Magna Scientia Advanced Biology and Pharmacy

eISSN: 2582-8363

Cross Ref DOI: 10.30574/msabp

Journal homepage: https://magnascientiapub.com/journals/msabp/

(REVIEW ARTICLE)

Check for updates

# Public-private partnerships in health sector innovation: Lessons from around the world

Samira Abdul [1,*], Ehizogie Paul Adeghe [2], Bisola Oluwafadekemi Adegoke [3], Adebukola Adejumoke Adegoke [4] and Emem Henry Udedeh [5]

[1] *University of North Florida, USA.*
[2] *Pediatric Clinic, William. D Kelley School Dental Clinic, Kornberg School of Dentistry, Temple University, USA.*
*3 Health information analyst, Huntington, WV, U.S.A.*
[4] *Marshall University, USA.*
[5] *Public Health Specialist; United Kingdom.*

Magna Scientia Advanced Biology and Pharmacy, 2024, 12(01), 045–059

Publication history: Received on 09 April 2024; revised on 21 May 2024; accepted on 24 May 2024

Article DOI: https://doi.org/10.30574/msabp.2024.12.1.0032

## Abstract

Public-Private Partnerships (PPPs) have emerged as a crucial mechanism for fostering innovation in the health sector globally. This review encapsulates the lessons learned from diverse PPP models worldwide, highlighting their significance and impact. PPPs in healthcare innovation entail collaboration between governmental bodies, private enterprises, and sometimes non-profit organizations to address challenges, such as limited resources, expertise, and infrastructure, while leveraging the strengths of each sector. The success of PPPs relies on effective governance structures, clear objectives, and mutual accountability. One notable example is the United Kingdom's NHS Innovation Accelerator, which partners with industry leaders to fast-track the adoption of innovative healthcare technologies within the National Health Service (NHS). Through this initiative, pioneering solutions, ranging from digital health platforms to medical devices, have been implemented, enhancing patient care and operational efficiency. Similarly, in low-resource settings like sub-Saharan Africa, PPPs have played a pivotal role in improving access to essential healthcare services. Projects such as the Medicines for Malaria Venture (MMV) collaborate with pharmaceutical companies, governments, and research institutions to develop affordable antimalarial drugs tailored to the region's needs. In the realm of medical research and development, partnerships like the Coalition for Epidemic Preparedness Innovations (CEPI) have demonstrated the power of international collaboration in addressing global health threats. CEPI brings together governments, philanthropic organizations, and the private sector to expedite the development of vaccines against emerging infectious diseases, as witnessed during the COVID-19 pandemic. However, challenges persist in PPP implementation, including complex regulatory frameworks, funding uncertainties, and divergent interests among stakeholders. Lessons from successful PPPs underscore the importance of transparent communication, stakeholder engagement, and sustained political commitment. In conclusion, PPPs in the health sector represent a dynamic avenue for catalyzing innovation and driving transformative change. By drawing insights from diverse experiences worldwide, policymakers and practitioners can refine existing frameworks and foster sustainable partnerships to tackle evolving health challenges effectively.

**Keyword:** Public-Private Partnership; Health; Innovation; World; Review

## 1. Introduction

Public-Private Partnerships (PPPs) in healthcare innovation represent collaborative endeavors between government entities, private sector organizations, and sometimes non-profit institutions to address healthcare challenges through

* Corresponding author: Samira Abdul

innovation (Adama & Okeke, 2024, Akintuyi, 2024, Igbinenikaro & Adewusi, 2024, Joel & Oguanobi, 2024). In these partnerships, resources, expertise, and responsibilities are shared to leverage the strengths of each sector for the collective benefit of society (Oguamanam, 2010; Tore, 2023).

PPPs in healthcare innovation encompass a range of collaborations aimed at developing and implementing innovative solutions to address healthcare challenges. These partnerships can take various forms, including research collaborations, joint ventures, and service delivery partnerships. They involve the pooling of resources, knowledge, and capabilities from both public and private sectors to drive innovation and improve healthcare outcomes (Gallouj, et al., 2023; Abeykoon, 2021; Gabriel, et al., 2017).

The significance of PPPs in the healthcare sector cannot be overstated, particularly in the face of complex and evolving healthcare challenges on a global scale (Adama & Okeke, 2024, Akpuokwe, Adeniyi & Bakare, 2024, Ijeh, et. al., 2024, Nzeako, et. al., 2024). These partnerships offer several key advantages; PPPs enable the mobilization of financial, technological, and human resources from both public and private sectors, maximizing the available resources for healthcare innovation (Ferreira, and Marques, 2021; Bull, and McNeill, 2007). By fostering collaboration between diverse stakeholders, PPPs facilitate the development and adoption of innovative solutions to healthcare challenges, leading to improved efficiency and effectiveness in healthcare delivery (Leigland, 2018; Deaton, and Heston, 2010). PPPs often result in scalable and sustainable solutions that can be replicated and adapted across different contexts, enhancing their impact and reach. By spreading risks and responsibilities across multiple partners, PPPs help mitigate the financial and operational risks associated with healthcare innovation initiatives (Al-Hanawi, and Qattan, 2019).

The purpose of this outline is to delve into the lessons learned from diverse PPP models implemented in the health sector around the world. By examining the successes, challenges, and best practices of different PPP initiatives, we aim to distill valuable insights that can inform future efforts to leverage PPPs for healthcare innovation. Through this exploration, we seek to identify key success factors, common pitfalls, and recommendations for optimizing the effectiveness of PPPs in driving healthcare innovation and addressing global health challenges (Adama & Okeke, 2024, Akpuokwe, et. al., 2024, Oguanobi & Joel, 2024, Ojeyinka, & Omaghomi, 2024).

## 2. Overview of Global PPP Models in Health Sector Innovation

Public-Private Partnerships (PPPs) in the health sector have evolved into diverse models, each tailored to address specific healthcare challenges and leverage the combined expertise and resources of public and private entities (Torchia, et al., 2015; Villani, et al., 2017; Babacan, 2020). This section provides a brief overview of different types of PPPs, followed by examples from various regions and an analysis of their significance in driving healthcare innovation.

Research-focused PPPs bring together government agencies, academic institutions, pharmaceutical companies, and other stakeholders to advance medical research and develop new treatments or technologies (Adama, et. al., 2024, Arowoogun, et. al., 2024, Okeke, et. al., 2023, Popoola, et. al., 2024). These collaborations facilitate the sharing of scientific knowledge, expertise, and infrastructure to accelerate the discovery and development of innovative healthcare solutions. Service delivery PPPs involve collaborations between public healthcare providers and private organizations to improve the delivery of healthcare services (Vertinsky, 2014; Mensah, 2016). These partnerships may encompass areas such as infrastructure development, healthcare management, and the provision of medical services. By leveraging the efficiency and innovation of the private sector, service delivery partnerships aim to enhance the accessibility, quality, and affordability of healthcare services for communities (Rowe, et al., 2013; Ferpozzi, 2023).

The NHS Innovation Accelerator (NIA) is an initiative that aims to identify and spread innovations that have the potential to improve patient outcomes and efficiency within the National Health Service (NHS) in the United Kingdom (Vertinsky, 2014; Mensah, 2016; Rosborough, and Hobson, 2023). The NIA partners with industry leaders, academic institutions, and healthcare providers to support the adoption and spread of innovative healthcare technologies and practices (Adama, et. al., 2024, Atadoga, et. al., 2024, Esho, et. al., 2024, Okpokoro, et. al., 2023). Through the NIA, pioneering solutions such as digital health platforms, remote monitoring devices, and patient engagement tools have been implemented to address healthcare challenges and drive innovation across the NHS (Cox, et al., 2018; Marjanovic, et al., 2019; Sansom, 2023).

Medicines for Malaria Venture (MMV) in Sub-Saharan Africa is a public-private partnership that focuses on the discovery, development, and delivery of new antimalarial drugs tailored to the needs of malaria-endemic regions, particularly in sub-Saharan Africa (Nwaka, et al., 2004; Winstanley, et al., 2004). MMV collaborates with pharmaceutical companies, research institutions, and funding agencies to accelerate the development of innovative antimalarial treatments and ensure their accessibility and affordability in malaria-affected countries (Adama, et. al., 2024,

Akpuokwe, et. al., 2024, Igbinenikaro, Adekoya & Etukudoh, 2024, Ojeyinka, & Omaghomi, 2024). By leveraging the expertise and resources of multiple stakeholders, MMV has contributed to significant advancements in malaria treatment and prevention, saving millions of lives in the region (Lezaun, 2018). Coalition for Epidemic Preparedness Innovations (CEPI) for Epidemic Preparedness is a global partnership that aims to accelerate the development of vaccines against emerging infectious diseases and ensure their equitable distribution during outbreaks (Gouglas, et al., 2019; Brende, et al., 2017). CEPI brings together governments, philanthropic organizations, and the private sector to fund and coordinate research and development efforts for vaccine candidates against priority pathogens, such as Ebola, Zika, and COVID-19. Through its collaborative approach, CEPI has played a crucial role in expediting the development and deployment of COVID-19 vaccines, demonstrating the effectiveness of PPPs in addressing global health threats (Brown, and Head, 2020; Tula et al., 2024; Noad, et al., 2021).

