to new roles within the economy (Strathmore University Centre for Intellectual Property and Information Technology Law, 2023).

Another critical challenge in implementing AI in ECOWAS is the digital divide, which reflects disparities in access to digital technologies across different regions and socio-economic groups. While AI can potentially drive transformative change, its benefits may not be evenly distributed if access to the necessary infrastructure is limited. In rural areas, for example, a lack of internet connectivity and computing devices can impede the adoption of AI solutions. The African Union's

(2020) Digital Transformation Strategy emphasizes the need for comprehensive digital infrastructure to support the deployment of AI across the continent, yet many West African countries still face substantial gaps in this regard.

To mitigate the digital divide, ECOWAS can focus on inclusive digital infrastructure development, ensuring that urban and rural areas have the technological resources required for AI adoption. Public-private partnerships could be instrumental in extending broadband coverage and providing affordable access to digital devices. Furthermore, governments must ensure that AI policies are inclusive, addressing the needs of marginalized communities and promoting digital equity (Fan & Pan, 2023). Initiatives such as mobile-based AI solutions could help bridge the gap, enabling more widespread use of AI in sectors such as healthcare and education.

Moreover, public trust in AI remains a significant challenge. In the public sector, citizens must have confidence in AI systems to accept and engage with them. Studies such as those by Aoki (2020) and Kleizen et al. (2023) highlight the importance of building trust through transparency, accountability, and ethical AI practices. In ECOWAS, where governance challenges are prevalent, AI could be viewed with skepticism if it is perceived as a tool for corruption or political manipulation. To overcome this barrier, ECOWAS governments should adopt strong AI governance frameworks that prioritize ethical considerations, transparency, and the protection of citizens' rights. As suggested by Dentons (2024), trust in AI systems can be cultivated by adhering to best practices in AI regulation and involving citizens in the decision-making process.

Finally, the technical readiness of governments in West Africa poses another challenge. Many regional public institutions lack the infrastructure, expertise, and data management systems required to implement AI successfully. To address this, governments should focus on capacity-building programs to develop public sector employees' skills in AI and data analytics.

In conclusion, while AI offers substantial benefits for ECOWAS countries, its implementation must be carefully managed to mitigate risks such as job displacement and the digital divide. By investing in education, infrastructure, and governance frameworks, ECOWAS can harness AI's potential while ensuring its inclusive, ethical, and sustainable deployment. Through these strategies, AI can be a powerful tool for

driving economic growth, improving public service delivery, and advancing regional integration in West Africa.

RESULTS AND DISCUSSION

This research examined how artificial intelligence (AI) can foster regional integration in West Africa, achieving three key objectives. First, the study assessed the impact of AI on regional integration efforts within ECOWAS, followed by an evaluation of AI's role in driving economic diversification within the ECOWAS sub-region. Finally, it investigated the risks and challenges of implementing AI in ECOWAS. The study relied entirely on secondary data from various sources such as government reports, academic journals, international organizations, and industry white papers, adopting a descriptive-analytical research design. Consequently, the findings on each objective are stated as follows:

On objective one, the study showed that AI is a key player in changing the economies of ECOWAS member states. The African Union (2024) and other reports state that AI can boost digital transformation in trade, healthcare, and governance. AI technologies simplify processes, help decision-making, and bring new solutions, aiding regional integration and economic diversification (Nwangwu, Enyiazu, Nwagwu, & Ezeibe, 2019). For instance, AI is important for lessening reliance on traditional sectors such as agriculture and mining and encouraging innovation in technology and services (Bala, 2017). Furthermore, AI improves e-government services, enhancing communication between governments and citizens, thus leading to better governance (Androutsopoulou et al., 2019; Criado & Gil-Garcia, 2019). However, the effective use of AI in ECOWAS must tackle infrastructure, regulations, and public trust issues. Customized planning is required, according to Nwangwu (2024), to properly benefit from the acceptance of artificial intelligence and reduce risks. Thus, artificial intelligence presents excellent opportunities for economic transformation in ECOWAS, opening the path for a future that is more broad, linked, and focused on technology.

