

International Conference on African Development (iCAD 2026) – Proceedings

ISSN: 3033–5248 (Online)

ISSN: 3033-523X (Print)

CONFERENCE PROCEEDINGS 2026

*Anglia Ruskin University, Cambridge, UK
17th – 19th June 2026*

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ISSN: 3033-5248 (Online)
ISSN: 3033-523X (Print)

International Conference on African Development (iCAD) 2026 - Conference Proceedings

Venue: Anglia Ruskin University, Cambridge, UK

Date: 17th - 19th June 2026

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Conference Overview by the President

iCAD Edition 2026

The 2026 edition of the International Conference on African Development (iCAD), held at Anglia Ruskin University, Cambridge, from 17th–19th June 2026, marked a significant milestone in the evolution of the Ghana Scholarly Society (GSS). Building on the momentum of previous conferences, this year's event focused on the theme ***“Green Transitions and Inclusive Industrialisation in Africa: Theory to Policy and Practice.”*** With over 250 delegates, speakers, scholars, practitioners, policymakers, and industry leaders in attendance, the conference demonstrated iCAD's growing global reach, convening power, and relevance.

Grounding Solutions in African Realities

The 2026 conference showcased path-breaking research addressing green transitions, inclusive industrialisation, sustainable enterprise, finance, digital transformation, law, health, engineering, urban futures and social development. Contributors offered practical insights grounded in African realities, showing how research can inform policy, strengthen industry practice and support sustainable development. Industry-led sessions further explored how public-private partnerships, green innovation, AI adoption, financial systems, construction technologies and institutional reforms can create new opportunities for African development.

A Platform for Policy and Practice

This year's programme confirmed GSS as a credible platform for translating research into policy and practice. The participation of universities, government officials, industry partners, entrepreneurs, financial institutions and development actors enriched the conversations and ensured policy relevance. The Gala Dinner was also delivered with unparalleled class and quality, reflecting the iCAD's growing ability to host high-level scholarly, professional and diplomatic engagements with excellence.

Looking Ahead to SOAS 2027

We are delighted to announce that the next edition, **iCAD 2027**, will be hosted at **SOAS University of London** from **16th–18th June 2027** under the theme ***“Building Africa's Productive Future: Upskilling, Efficiency and Accountability for Inclusive Development.”*** The conference will examine how Africa can develop the skills, institutions, leadership capabilities, and partnerships needed to convert its human, natural, and entrepreneurial potential into productivity, accountability, and inclusive prosperity. As always, we invite scholars, policymakers, practitioners and industry leaders to join us in London. To submit your work, please visit www.ghscholars.com or email admin@ghscholars.com.

Dr Kweku Adams

Associate Professor, University of Bradford
President, Ghana Scholarly Society

Track chairs

We extend our heartfelt gratitude to all our track chairs whose invaluable leadership, dedication, and scholarly guidance were instrumental in the success of iCAD 2026. Your commitment ensured the intellectual richness and rigour that defined this year's conference.

Business & Management

Green Human Resource Management and Organizational Sustainability in Ghana's Energy Sector: The Role of Green Organizational Culture and Green Transformational Leadership

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Abstract

This study examines how Green Human Resource Management (Green HRM) influences organizational sustainability within Ghana's energy sector, emphasizing the mediating role of Green Organizational Culture (GOC) and the moderating role of Green Transformational Leadership (GTL). Rooted in the Resource-Based View (RBV) and Transformational Leadership Theory (TLT), the study conceptualizes Green HRM as a strategic approach that embeds environmental values into HR systems through green recruitment, training, performance management, and reward practices. Using an explanatory sequential mixed-methods design, data will be collected from the Volta River Authority (VRA) and Ghana National Petroleum Corporation (GNPC) through surveys (n=370) and semi-structured interviews (n=15–20). Quantitative data will be analyzed using Structural Equation Modeling (SEM), and qualitative data through thematic analysis. It is anticipated that Green HRM will positively affect environmental, social, and economic sustainability outcomes, with GOC fostering shared ecological values and GTL enhancing employee engagement, innovation, and eco-initiatives. However, institutional barriers such as bureaucratic inertia and limited resources may constrain implementation. The study contributes theoretically by linking leadership, culture, and HR practices to sustainability within a developing-country context. Practically, it provides insights for policymakers and HR leaders on embedding green practices into strategic frameworks. By aligning with SDGs 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth) and 13 (Climate Action), the study supports Ghana's pursuit of sustainable and green energy transition.

Keywords: Green human resource management; organisational sustainability; green organisational culture; green transformational leadership; energy sector; sustainable energy transition.