Research-focused PPPs facilitate the discovery and development of new treatments, diagnostics, and preventive measures by harnessing the collective expertise and resources of public and private stakeholders (Adama, et. al., 2024, Aturamu, Thompson & Akintuyi, 2021, Ijeh, et. al., 2024, Oguanobi & Joel, 2024). These collaborations help bridge the gap between scientific discovery and clinical application, accelerating the translation of research findings into tangible healthcare solutions. By fostering collaboration across sectors, research-focused PPPs drive innovation, promote knowledge sharing, and advance scientific understanding, ultimately improving patient outcomes and public health (Hammill, 2017; Okoye et al., 2023; Egharevba, 2017).

Service delivery PPPs enhance the accessibility, quality, and efficiency of healthcare services by leveraging the capabilities and innovation of the private sector. These partnerships enable governments to leverage private sector expertise, infrastructure, and resources to address healthcare challenges, expand service delivery capacity, and improve healthcare outcomes for communities (Adebamowo, et. al., 2017, Akintuyi, 2024, Ijeh, et. al., 2024, Joel & Oguanobi, 2024). By combining the strengths of public and private entities, service delivery partnerships drive innovation in healthcare delivery models, promote cost-effectiveness, and enhance the overall effectiveness of healthcare systems.

In conclusion, PPPs in the health sector encompass a variety of models, each designed to address specific healthcare challenges and leverage the combined expertise and resources of public and private stakeholders. By fostering collaboration across sectors, PPPs drive innovation, promote knowledge sharing, and improve healthcare outcomes for communities worldwide (Adeghe, 2024, Akintuyi, 2024, Igbinenikaro & Adewusi, 2024, Ojeyinka, & Omaghomi, 2024). Through examples such as the NHS Innovation Accelerator, Medicines for Malaria Venture, and the Coalition for Epidemic Preparedness Innovations, PPPs have demonstrated their significance in driving healthcare innovation and addressing global health challenges.

## 3. Challenges and Lessons Learned

Public-Private Partnerships (PPPs) in the health sector, while beneficial, often encounter various challenges that can impede their effectiveness. Understanding these challenges and learning from them is crucial for optimizing the outcomes of PPP initiatives. This section explores common challenges faced by PPPs and the valuable lessons learned from addressing them (Torchia, et al., 2015; Hernandez-Aguado, and Zaragoza, 2016).

One significant challenge in PPP implementation is navigating complex regulatory frameworks and legal requirements. Differences in regulations across jurisdictions, particularly in multinational partnerships, can create obstacles to collaboration and innovation (Adeghe, 2024, Akpuokwe, et. al., 2024, Igbinenikaro, Adekoya & Etukudoh, 2024, Okpokoro, et. al., 2022). Moreover, stringent regulations may delay the approval and implementation of healthcare innovations, hindering their timely delivery to patients. Establishing clear communication channels with regulatory authorities and proactively engaging in dialogue can help mitigate regulatory hurdles (Adeghe, Okolo & Ojeyinka, 2024, Akpuokwe, et. al., 2024, Esho, et. al., 2024, Okolo, et. al., 2024). PPP stakeholders must collaborate closely with regulators to navigate legal complexities effectively. Additionally, advocating for regulatory reforms to streamline approval processes and harmonize standards can facilitate innovation and accelerate the adoption of healthcare solutions (Kostyak, et al., 2017; Oladipo et al., 2024).

Financial uncertainties, including funding gaps, budget constraints, and unpredictable revenue streams, pose significant challenges to PPP sustainability. Moreover, the inherent risks associated with healthcare innovation, such as product development failures or market uncertainties, can deter private sector involvement and jeopardize project viability (Adeghe, Okolo & Ojeyinka, 2024, Atadoga, et. al., 2024, Joel & Oguanobi, 2024, Okunade, et. al., 2023). Effective risk management strategies are essential for mitigating financial uncertainties and ensuring PPP success. Developing robust financial models, conducting thorough risk assessments, and diversifying funding sources can enhance project

resilience. Additionally, establishing contingency plans and risk-sharing mechanisms among partners can help mitigate financial risks and ensure project sustainability over the long term (Fanzo, et al., 2021; Nwankwo et al., 2024).

Cultural and organizational differences among PPP partners, including divergent priorities, communication styles, and decision-making processes, can hinder collaboration and alignment of interests. Misaligned incentives and conflicting agendas may impede progress and undermine trust among stakeholders.

Building strong relationships and fostering a culture of collaboration and mutual respect are essential for overcoming cultural and organizational differences in PPPs. Investing in effective communication strategies, such as regular meetings, workshops, and joint planning sessions, can facilitate understanding and alignment among partners (Adeghe, Okolo & Ojeyinka, 2024, Babawarun, et. al., 2024, Nzeako, et. al., 2024, Okolo, et. al., 2024). Additionally, establishing clear governance structures, roles, and responsibilities can promote transparency and accountability, fostering a shared sense of purpose and commitment to project success.

Transparency, accountability, and trust are foundational elements of successful PPPs. Lack of transparency in decision-making processes, inadequate monitoring and evaluation mechanisms, and breaches of trust among partners can undermine project integrity and effectiveness. Prioritizing transparency, accountability, and trust-building is critical for fostering strong partnerships and ensuring PPP success (Bavington, 2021; Yaqoobi, 2022; Dell'Oste, 2021). Establishing clear communication channels, sharing relevant information openly, and engaging stakeholders in decision-making processes can enhance transparency and build trust among partners. Moreover, implementing robust monitoring and evaluation mechanisms to track progress, identify challenges, and measure impact can enhance accountability and promote continuous improvement in PPP implementation (Adeghe, Okolo & Ojeyinka, 2024, Bakare, et. al., 2024, Lawal, et. al., 2017, Omaghomi, et. al., 2024).

## 4. Case Studies: Lessons from Select PPP Initiatives

The NHS Innovation Accelerator (NIA) aims to identify and spread innovations that have the potential to improve patient outcomes and efficiency within the National Health Service (NHS) in the United Kingdom (Adeghe, Okolo & Ojeyinka, 2024, Cattaruzza, et. al., 2023, Maduka, et. al., 2023, Okolo, et. al., 2024). Through partnerships with industry leaders, academic institutions, and healthcare providers, the NIA has supported the adoption and spread of innovative healthcare technologies and practices (Marjanovic, et al., 2019; Odunaiya et al., 2024; McClellan, et al., 2018).

Medicines for Malaria Venture (MMV) is a public-private partnership focused on the discovery, development, and delivery of new antimalarial drugs tailored to the needs of malaria-endemic regions, particularly in sub-Saharan Africa. By collaborating with pharmaceutical companies, research institutions, and funding agencies, MMV has accelerated the development of innovative antimalarial treatments and ensured their accessibility and affordability in malaria-affected countries (Thiel, 2005; Talisuna, 2018; World Health Organization, 2018).

The Coalition for Epidemic Preparedness Innovations (CEPI) is a global partnership that aims to accelerate the development of vaccines against emerging infectious diseases and ensure their equitable distribution during outbreaks Adeghe, Okolo & Ojeyinka, 2024, Chidi, et. al., 2024, Igbinenikaro & Adewusi, 2024, Omaghomi, et. al., 2024). By bringing together governments, philanthropic organizations, and the private sector, CEPI has played a crucial role in expediting the development and deployment of COVID-19 vaccines, demonstrating the effectiveness of PPPs in addressing global health threats. Effective communication and collaboration among stakeholders are essential for PPP success (Olatoye, et. al., 2009, Phillips, et. al., 2018, Popoola, et. al., 2024). The case studies illustrate the importance of building strong relationships, fostering trust, and aligning interests among partners to drive innovation and achieve common goals. Establishing clear governance structures, roles, and responsibilities is critical for effective PPP implementation (Adeghe, Okolo & Ojeyinka, 2024, Ekechi, et. al., 2024, Joel & Oguanobi, 2024, Okunade, et. al., 2023). By defining clear objectives, establishing accountability mechanisms, and ensuring transparency in decision-making processes, PPPs can enhance project management and governance, leading to improved outcomes. Robust risk management strategies, including financial planning, risk assessment, and contingency planning, are essential for mitigating uncertainties and ensuring project sustainability (Adeghe, Okolo & Ojeyinka, 2024, Eneh, et. al., 2024, Okolo, et. al., 2024, Omaghomi, et. al., 2024). By diversifying funding sources, establishing risk-sharing mechanisms, and implementing monitoring and evaluation frameworks, PPPs can enhance resilience and adaptability to changing circumstances (Excler, et al., Wouters, et al., 2021).