Concerning objective two, the study shows that AI is instrumental in driving economic transformation within ECOWAS, as outlined by the African Union's Continental AI Strategy (2024) and the Digital Transformation Strategy for Africa

(2020-2030). AI technologies are being integrated across various sectors, including agriculture, healthcare, and finance, to boost productivity and innovation. AI solutions, such as data analytics and machine learning, enhance resource utilization, improve government functions, and support data-driven decision-making (Mahama et al., 2024; Fan & Pan, 2023). In addition, AI helps resolve challenges related to regional integration by improving communication, reducing inefficiencies, and facilitating cross-border transactions, aligning with ECOWAS's goal of fostering economic unity (Bala, 2017; Nwangwu, 2024). Adopting AI in public services also improves citizen engagement and trust in government (Androutsopoulou et al., 2019). Therefore, the efforts of ECOWAS toward economic transformation, regional integration, and continuous economic progress depend critically on AI's capacity to improve operations and decision-making.

Finally, the study pointed out significant risks and problems associated with using artificial intelligence in ECOWAS. Job loss is a big issue, especially in sectors like public services and agriculture, which depend on low-skilled workers. As AI takes over tasks usually done by people, there is a risk that the gap between skilled and unskilled workers will grow. The study reveals that presenting educational programs is significant for boosting AI and digital skills in the region, helping workers adjust to changes from AI. Another major problem is the digital divide, where a lack of access to technology limits AI use, especially in rural areas. The research highlights the need for developing digital systems to ensure equal access to AI technologies.

Furthermore, a trust gap in artificial intelligence limits its acceptance, particularly within public services. Gaining trust relies on transparency and ethical conduct. Also, public institutions in ECOWAS do not have enough technological knowledge and readiness, hence the importance of training initiatives to provide governments with instruments and knowledge to apply artificial intelligence efficiently. In essence, although artificial intelligence presents major opportunities for regional and economic development in ECOWAS, its successful implementation depends on the cautious handling of risks and constraints.

Policy Implications

To effectively integrate AI into ECOWAS's economic and political frameworks,

policymakers should focus on several key areas: Digital Infrastructure: Improve access to affordable internet and digital devices, especially in rural areas. AI Education & Workforce Development: Invest in AI literacy and skills training, focusing on retraining workers displaced by automation. AI Governance: Create ethical AI frameworks to ensure transparency, accountability, and public trust. Regional Collaboration: Promote cross-border AI research, development, and innovation to boost regional integration. Equitable Impact: Ensure AI benefits all communities, particularly marginalized ones, and promotes social equity. Cybersecurity & Data Privacy: Develop robust cybersecurity and data privacy laws to protect citizens' information. Political Leadership: Ensure strong political will and leadership to support AI integration as part of national development strategies. In conclusion, a comprehensive, inclusive approach to AI can drive innovation, economic diversification, and regional cooperation in ECOWAS.

CONCLUSION

In conclusion, artificial intelligence (AI) presents significant opportunities to drive sustainable socio-economic growth and enhance regional integration within the ECOWAS sub-region. By fostering innovation, improving governance, and optimizing resource allocation, AI can diversify economies, enhance productivity, and facilitate cross-border cooperation. However, successful integration requires overcoming challenges related to infrastructure, digital divides, and public trust. Policymakers must prioritize inclusive digital infrastructure, workforce development, and robust governance frameworks to unlock AI's full potential. Future research should explore the long-term impacts of AI on employment, regional trade, and the digital economy, as well as the ethical implications of AI deployment in governance and public services across ECOWAS member states.

REFERENCES

African Union. (2024). *Continental artificial intelligence strategy*. https://au.int/sites/default/files/documents/44004-doc-EN-_Continental_AI_Strategy_July_2024.pdf

African Union. (2020, May 18). *Digital transformation strategy for Africa 2020-2030*. https://au.int/en/documents/20200518/digital-transformation-strategy-africa-2020-2030

Androutsopoulou A, Karacapilidis N, Loukis E, et al. (2019). Transforming the

communication between citizens and government through AI-guided chatbots. *Government Information Quarterly* 36(2), 358–367.

Aoki, N. (2020). An experimental study of public trust in AI chatbots in the public sector. *Government Information Quarterly* 37(4), 101490.

Bala, M. T. (2017). The challenges and prospects for regional and economic integration in West Africa. *Asian Social Science*, *13*(5), 24.

Ben Abdelaziz, F., Kunze, H., La Torre, D., & Sinclair-Desgagné, B. (2022). Guest editorial: Artificial intelligence and machine learning in business and management. *Journal of Modelling in Management*, *17*(3), 849-852.

Bjerke-Busch, L. S., & Thorp, S. (2024). Overcoming the productivity paradox in the public sector by managing deliberate learning. *Public Management Review*, *26*(6), 1752-1778.

Brandon-Jones M, Kauppi K (2018) Examining the antecedents of the technology acceptance model within e-procurement. *International Journal of Operations and Production Management,* 38(1), 22–42.