In conclusion, the case studies provide valuable insights into the challenges and lessons learned from select PPP initiatives in the health sector. By understanding and addressing regulatory hurdles, financial uncertainties, cultural differences, and trust-building challenges, PPPs can maximize their impact and contribute to driving healthcare

innovation and improving health outcomes globally (Adeghe, Okolo & Ojeyinka, 2024, Esho, et. al., 2024, Esho, et. al., 2024, Popoola, et. al., 2024).

## 5. Future Directions and Recommendations

Public-Private Partnerships (PPPs) have demonstrated their potential to drive innovation and improve healthcare outcomes globally (Akintuyi, 2024, Eneh, et. al., 2024, Igbinenikaro, Adekoya & Etukudoh, 2024, Omaghomi, et. al., 2024). However, there are opportunities for enhancing PPP effectiveness, scaling successful models, and guiding future research and evaluation efforts. This section explores these future directions and offers recommendations for maximizing the impact of PPPs in healthcare innovation (Cui, et al., 2018; Song, et al., 2016; Warsen, et al., 2018).

Leveraging digital technologies, such as telemedicine, health informatics, and artificial intelligence, presents opportunities to enhance healthcare delivery and patient outcomes through PPPs (Adeghe, Okolo & Ojeyinka, 2024, Gannon, et. al., 2023, Okunade, et. al., 2023, Omaghomi, et. al., 2024). By integrating digital solutions into PPP initiatives, stakeholders can improve access to healthcare services, optimize resource allocation, and enhance patient engagement and empowerment. PPPs can play a crucial role in addressing health inequities by targeting underserved populations and marginalized communities. By prioritizing inclusivity and equity in PPP design and implementation, stakeholders can ensure that healthcare innovations reach those most in need and contribute to narrowing health disparities globally (Adeghe, Okolo & Ojeyinka, 2024, Igbinenikaro & Adewusi, 2024, Igbinenikaro, Adekoya & Etukudoh, 2024, Popoola, et. al., 2024). Aligning PPP initiatives with the United Nations Sustainable Development Goals (SDGs) provides a framework for addressing pressing global health challenges, such as maternal and child health, infectious diseases, and non-communicable diseases (Adeniyi, et. al., 2024, Esho, et. al., 2024, Jumare, et. al., 2023, Omaghomi, et. al., 2024). By focusing on SDG targets and indicators, PPPs can contribute to achieving universal health coverage, promoting health equity, and advancing sustainable development agendas (Moro Visconti, and Morea, 2020; Toni, et al., 2024).

Governments play a crucial role in creating an enabling policy environment for PPPs in healthcare innovation. Policymakers should prioritize policy alignment, streamline regulatory processes, and provide incentives for private sector participation in PPPs (Adeghe, Okolo & Ojeyinka, 2024, Akintuyi, 2024, Joel & Oguanobi, 2024, Omaghomi, et. al., 2024). Additionally, fostering collaboration and coordination among government agencies, private enterprises, and civil society organizations is essential for scaling successful PPP models and maximizing their impact. Investing in capacity building and workforce development is critical for enhancing PPP effectiveness (Adegoke, & Olayide, Akpuokwe, et. al., 2024, Nzeako, et. al., 2024, Popoola, et. al., 2024). Governments and international organizations should prioritize investments in education, training, and skills development to build the capacity of healthcare professionals, researchers, and policymakers to engage in PPPs effectively. Moreover, promoting knowledge sharing and peer learning platforms can facilitate the exchange of best practices and lessons learned among PPP stakeholders (Adegoke, et. al., 2022, Ekechi, et. al., 2024, Joel & Oguanobi, 2024, Okolo, et. al., 2024). Exploring innovative financing mechanisms, such as impact investing, social bonds, and public-private co-investment funds, can mobilize additional resources for healthcare innovation PPPs. Governments, development banks, and philanthropic organizations should collaborate to design and implement financial instruments that incentivize private sector investment in PPPs while ensuring alignment with public health priorities and equity objectives (Ballantyne, and Stewart, 2019; Torchia, et al., 2015).

There is a need for rigorous evaluation and impact assessment of PPP initiatives to assess their effectiveness, sustainability, and contribution to healthcare outcomes (Ajogwu, et. al., 2023, Igbinenikaro & Adewusi, 2024, Joel & Oguanobi, 2024, Popoola, et. al., 2024). Future research should focus on developing robust evaluation frameworks, methodologies, and indicators to measure the impact of PPPs on health outcomes, cost-effectiveness, and equity (Adegoke, 2023, Eneh, et. al., 2024, Igbinenikaro, Adekoya & Etukudoh, 2024, Popoola, et. al., 2024). Understanding the factors that contribute to the long-term sustainability and scalability of PPP models is essential for guiding future investments and policy decisions (Popoola, et. al., 2024, Okolo, et. al., 2024). Research should explore the determinants of PPP success, the mechanisms for scaling successful models, and the sustainability of PPP outcomes beyond project lifecycles. Ethical considerations, including equity, fairness, and social responsibility, should be integrated into PPP design and implementation (Adeniyi, et. al., 2024, Eneh, et. al., 2024, Joel & Oguanobi, 2024, Popoola, et. al., 2024). Future research should examine the ethical implications of PPPs in healthcare innovation, including issues related to access, affordability, data privacy, and intellectual property rights. Moreover, governance mechanisms and accountability structures should be evaluated to ensure transparency, integrity, and accountability in PPP governance and decision-making processes (de Vrueh, and Crommelin, 2017; Alonazi, 2017).

## 6. Conclusion

In conclusion, Public-Private Partnerships (PPPs) hold immense potential for driving healthcare innovation, improving health outcomes, and advancing global health agendas. By harnessing digital technologies, addressing health inequities, and promoting sustainable development goals, PPPs can contribute to achieving universal health coverage and promoting health equity worldwide. To maximize the effectiveness of PPPs, policymakers should prioritize policy alignment, invest in capacity building, and explore innovative financing mechanisms. Additionally, further research and evaluation are needed to assess the impact, sustainability, and ethical considerations of PPPs in healthcare innovation. In summary, PPPs represent a powerful mechanism for driving health sector innovation and addressing complex health challenges. By learning from diverse experiences, embracing innovation, and fostering collaboration among stakeholders, PPPs can play a transformative role in shaping the future of healthcare delivery and improving health outcomes for all.

## Compliance with ethical standards

*Disclosure of conflict of interest*

No conflict of interest to be disclosed.

## References

[1] Abeykoon, P., 2021. Partnerships in health development. Journal of Health Management, 23(1), pp.143-154.

[2] Adama, H. E., & Okeke, C. D. (2024). Comparative analysis and implementation of a transformative business and supply chain model for the FMCG sector in Africa and the USA. Magna Scientia Advanced Research and Reviews, 10(02), 265–271. DOI: https://doi.org/10.30574/msarr.2024.10.2.0067

[3] Adama, H. E., & Okeke, C. D. (2024). Digital transformation as a catalyst for business model innovation: A critical review of impact and implementation strategies. Magna Scientia Advanced Research and Reviews, 10(02), 256–264. DOI: https://doi.org/10.30574/msarr.2024.10.2.0066

[4] Adama, H. E., & Okeke, C. D. (2024). Harnessing business analytics for gaining competitive advantage in emerging markets: A systematic review of approaches and outcomes. International Journal of Science and Research Archive, 11(02), 1848–1854. DOI: https://doi.org/10.30574/ijsra.2024.11.2.0683

[5] Adama, H. E., Popoola, O. A., Okeke, C. D., & Akinoso, A. E. (2024). Theoretical frameworks supporting IT and business strategy alignment for sustained competitive advantage. International Journal of Management & Entrepreneurship Research, 6(4), 1273-1287. DOI: 10.51594/ijmer.v6i4.1058. Fair East Publishers. Retrieved from http://www.fepbl.com/index.php/ijmer

[6] Adama, H. E., Popoola, O. A., Okeke, C. D., & Akinoso, A. E. (2024). Economic theory and practical impacts of digital transformation in supply chain optimization. International Journal of Advanced Economics, 6(4), 95-107. DOI: 10.51594/ijae.v6i4.1072. Fair East Publishers. Retrieved from http://www.fepbl.com/index.php/ijae

[7] Adama, H.E., Popoola, O.A., Okeke, C.D. and Akinoso, A.E. (2024). Theoretical Frameworks Supporting IT and Business Strategy Alignment for Sustained Competitive Advantage. International Journal of Management & Entrepreneurship Research, 6(4), pp.1273-1287.

[8] Adama, H.E., Popoola, O.A., Okeke, C.D. and Akinoso, A.E. (2024). Economic Theory and Practical Impacts of Digital Transformation in Supply Chain Optimization. International Journal of Advanced Economics, 6(4), pp.95-107

[9] Adebamowo, S. N., Dareng, E. O., Famooto, A. O., Offiong, R., Olaniyan, O., Obende, K., ... & ACCME Research Group as part of the H3Africa Consortium. (2017). Cohort profile: African Collaborative Center for Microbiome and Genomics Research's (ACCME's) Human Papillomavirus (HPV) and Cervical Cancer Study. International journal of epidemiology, 46(6), 1745-1745j.

[10] Adeghe, E. P. (2024). Integrating pediatric oral health into primary care: A public health strategy to combat oral diseases in children across the United States.

[11] Adeghe, E. P. (2024). The multifaceted role of fluoride in preventing early childhood caries: A comprehensive review.

[12] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). A review of the use of machine learning in predictive analytics for patient health outcomes in pharmacy practice.

[13] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). A review of the integration of virtual reality in healthcare: implications for patient education and treatment outcomes.

[14] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). A review of wearable technology in healthcare: Monitoring patient health and enhancing outcomes.

[15] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). A review of the integration of virtual reality in healthcare: implications for patient education and treatment outcomes.

[16] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). A review of the use of machine learning in predictive analytics for patient health outcomes in pharmacy practice.

[17] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). Evaluating the impact of blockchain technology in healthcare data management: A review of security, privacy, and patient outcomes.

[18] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). Integrating IoT in pediatric dental health: A data-driven approach to early prevention and education.

[19] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). Navigating early childhood caries management in children with autism and developmental disorders: A US perspective.

[20] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). The influence of patient-reported outcome measures on healthcare delivery: A review of methodologies and applications.

[21] Adeghe, E. P., Okolo, C. A., & Ojeyinka, O. T. (2024). The role of big data in healthcare: A review of implications for patient outcomes and treatment personalization. World Journal of Biology Pharmacy and Health Sciences, 17(3), 198-204

[22] Adeghe, E. P., Okolo, C. A., Ojeyinka, O. T., 2024: A review of emerging trends in telemedicine: Healthcare delivery transformations. International Journal of Life Science Research Archive Volume 6 Issue 01, Pages 137-147. DOI: https://doi.org/10.53771/ijlsra.2024.6.1.0040

[23] Adeghe, E. P., Okolo, C. A., Ojeyinka, O. T.,2024; Optimizing dental screening protocols for children with special healthcare needs: Enhancing access and prevention 2024/3/12 International Journal of Frontiers in Science and Technology Research. Volume 6 Issue 01 Pages 054-061, Frontier Research Journal

[24] Adeghe, Ehizogie Paul & Marisol Tellez., 2023: Effectiveness of 5% Novamin in Comparison with other Fluoride-Containing Dentifrices in the Management of Dentine Hypersensitivity - A Systematic Review and Meta-Analysis Conference Science in Dental Practice Day Kornberg School of Dentistry Temple University

[25] Adegoke, A. & Olayide, O. IFAD/FGN Assisted Value Chain Development Programme (VCDP).

[26] Adegoke, A. A., Navya, A. N., Jordan, F. J., Jenifer, N. J., & Begley, R. D. (2022). Cyber security as a threat to health care. Journal of Technology and Systems, 4(1), 32-64.

[27] Adegoke, A., (2023). Patients' Reaction to Online Access to Their Electronic Medical Records: The Case of Diabetic Patients in the US. International Journal of Applied Sciences: Current and Future Research Trends, 19 (1), pp 105-115

[28] Adeniyi, A. O., Arowoogun, J. O., Chidi, R., Okolo, C. A., & Babawarun, O. (2024). The impact of electronic health records on patient care and outcomes: A comprehensive review. World Journal of Advanced Research and Reviews, 21(2), 1446-1455.

[29] Adeniyi, A. O., Arowoogun, J. O., Okolo, C. A., Chidi, R., & Babawarun, O. (2024). Ethical considerations in healthcare IT: A review of data privacy and patient consent issues. World Journal of Advanced Research and Reviews, 21(2), 1660-1668.

[30] Ajogwu, A. E., Maduka, C. P., Adegokeb, A. A., Okongwuc, C. C., Enahorod, A. & Osunlajae, O., 2023: Advancing Women's Health In Nigeria: A Review Of Laboratory Science Contributions Description. 71 Malaysian Mental Health Journal (MMHJ)

[31] Akintuyi, O. B. (2024). Adaptive AI in Precision Agriculture: A Review: Investigating the use of self-learning algorithms in optimizing farm operations based on real-time data. Research Journal of Multidisciplinary Studies, 7(02), 016-030.

[32] Akintuyi, O. B. (2024). AI in agriculture: A comparative review of developments in the USA and Africa. Research Journal of Science and Engineering, 10(02), 060–070.

[33] Akintuyi, O. B. (2024). The Role of Artificial Intelligence in U.S. Agriculture: A Review: Assessing advancements, challenges, and the potential impact on food production and sustainability. Open Access Research Journal of Engineering and Technology, 6(02), 023–032.

[34] Akintuyi, O. B. (2024). Vertical Farming in Urban environments: A Review of Architectural Integration and Food Security. Journal of Biology and Pharmacy, 10(02), 114-126.

[35] Akpuokwe, C. U., Adeniyi, A. O., & Bakare, S. S. (2024). Legal challenges of artificial intelligence and robotics: a comprehensive review. Computer Science & IT Research Journal, 5(3), 544-561.

[36] Akpuokwe, C. U., Adeniyi, A. O., Bakare, S. S., & Eneh, N. E. (2024). The impact of judicial reforms on legal systems: a review in African countries. International Journal of Applied Research in Social Sciences, 6(3), 198-211.

[37] Akpuokwe, C. U., Adeniyi, A. O., Bakare, S. S., & Eneh, N. E. (2024). Legislative responses to climate change: a global review of policies and their effectiveness. International Journal of Applied Research in Social Sciences, 6(3), 225-239.

[38] Akpuokwe, C. U., Adeniyi, A. O., Eneh, N. E., & Bakare, S. S. (2024). Gun control laws in the USA: a comparative global review. International journal of applied research in social sciences, 6(3), 240-253.

[39] Akpuokwe, C. U., Bakare, S. S., Eneh, N. E., & Adeniyi, A. O. (2024). Parental involvement laws in child education: a USA and African review. International Journal of Applied Research in Social Sciences, 6(3), 185-197.

[40] Akpuokwe, C. U., Bakare, S. S., Eneh, N. E., & Adeniyi, A. O. (2024). Corporate law in the era of globalization: a review of ethical implications and global impacts. Finance & Accounting Research Journal, 6(3), 304-319.

[41] Akpuokwe, C. U., Eneh, N. E., Adeniyi, A. O., & Bakare, S. S. (2024). Migration trends and policies: a review of African and USA perspectives. International Journal of Applied Research in Social Sciences, 6(3), 212-224

[42] Al-Hanawi, M.K. and Qattan, A.M., 2019. An analysis of public-private partnerships and sustainable health care provision in the Kingdom of Saudi Arabia. Health services insights, 12, p.1178632919859008.

[43] Alonazi, W.B., 2017. Exploring shared risks through public-private partnerships in public health programs: a mixed method. BMC public health, 17, pp.1-7.

[44] Arowoogun, J. O., Babawarun, O., Chidi, R., Adeniyi, A. O., & Okolo, C. A. (2024). A comprehensive review of data analytics in healthcare management: Leveraging big data for decision-making. World Journal of Advanced Research and Reviews, 21(2), 1810-1821.

[45] Atadoga, A., Elufioye, O. A., Omaghomi, T. T., Akomolafe, O., Odilibe, I. P., & Owolabi, O. R. (2024). Blockchain in healthcare: A comprehensive review of applications and security concerns. International Journal of Science and Research Archive, 11(1), 1605-1613.

[46] Atadoga, A., Omaghomi, T. T., Elufioye, O. A., Odilibe, I. P., Daraojimba, A. I., & Owolabi, O. R. (2024). Internet of Things (IoT) in healthcare: A systematic review of use cases and benefits. International Journal of Science and Research Archive, 11(1), 1511-1517

[47] Aturamu, O. A., Thompson, O. A., & Akintuyi, B. O. (2021). Forecasting the effect of climate variability on yam yield in rainforest and Guinea Savannah agro-ecological zone of Nigeria. Journal of Global Agriculture and Ecology, 11(4), 1-12

[48] Babacan, H., 2020. Public–private partnerships for global health: Benefits, enabling factors, and challenges. Handbook of global health, pp.1-34.