Chen, X. Q., Ma, C. Q., Ren, Y. S., Lei, Y. T., Huynh, N. Q. A., & Narayan, S. (2023). Explainable artificial intelligence in finance: A bibliometric review. *Finance Research Letters, 56*. https://doi.org/10.1016/j.frl.2023.104145

Criado, J. I., & Gil-Garcia, J. R. (2019). Creating public value through smart technologies and strategies: From digital services to artificial intelligence and beyond. *International Journal of Public Sector Management, 32*(5), 438–450. https://doi.org/10.1108/IJPSM-03-2019-0075.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340. https://doi.org/10.2307/249008

Dentons. (2024, June 13). *AI regulation and policy in Africa*. https://www.dentons.com/en/insights/articles/2024/june/13/ai-regulation-and-policy-in- africa

Dergaa, I., Chamari, K., Zmijewski, P., & Saad, H. B. (2023). From human writing to artificial intelligence generated text: Examining the prospects and potential threats of ChatGPT in academic writing. *Biology of Sport, 40*(2), 615–622. https://doi.org/10.5114/biolsport.2023.119513

Elouidani, R., & Outouzzalt, A. (2023). Artificial intelligence for sustainable finance: A bibliometric analysis. In *Lecture Notes in Networks and Systems* (pp. 529-542). https://doi.org/10.1007/978-3-031-26384-2_46

Ermolayeva, A., Birukou, A., Matyushenko, S., & Kochetkov, D. (2023). Statistical model and method for analyzing AI conference rankings: China vs USA. *Heliyon, 9*(11). https://doi.org/10.1016/j.heliyon.2023.e11267

Fan, B., & Pan, T. (2023). Does information technology–organizational resource

interaction affect E-government performance? Moderating roles of environmental uncertainty. *Government Information Quarterly*, *40*(3), 101830.

Gera, R., Chadha, P., Saxena, A., & Dixit, S. (2024). A scientometric and bibliometric review of impacts and application of artificial intelligence and fintech for financial inclusion. In *Artificial intelligence, fintech, and financial inclusion* (pp. 82-111). CRC Press. https://doi.org/10.1201/9781003125204-7

He, Q., & Xue, Y. (2023). Research on the influence of digital finance on the economic efficiency of the energy industry in the background of artificial intelligence. *Scientific Reports, 13*(1). https://doi.org/10.1038/s41598-023-42309-5

Kleizen, B., Van Dooren, W., Verhoest, K., & Tan, E. (2023). Do citizens trust trustworthy artificial intelligence? Experimental evidence on the limits of ethical AI measures in government. *Government Information Quarterly*, *40*(4), 101834.

Kumar, S., Lim, W. M., Sivarajah, U., & Kaur, J. (2023). Artificial intelligence and blockchain integration in business: Trends from a bibliometric-content analysis. *Information Systems Frontiers, 25*(2), 871-896. https://doi.org/10.1007/s10796-022-10279-0

Li, Y., Fan, Y., & Nie, L. (2023). Making governance agile: exploring the role of artificial intelligence in China's local governance. *Public Policy and Administration*, 09520767231188229.

Mahama, U. F. A., Boison, D. K., Doumbia, M. O., & Antwi-Boampong, A. (2024). Enhancing Decision-Making and Supply Chain Agility through Artificial Intelligence. *Perspectives on Global Development and Technology*, *23*(5-6), 407- 425.

Miller, A. (2019). The intrinsically linked future for human and artificial intelligence interaction. *Journal of Big Data, 6*(1), 1–9. https://doi.org/10.1186/s40537-019-0170-4

Ministry of Communication and Digital Economy. (2023). *The Gambia digital economy master plan 2023-20233*. Retrieved from https://mocde.gov.gm/gm-cloud-policy-documents/.pdf.

Misra, S. K., Sharma, S. K., Gupta, S., & Das, S. (2023). A framework to overcome challenges to the adoption of artificial intelligence in Indian Government Organizations. *Technological Forecasting and Social Change*, *194*, 122721.

Nwangwu, C. (2024). Nigeria's 4-D Diplomacy and Regional Integration in West Africa: A Peacebuilding Debacle?. *Peace Review*, *36*(4), 754-768.

Nwangwu, C., C. Enyiazu, E. J. Nwagwu, and C. C. Ezeibe. (2019). "Regionalism in World Politics: Interrogating the Relevance of the ECOWAS in Global Political Economy." *Central European Journal of International and Security Studies* 13 (2): 111–132. doi:10.51870/CEJISS.A130205.