[49] Babawarun, O., Okolo, C. A., Arowoogun, J. O., Adeniyi, A. O., & Chidi, R. (2024). Healthcare managerial challenges in rural and underserved areas: A Review. World Journal of Biology Pharmacy and Health Sciences, 17(2), 323-330.

[50] Bakare, S. S., Adeniyi, A. O., Akpuokwe, C. U., & Eneh, N. E. (2024). Data privacy laws and compliance: a comparative review of the EU GDPR and USA regulations. Computer Science & IT Research Journal, 5(3), 528-543

[51] Ballantyne, A. and Stewart, C., 2019. Big data and public-private partnerships in healthcare and research: the application of an ethics framework for big data in health and research. Asian Bioethics Review, 11(3), pp.315-326.

[52] Bavington, C., 2021. Corruption in Public Private Partnerships as a Barrier to Sustainable Development.

[53] Brende, B., Farrar, J., Gashumba, D., Moedas, C., Mundel, T., Shiozaki, Y., Vardhan, H., Wanka, J. and Røttingen, J.A., 2017. CEPI—a new global R&D organisation for epidemic preparedness and response. The Lancet, 389(10066), pp.233-235.

[54] Brown, R.J. and Head, M.G., 2020. Monitoring investments in coronavirus research and development. The Lancet Microbe, 1(2), p.e61.

[55] Bull, B. and McNeill, D., 2007. Development issues in global governance: Public-private partnerships and market multilateralism. Routledge.

[56] Cattaruzza, M. S., Gannon, J., Bach, K., Forberger, S., Kilibarda, B., Khader, Y., ... & Bar-Zeev, Y. (2023). An e-book on industry tactics: preliminary results about readers' opinions and awareness. Tobacco Prevention & Cessation, 9(Supplement).

[57] Chidi, R., Adeniyi, A. O., Okolo, C. A., Babawarun, O., & Arowoogun, J. O. (2024). Psychological resilience in healthcare workers: A review of strategies and intervention. World Journal of Biology Pharmacy and Health Sciences, 17(2), 387-395.

[58] Cox, A., Spiegelhalter, K., Marangozov, R., Hanlon, J., Hex, N. and Gabbay, M., 2018. NHS innovation accelerator evaluation. Institute for Employment Studies, https://www. employmentstudies. co. uk/resource/nhs-innovation-acceleratorevaluation.

[59] Cui, C., Liu, Y., Hope, A. and Wang, J., 2018. Review of studies on the public–private partnerships (PPP) for infrastructure projects. International journal of project management, 36(5), pp.773-794.

[60] de Vrueh, R.L. and Crommelin, D.J., 2017. Reflections on the future of pharmaceutical public-private partnerships: from input to impact. Pharmaceutical research, 34(10), pp.1985-1999.

[61] Deaton, A. and Heston, A., 2010. Understanding PPPs and PPP-based national accounts. American Economic Journal: Macroeconomics, 2(4), pp.1-35.

[62] Dell'Oste, R., 2021 ACCOUNTABILITY AND TRUST IN PUBLIC-PRIVATE PARTNERSHIPS.

[63] Egharevba, T., 2017. Stakeholder perceptions towards conducting pharmaceutical industry-sponsored clinical trials in Sub-Saharan Africa (Doctoral dissertation, University of Glasgow).

[64] Ekechi, C. C., Chukwurah, E. G., Oyeniyi, L. D., & Okeke, C. D. (2024). AI-Infused Chatbots For Customer Support: A Cross-Country Evaluation Of User Satisfaction In The Usa And The UK. International Journal of Management & Entrepreneurship Research, 6(4), 1259-1272.

[65] Ekechi, C. C., Chukwurah, E. G., Oyeniyi, L. D., & Okeke, C. D. (2024). A Review Of Small Business Growth Strategies In African Economies. International Journal of Advanced Economics, 6(4), 76-94

[66] Eneh, N. E., Adeniyi, A. O., Akpuokwe, C. U., Bakare, S. S., & Titor-Addingi, M. C. (2024). Evaluating environmental legislation on disaster resilience: Data insights from Nigeria and the USA. World Journal of Advanced Research and Reviews, 21(2), 1900-1908.

[67] Eneh, N. E., Adeniyi, A. O., Akpuokwe, C. U., Bakare, S. S., & Titor-Addingi, M. C. (2024). Urban resilience against environmental disasters: Comparing Lagos and New York. World Journal of Advanced Research and Reviews, 21(2), 1909-1917.

[68] Eneh, N. E., Bakare, S. S., Adeniyi, A. O., & Akpuokwe, C. U. (2024). Modern labor law: a review of current trends in employee rights and organizational duties. International Journal of Management & Entrepreneurship Research, 6(3), 540-553.

[69] Eneh, N. E., Bakare, S. S., Akpuokwe, C. U., & Adeniyi, A. O. (2024). Cross-jurisdictional disaster preparedness: A Nigeria-USA data-analytical approach. World Journal of Advanced Research and Reviews, 21(2), 1822-1829

[70] Esho, A. O. O., Iluyomade, T. D., Olatunde, T. M., & Igbinenikaro, O. P. (2024). Next-generation materials for space electronics: A conceptual review.

[71] Esho, A. O. O., Iluyomade, T. D., Olatunde, T. M., & Igbinenikaro, O. P. (2024). A comprehensive review of energy-efficient design in satellite communication systems.

[72] Esho, A. O. O., Iluyomade, T. D., Olatunde, T. M., Igbinenikaro, O. P. (2024). Electrical Propulsion Systems For Satellites: A Review Of Current Technologies And Future Prospects. International Journal of Frontiers in Engineering and Technology Research. 06,(02), 035–044. https://doi.org/10.53294/ijfetr.2024.6.2.0034.

[73] Esho, A. O. O., Iluyomade, T. D., Olatunde, T. M., Igbinenikaro, O. P. (2024). Next-Generation Materials For Space Electronics: A Conceptual Review. Open Access Research Journal of Engineering and Technology, 06,(02), 051–062. https://doi.org/10.53022/oarjet.2024.6.2.0020.

[74] Esho, A. O. O., Iluyomade, T. D., Olatunde, T. M., Igbinenikaro, O. P. (2024). A Comprehensive Review Of Energy-Efficient Design In Satellite Communication Systems. International Journal of Engineering Research Updates. 06,(02), 013–025. https://doi.org/10.53430/ijeru.2024.6.2.0024

[75] Excler, J.L., Saville, M., Privor-Dumm, L., Gilbert, S., Hotez, P.J., Thompson, D., Abdool-Karim, S. and Kim, J.H., 2023. Factors, enablers and challenges for COVID-19 vaccine development. BMJ Global Health, 8(6).

[76] Fanzo, J., Shawar, Y.R., Shyam, T., Das, S. and Shiffman, J., 2021. Challenges to establish effective public-private partnerships to address malnutrition in all its forms. International journal of health policy and management, 10(12), p.934.

[77] Ferpozzi, H., 2023. Public-Private Partnerships and the Landscape of Neglected Tropical Disease Research: The Shifting Logic and Spaces of Knowledge Production. Minerva, pp.1-23.

[78] Ferreira, D.C. and Marques, R.C., 2021. Public-private partnerships in health care services: Do they outperform public hospitals regarding quality and access? Evidence from Portugal. Socio-Economic Planning Sciences, 73, p.100798.

[79] Gabriel, M., Stanley, I. and Saunders, T., 2017. Open innovation in health. A Guide to Transforming Healthcare through Collaboration.

[80] Gallouj, F., Merlin-Brogniart, C. and Moursli-Provost, A.C., 2013. 11. Public–private partnerships in hospital innovation: what lessons for hospital management?. Public–Private Innovation Networks in Services, p.265.

[81] Gannon, J., Bach, K., Cattaruzza, M. S., Bar-Zeev, Y., Forberger, S., Kilibarda, B., ... & Borisch, B. (2023). Big tobacco's dirty tricks: Seven key tactics of the tobacco industry. Tobacco Prevention & Cessation, 9.

[82] Gouglas, D., Christodoulou, M., Plotkin, S.A. and Hatchett, R., 2019. CEPI: driving progress toward epidemic preparedness and response. Epidemiologic Reviews, 41(1), pp.28-33.

[83] Hammill, T.L., 2017. A review of the progress and pitfalls of FDA policy process: Planning a pathway for pharmaceutical interventions for hearing loss development. Hearing Research, 349, pp.172-176.

[84] Hernandez-Aguado, I. and Zaragoza, G.A., 2016. Support of public–private partnerships in health promotion and conflicts of interest. BMJ open, 6(4).

[85] Igbinenikaro, E., & Adewusi, O. A. (2024). Developing International Policy Guidelines for Managing Cross-Border Insolvencies in the Digital Economy. International Journal of Management & Entrepreneurship Research. Vol. 6 No. 4 (2024). https://doi.org/10.51594/ijmer.v6i4.983

[86] Igbinenikaro, E., & Adewusi, O. A. (2024). Financial Law: Policy Frameworks for Regulating Fintech Innovations: Ensuring Consumer Protection while Fostering Innovation. Finance &Accounting Research Journal, Vol. 6 No. 4 (2024). https://doi.org/10.51594/farj.v6i4.991.

[87] Igbinenikaro, E., & Adewusi, O. A. (2024). Navigating the Legal Complexities of Artificial Intelligence in Global Trade Agreements. International Journal of Applied Research in Social Sciences, Vol. 6 No. 4 (2024). https://doi.org/10.51594/ijarss.v6i4.987.

[88] Igbinenikaro, E., & Adewusi, O. A. (2024). Policy Recommendations for Integrating Artificial Intelligence into Global Trade Agreements. International Journal of Engineering Research Updates, 06(01), 001-010. https://doi.org/10.53430/ijeru.2024.6.1.0022.

[89] Igbinenikaro, E., & Adewusi, O. A. (2024). Tax Havens Reexamined: The Impact of Global Digital Tax Reforms on International Taxation. World Journal of Advanced Science and Technology, 05(02), 001- 012. https://doi.org/10.53346/wjast.2024.5.2.0031

[90] Igbinenikaro, O. P., Adekoya, O. O., & Etukudoh, E. A. (2024). A Comparative Review Of Subsea Navigation Technologies In Offshore Engineering Projects. International Journal of Frontiers in Engineering and Technology Research. 06,(02), 019–034. https://doi.org/10.53294/ijfetr.2024.6.2.0031.

[91] Igbinenikaro, O. P., Adekoya, O. O., & Etukudoh, E. A. (2024). Conceptualizing Sustainable Offshore Operations: Integration Of Renewable Energy Systems. International Journal of Frontiers in Science and Technology Research. 06(02), 031–043. https://doi.org/10.53294/ijfstr.2024.6.2.0034.

[92] Igbinenikaro, O. P., Adekoya, O. O., & Etukudoh, E. A. (2024). Emerging Underwater Survey Technologies: A Review And Future Outlook. Open Access Research Journal of Science and Technology. 10,(02), 071–084. https://doi.org/10.53022/oarjst.2024.10.2.0052.

[93] Igbinenikaro, O. P., Adekoya, O. O., & Etukudoh, E. A. (2024). Fostering Cross-Disciplinary Collaboration In Offshore Projects: Strategies And Best Practices. International Journal of Management & Entrepreneurship Research. 6,(4), 1176-1189. https://doi.org/10.51594/ijmer.v6i4.1006.

[94] Igbinenikaro, O. P., Adekoya, O. O., & Etukudoh, E. A. (2024). Review Of Modern Bathymetric Survey Techniques And Their Impact On Offshore Energy Development. Engineering Science & Technology Journal. 5,(4), 1281-1302. https://doi.org/10.51594/estj.v5i4.1018

[95] Ijeh, S., Okolo, C. A., Arowoogun, J. O., & Adeniyi, A. O. (2024). Addressing health disparities through IT: A review of initiatives and outcomes. World Journal of Biology Pharmacy and Health Sciences, 18(1), 107-114.

[96] Ijeh, S., Okolo, C. A., Arowoogun, J. O., & Adeniyi, A. O. (2024). Theoretical insights into telemedicine and healthcare ICT: lessons from implementation in Africa and the United States. World Journal of Biology Pharmacy and Health Sciences, 18(1), 115-122.

[97] Ijeh, S., Okolo, C. A., Arowoogun, J. O., Adeniyi, A. O., & Omotayo, O. (2024). Predictive modeling for disease outbreaks: a review of data sources and accuracy. International Medical Science Research Journal, 4(4), 406-419.

[98] Joel O. T., & Oguanobi V. U. (2024). Data-driven strategies for business expansion: Utilizing predictive analytics for enhanced profitability and opportunity identification. International Journal of Frontiers in Engineering and Technology Research, 2024, 06(02), 071–081. https://doi.org/10.53294/ijfetr.2024.6.2.0035

[99] Joel O. T., & Oguanobi V. U. (2024). Entrepreneurial leadership in startups and SMEs: Critical lessons from building and sustaining growth. International Journal of Management & Entrepreneurship Research P-ISSN: 2664-3588, E-ISSN: 2664-3596 Volume 6, Issue 5, P.No.1441-1456, May 2024 DOI: 10.51594/ijmer.v6i5.1093. www.fepbl.com/index.php/ijmer

[100] Joel O. T., & Oguanobi V. U. (2024). Future Directions in Geological Research Impacting Renewable Energy and Carbon Capture: A Synthesis of Sustainable Management Techniques. International Journal of Frontiers in Science and Technology Research, 2024, 06(02), 071–083 https://doi.org/10.53294/ijfstr.2024.6.2.0039 3

[101] Joel O. T., & Oguanobi V. U. (2024). Geological Data Utilization in Renewable Energy Mapping and Volcanic Region Carbon Storage Feasibility. Open Access Research Journal of Engineering and Technology, 2024, 06(02), 063–074. https://doi.org/10.53022/oarjet.2024.6.2.0022

[102] Joel O. T., & Oguanobi V. U. (2024). Geological Survey Techniques and Carbon Storage: Optimizing Renewable Energy Site Selection and Carbon Sequestration. Open Access Research Journal of Engineering and Technology, 2024, 11(01), 039–051. https://doi.org/10.53022/oarjst.2024.11.1.0054

[103] Joel O. T., & Oguanobi V. U. (2024). Geotechnical Assessments for Renewable Energy Infrastructure: Ensuring Stability in Wind and Solar Projects. Engineering Science & Technology Journal P-ISSN: 2708-8944, E-ISSN: 2708-8952 Volume 5, Issue 5, P.No. 1588-1605, May 2024 DOI: 10.51594/estj/v5i5.1110 : www.fepbl.com/index.php/estj

[104] Joel O. T., & Oguanobi V. U. (2024). Leadership and management in high-growth environments: effective strategies for the clean energy sector. International Journal of Management & Entrepreneurship Research, P-ISSN: 2664-3588, E-ISSN: 2664-3596, Volume 6, Issue 5, P.No.1423-1440, May 2024. DOI: 10.51594/ijmer.v6i5.1092. www.fepbl.com/index.php/ijmer

[105] Joel O. T., & Oguanobi V. U. (2024). Navigating business transformation and strategic decision-making in multinational energy corporations with geodata. International Journal of Applied Research in Social Sciences P-ISSN: 2706-9176, E-ISSN: 2706-9184 Volume 6, Issue 5, P.No. 801-818, May 2024 DOI: 10.51594/ijarss.v6i5.1103. www.fepbl.com/index.php/ijarss

[106] Jumare, J., Dakum, P., Sam-Agudu, N., Memiah, P., Nowak, R., Bada, F., ... & Charurat, M. (2023). Prevalence and characteristics of metabolic syndrome and its components among adults living with and without HIV in Nigeria: a single-center study. BMC Endocrine Disorders, 23(1), 160.

[107] Kostyak, L., Shaw, D.M., Elger, B. and Annaheim, B., 2017. A means of improving public health in low-and middle-income countries? Benefits and challenges of international public–private partnerships. Public health, 149, pp.120-129.

[108] Lawal, H. S., Omeje, U. K., Ekoh, E. D., & Adeghe, E. P. (2017). Adenoid cystic carcinoma of the mandible: Case report. East African Medical Journal, 94(2), 158-162

[109] Leigland, J., 2018. Public-private partnerships in developing countries: The emerging evidence-based critique. The World Bank Research Observer, 33(1), pp.103-134.

[110] Lezaun, J., 2018. The deferred promise of radical cure: pharmaceutical conjugations of malaria in the global health era. Economy and Society, 47(4), pp.547-571.

[111] Maduka, C. P., Adegoke, A. A., Okongwu, C. C., Enahoro, A., Osunlaja, O., & Ajogwu, A. E. (2023). Review Of Laboratory Diagnostics Evolution In Nigeria's Response To COVID-19. International Medical Science Research Journal, 3(1), 1-23.

[112] Marjanovic, S., Sim, M., Dubow, T., Corbett, J., Harte, E., Parks, S., Miani, C., Chataway, J. and Ling, T., 2019. Innovation as a driver of quality and productivity in UK healthcare. Creating and Connecting Receptive Places: Emerging Insights Report. Santa Monica, CA/Cambridge: RAND Corporation< https://www. rand. org/pubs/research_reports/RR1845. html> accessed, 12.

[113] McClellan, M., Udayakumar, K., Thoumi, A., Gonzalez-Smith, J. and Kadakia, K., 2018. Advancing Integrated Care in England.

[114] Mensah, G.A., 2016. New partnerships to advance global health research for NCD. Glob Heart, 11(4), pp.473-478.

[115] Moro Visconti, R. and Morea, D., 2020. Healthcare digitalization and pay-for-performance incentives in smart hospital project financing. International journal of environmental research and public health, 17(7), p.2318.

[116] Noad, R., Ismail, S., Simpson, K. and Scott, A., 2021. Scoping report for the UK Vaccine Network: Options for investment in vaccines and vaccine technology for infectious diseases with epidemic potential.

[117] Nwaka, S., Riopel, L., Ubben, D. and Craft, J.C., 2004. Medicines for Malaria Venture new developments in antimalarials. Travel Medicine and Infectious Disease, 2(3-4), pp.161-170..

[118] Nwankwo E. E., Ogedengbe D. E., Oladapo J. O., Soyombo O. T., and Okoye C. C. (2024). Cross-cultural leadership styles in multinational corporations: A comparative literature review. International Journal of Science and Research Archives (IJSRA). DOI: https://doi.org/10.30574/ijsra.2024.11.1.0273

[119] Nzeako, G., Akinsanya, M. O., Popoola, O. A., Chukwurah, E. G., & Okeke, C. D. (2024). The role of AI-Driven predictive analytics in optimizing IT industry supply chains. International Journal of Management & Entrepreneurship Research, 6(5), 1489-1497.

[120] Nzeako, G., Akinsanya, M. O., Popoola, O. A., Chukwurah, E. G., Okeke, C. D., & Akpukorji, I. S. (2024). Theoretical insights into IT governance and compliance in banking: Perspectives from African and US regulatory environments. International Journal of Management & Entrepreneurship Research, 6(5), 1457-1466.

[121] Nzeako, G., Okeke, C. D., Akinsanya, M. O., Popoola, O. A., & Chukwurah, E. G. (2024). Security paradigms for IoT in telecom networks: Conceptual challenges and solution pathways. Engineering Science & Technology Journal, 5(5), 1606-1626.

[122] Odunaiya O. G., Nwankwo E. E., Okoye C.C., and Uzondu C. S. (2024). Behavioral economics and consumer protection in the U.S.: A review: Understanding how psychological factors shape consumer policies and regulations. International Journal of Science and Research Archives. (IJSRA). DOI: https://doi.org/10.30574/ijsra.2024.11.1.0274

[123] Oguamanam, C., 2010. Patents and pharmaceutical R&D: consolidating private–public partnership approach to global public health crises. The Journal of World Intellectual Property, 13(4), pp.556-580.

[124] Oguanobi V. U. & Joel O. T., (2024). Geoscientific research's influence on renewable energy policies and ecological balancing. Open Access Research Journal of Multidisciplinary Studies, 2024, 07(02), 073–085 https://doi.org/10.53022/oarjms.2024.7.2.0027

[125] Oguanobi V. U. & Joel O. T., (2024). Scalable Business Models for Startups in Renewable Energy: Strategies for Using GIS Technology to Enhance SME Scaling. Engineering Science & Technology Journal, P-ISSN: 2708- 8944, E-ISSN: 2708-8952, Volume 5, Issue 5, P.No. 1571-1587, May 2024. DOI: 10.51594/estj/v5i5.1109. www.fepbl.com/index.php/estj

[126] Ojeyinka, O. T., & Omaghomi, T. T. (2024). Climate change and zoonotic diseases: a conceptual framework for predicting and managing health risks in the USA. GSC Biological and Pharmaceutical Sciences, 26(3), 027-036.

[127] Ojeyinka, O. T., & Omaghomi, T. T. (2024). Integrative strategies for zoonotic disease surveillance: A review of one health implementation in the United States. World Journal of Biology Pharmacy and Health Sciences, 17(3), 075-086.

[128] Ojeyinka, O. T., & Omaghomi, T. T. (2024). Wildlife as sentinels for emerging zoonotic diseases: A review of surveillance systems in the USA. World Journal of Advanced Research and Reviews, 21(3), 768-778

[129] Okeke, O. C., Ekakitie, O. O., Adeniyi, M. J., Oyeyemi, A. W., & Ajayi, O. I. (2023). Interrelationship between surging reproductive hormones and blood viscosity indices in apparently healthy females.

[130] Okolo, C. A., Arowoogun, J. O., Chidi, R., & Adeniyi, A. O. (2024). Telemedicine's role in transforming healthcare delivery in the pharmaceutical industry: A systematic review. World Journal of Advanced Research and Reviews, 21(2), 1836-1856.

[131] Okolo, C. A., Babawarun, O., Arowoogun, J. O., Adeniyi, A. O., & Chidi, R. (2024). The role of mobile health applications in improving patient engagement and health outcomes: A critical review. International Journal of Science and Research Archive, 11(1), 2566-2574.

[132] Okolo, C. A., Chidi, R., Babawarun, O., Arowoogun, J. O., & Adeniyi, A. O. (2024). Data-driven approaches to bridging the gap in health communication disparities: A systematic review. World Journal of Advanced Research and Reviews, 21(2), 1435-1445.

[133] Okolo, C. A., Ijeh, S., Arowoogun, J. O., Adeniyi, A. O., & Omotayo, O. (2024). Reviewing the impact of health information technology on healthcare management efficiency. International Medical Science Research Journal, 4(4), 420-440.

[134] Okolo, C. A., Ijeh, S., Arowoogun, J. O., Adeniyi, A. O., & Omotayo, O. (2024). HEALTHCARE MANAGERS'ROLE IN ADDRESSING HEALTH DISPARITIES: A REVIEW OF STRATEGIES. International Journal of Applied Research in Social Sciences, 6(4), 518-531.

[135] Okoye C. C., Nwankwo D. O., Okeke N. M., Nwankwo E. E., Eze S. U., (2023). Electronic commerce and sustainability of SMEs in Anambra State, Malaysian E Commerce Journal (MECJ), https://myecommerecejournal.com/archives/mecj-01-2023-32-41/

[136] Okpokoro, E., Lesosky, M., Osa-Afiana, C., Bada, F., Okwor, U., Odonye, G., ... & Adams, S. (2023). Prevalence and Risk Factors for Mycobacterium tuberculosis Infection among Health Workers in HIV Treatment Centers in North Central, Nigeria. The American Journal of Tropical Medicine and Hygiene, 109(1), 60-68.

[137] Okpokoro, E., Okwor, U., Osa-Afiana, C., Odonye, G., Bada, F., Igbinomwanhia, V., ... & Adams, S. (2022). Tuberculosis Infection Control Practice among Antiretroviral (ART) Clinics in North Central Nigeria. Safety and Health at Work, 13, S108.

[138] Okunade, B. A., Adediran, F. E., Maduka, C. P., & Adegoke, A. A. (2023). Community-Based Mental Health Interventions In Africa: A Review And Its Implications For Us Healthcare Practices. International Medical Science Research Journal, 3(3), 68-91.

[139] Okunade, B.A., Adediran, F.E., Balogun, O.D., Maduka, C.P. and Adegoke, A.A., 2023. Capacity building in Nigeria's healthcare sector: A review of skill development and mentorship initiatives.

[140] Okunade, B.A., Adediran, F.E., Balogun, O.D., Maduka, C.P., Adegoke, A.A. and Daraojimba, R.E., 2023. Gender policies and women's empowerment in nigeria: an analytical review of progress and barriers. International Journal of Applied Research in Social Sciences, 5(10), pp.543-565

[141] Oladipo J. O., Okoye C. C., Elufioye O. A., Falaiye T., and Nwankwo E. E. (2024). Human factors in cybersecurity: Navigating the fintech landscape. International Journal of Science and Research Archives (IJSRA). DOI: https://doi.org/10.30574/ijsra.2024.11.1.0258

[142] Olatoye, O. I., Olugasa, B. O., Omoloja, A. A., & Ojeyinka, O. T. (2009). Serological evidence of avian influenza viruses in pigs in south-western Nigeria

[143] Omaghomi, T. T., Akomolafe, O., Ogugua, J. O., Daraojimba, A. I., & Elufioye, O. A. (2024). HEALTHCARE MANAGEMENT IN A POST-PANDEMIC WORLD: LESSONS LEARNED AND FUTURE PREPAREDNESS-A REVIEW. International Medical Science Research Journal, 4(2), 210-223.

[144] Omaghomi, T. T., Akomolafe, O., Onwumere, C., Odilibe, I. P., & Elufioye, O. A. (2024). PATIENT EXPERIENCE AND SATISFACTION IN HEALTHCARE: A FOCUS ON MANAGERIAL APPROACHES-A REVIEW. International Medical Science Research Journal, 4(2), 194-209.

[145] Omaghomi, T. T., Arowoogun, J. O., Akomolafe, O., Odilibe, I. P., & Elufioye, O. A. (2024). Telemedicine in rural Africa: A review of accessibility and impact.

[146] Omaghomi, T. T., Elufioye, O. A., Akomolafe, O., Anyanwu, E. C., & Daraojimba, A. I. (2024). Health apps and patient engagement: A review of effectiveness and user experience.

[147] Omaghomi, T. T., Elufioye, O. A., Akomolafe, O., Anyanwu, E. C., & Odilibe, I. P. (2024). A COMPREHENSIVE REVIEW OF TELEMEDICINE TECHNOLOGIES: PAST, PRESENT, AND FUTURE PROSPECTS. International Medical Science Research Journal, 4(2), 183-193.

[148] Omaghomi, T. T., Elufioye, O. A., Ogugua, J. O., Daraojimba, A. I., & Akomolafe, O. (2024). INNOVATIONS IN HOSPITAL MANAGEMENT: A REVIEW. International Medical Science Research Journal, 4(2), 224-234.

[149] Omaghomi, T. T., Elufioye, O. A., Onwumere, C., Arowoogun, J. O., Odilibe, I. P., & Owolabi, O. R. (2024). General healthcare policy and its influence on management practices: A review

[150] Phillips, W., Ekoh, D., Adeghe, E., Noudegbessi, E., Mabiala, M., Ogunleye, O. O., ... & Gwaneza, S. (2018). Patterns of influenza-like illness and vaccination coverage on Liberty University's campus

[151] Popoola, O. A., Adama, H. E., Okeke, C. D., & Akinoso, A. E. (2024). The strategic value of business analysts in enhancing organizational efficiency and operations. International Journal of Management & Entrepreneurship Research, 6(4), 1288-1303. DOI: 10.51594/ijmer.v6i4.1059. Fair East Publishers. Retrieved from http://www.fepbl.com/index.php/ijmer

[152] Popoola, O. A., Adama, H. E., Okeke, C. D., & Akinoso, A. E. (2024). Cross-industry frameworks for business process reengineering: Conceptual models and practical executions. World Journal of Advanced Research and Reviews, 22(01), 1198–1208. DOI: 10.30574/wjarr.2024.22.1.1201. https://doi.org/10.30574/wjarr.2024.22.1.1201

[153] Popoola, O. A., Adama, H. E., Okeke, C. D., & Akinoso, A. E. (2024). Conceptualizing agile development in digital transformations: Theoretical foundations and practical applications. Engineering Science & Technology Journal, 5(4), 1524-1541. DOI: 10.51594/estj/v5i4.1080. Fair East Publishers. Retrieved from http://www.fepbl.com/index.php/estj

[154] Popoola, O. A., Adama, H. E., Okeke, C. D., & Akinoso, A. E. (2024). Advancements and innovations in requirements elicitation: Developing a comprehensive conceptual model. World Journal of Advanced Research and Reviews, 22(01), 1209–1220. DOI: https://doi.org/10.30574/wjarr.2024.22.1.1202

[155] Popoola, O. A., Adama, H. E., Okeke, C. D., & Akinoso, A. E. (2024). Conceptualizing agile development in digital transformations: Theoretical foundations and practical applications. Engineering Science & Technology Journal, 5(4), 1524-1541. DOI: 10.51594/estj/v5i4.1080. Fair East Publishers. Retrieved from http://www.fepbl.com/index.php/estj

[156] Popoola, O. A., Adama, H. E., Okeke, C. D., & Emmanuel, A. (2024). Cross-industry frameworks for business process reengineering: Conceptual models and practical executions.

[157] Popoola, O. A., Akinsanya, M. O., Nzeako, G., Chukwurah, E. G., & Okeke, C. D. (2024). The impact of automation on maritime workforce management: A conceptual framework. International Journal of Management & Entrepreneurship Research, 6(5), 1467-1488.

[158] Popoola, O. A., Akinsanya, M. O., Nzeako, G., Chukwurah, E. G., & Okeke, C. D. (2024). Exploring theoretical constructs of cybersecurity awareness and training programs: comparative analysis of African and US Initiatives. International Journal of Applied Research in Social Sciences, 6(5), 819-827.

[159] Popoola, O.A., Adama, H.E., Okeke, C.D. and Akinoso, A.E. (2024). Conceptualizing Agile Development in Digital Transformations: Theoretical Foundations and Practical Applications. Engineering Science & Technology Journal, 5(4), pp.1524-1541.

[160] Popoola, O.A., Adama, H.E., Okeke, C.D. and Akinoso, A.E. (2024). The Strategic Value of Business Analysts in Enhancing Organizational Efficiency and Operations. International Journal of Management & Entrepreneurship Research, 6(4), pp.1288-1303

[161] Rosborough, J. and Hobson, J., 2023. University of Leeds MedTech PBIAA–Supporting Evidence.

[162] Rowe, S., Alexander, N., Kretser, A., Steele, R., Kretsch, M., Applebaum, R., Clydesdale, F., Cummins, D., Hentges, E., Navia, J. and Jarvis, A., 2013. Principles for building public-private partnerships to benefit food safety, nutrition, and health research. Nutrition reviews, 71(10), pp.682-691.

[163] Sansom, N., 2023. Penetrating the National Health Service and private sectors. In Medical Innovation (pp. 103-112). CRC Press.

[164] Song, J., Zhang, H. and Dong, W., 2016. A review of emerging trends in global PPP research: Analysis and visualization. Scientometrics, 107, pp.1111-1147.

[165] Talisuna, A.O., 2018. Eradicating Malaria in IDB Member Countries in Africa. Occasional Paper, (13).

[166] Thiel, L., 2005. MALARIA INITIATIVE FOR AFRICA.

[167] Thompson, O. A., Akintuyi, O. B., Omoniyi, L. O., & Fatoki, O. A. (2022). Analysis of Land Use and Land Cover Change in Oil Palm Producing Agro-Ecological Zones of Nigeria. Journal of Agroforestry and Environment, 15(1), 30-41

[168] Toni, M., Mattia, G. and Pratesi, C.A., 2024. What's next in the Healthcare system? The contribution of digital innovation in achieving Patient-centricity. Futures, 156, p.103304.

[169] Torchia, M., Calabrò, A. and Morner, M., 2015. Public–private partnerships in the health care sector: a systematic review of the literature. Public Management Review, 17(2), pp.236-261.

[170] Tore, W.B., 2023. The Implementation of Public Private Partnership in Public Health Sector in Isiolo Sub-County, Kenya (Doctoral dissertation, KeMU).

[171] Tula S. T., Ofodile O. C., Okoye C. C., Nifise A. O. A., and Odeyemi O. (2024). Entrepreneurial ecosystems in the USA: A comparative review with European models. International Journal of Management & Entrepreneurship Research. DOI: 10.51594/ijmer.v6i

[172] Vertinsky, L.S., 2014. Patents, partnerships, and the pre-competitive collaboration myth in pharmaceutical innovation. UCDL Rev., 48, p.1509.

[173] Villani, E., Greco, L. and Phillips, N., 2017. Understanding value creation in public-private partnerships: A comparative case study. Journal of management studies, 54(6), pp.876-905.

[174] Warsen, R., Nederhand, J., Klijn, E.H., Grotenbreg, S. and Koppenjan, J., 2018. What makes public-private partnerships work? Survey research into the outcomes and the quality of cooperation in PPPs. Public Management Review, 20(8), pp.1165-1185.

[175] Winstanley, P., Ward, S., Snow, R. and Breckenridge, A., 2004. Therapy of falciparum malaria in sub-saharan Africa: from molecule to policy. Clinical microbiology reviews, 17(3), pp.612-637.

[176] World Health Organization, 2018. An urgent front: Cross-border collaboration to secure a malaria-free south-east Asia region.

[177] Wouters, O.J., Shadlen, K.C., Salcher-Konrad, M., Pollard, A.J., Larson, H.J., Teerawattananon, Y. and Jit, M., 2021. Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment. The Lancet, 397(10278), pp.1023-1034.

[178] Yaqoobi, A.A., 2022. The Governance of Public–Private Partnerships: Complexity, Uncertainty and Incompleteness (Doctoral dissertation, University of Leicester).