Evaluation of potential power production and reduction in GHG emissions from bio-compressed natural gas derived from food waste in Africa

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Abstract

The increasing generation of food waste, coupled with inadequate collection and treatment systems, presents significant environmental and public health challenges across Africa. Converting food waste into biomethane and upgrading it to bio-compressed natural gas (bio-CNG) offers a potentially sustainable approach to waste management and renewable energy production. This study evaluates the electricity-generation potential and greenhouse gas emission reductions associated with producing bio-CNG from food waste in African countries. The findings indicate that the estimated annual bio-CNG yield could support the generation of approximately 4,035.7 GWh of electricity. This output would represent an average contribution of 3.4% to the assessed electricity requirements of the countries included in the analysis, based on an estimated demand of 798,958.7 GWh. Furthermore, electricity generated from bio-CNG could displace approximately 94.47 million litres of diesel annually, thereby avoiding an estimated 256.71 kt CO₂-equivalent emissions per year. These findings demonstrate the potential of food-waste-derived bio-CNG to support improved waste management, renewable electricity generation and climate-change mitigation in Africa. The study provides evidence to inform policies and investments concerning the environmental and energy viability of bio-CNG projects in Africa and other developing regions.

Keywords: food waste; bio-compressed natural gas; biomethane; electricity generation; Africa.

In Search of Superior Environmental Value Creation: When and How Do CEO Environmental Values Matter?

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Abstract

As environmental challenges intensify globally, the role of business organizations in promoting sustainability has gained increased attention, particularly within small and medium-sized enterprises (SMEs) in developing economies. Integrating the Natural-Resource-Based View (NRBV), Upper Echelon Theory (UET), and Institutional Theory, the study theorizes that the extent to which Chief Executive Officers' (CEOs) environmental values drive environmental value creation through Green Human Resource Management (GHRM) practices varies at levels of institutional pressure and network embeddedness. The study adopts a quantitative, descriptive research design. Data were collected from 326 CEOs of manufacturing SMEs in Ghana through structured questionnaires. Hayes' PROCESS macro-4.2 was used to test the proposed hypotheses and assess the relationships among variables. The results reveal that CEOs' environmental values significantly enhance environmental value creation indirectly through GHRM practices. Also, institutional pressure and network embeddedness amplifies the influence of CEO environmental values on environmental value creation via GHRM. The study contributes to sustainability and strategic management literature by conceptualizing CEO environmental values as a strategic resource and identifying GHRM as a crucial mediating mechanism. It also advances understanding of the boundary conditions that determine when and how leadership values most effectively drive environmental value creation. For SME leaders, policymakers, and development partners, the findings highlight the importance of fostering leadership-driven sustainability through internally aligned HR systems and externally oriented collaborations. Encouraging CEOs to embed environmental values into HRM practices and leverage institutional and network support can enhance SMEs' contributions to sustainable development.

Keywords: CEO environmental values; environmental value creation; green human resource management; institutional pressure; network embeddedness; manufacturing SMEs.

Leading for Impact: How and When CEO SDG Motivation Shapes Firm Responses to Grand Challenges

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Abstract

Grand challenges pose significant threats to sustainable development, particularly in Africa, where resource constraints and institutional weaknesses can intensify their effects. Although addressing these challenges requires coordinated societal action, organisational leaders play an important role in mobilising resources and developing appropriate strategic responses. Drawing on Self-Determination Theory and Stakeholder Theory, this study develops and tests an integrative model explaining how and under what conditions chief executive officers' (CEOs') motivation towards the Sustainable Development Goals (SDGs) enhances organisational responses to grand challenges through social innovation. Quantitative data were collected from 312 senior managers of non-governmental organisations in Ghana. The findings show that social innovation fully mediates the relationship between CEO SDG motivation and organisational responses to grand challenges. They further demonstrate that CEO international experience and stakeholder resource partnerships represent important boundary conditions within the proposed model. The study connects micro-level leadership motivation with organisation-level sustainability outcomes by identifying social innovation as the mechanism through which CEO commitment to the SDGs is translated into responses to complex societal problems. Practically, the findings highlight the importance of developing sustainability-motivated leaders, strengthening their international exposure and establishing resource-sharing partnerships with relevant stakeholders. These measures can improve organisations' capacity to develop socially innovative and contextually appropriate responses to grand challenges.

Keywords: CEO SDG motivation; grand challenges; social innovation; international experience; stakeholder partnerships; sustainable development.

Big Data Enabled Circular Economy Practices and Green Human Capital: A Joint Pathway to Environmental Performance

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Abstract

Despite extant research examining the relationship between green human capital and environmental performance, empirical evidence remains inconclusive. This study employs the natural resource-based view to explain that circular economy practices serve as a bridge in the green human capital and environmental performance relationship, and that this indirect effect is contingent on varying levels of big data analytics capabilities. We test the study's hypotheses using two-wave data from 318 managers of Small and Medium Sized Enterprises in the agri-food industry in Ghana. The results indicate that green human capital drives environmental performance, and indirectly through circular economy practices. Also, the indirect effect of green human capital on environmental performance through circular economy practices is strengthened at high degrees of big data analytics capabilities. Therefore, this study extends the avalanche of research on green human resource management initiatives and sustainability practices by offering rich insights for managerial implementation and policy development on eco-friendly initiatives in the agri-food sector in the developing economy of Sub-Saharan Africa.

Keywords: green human capital; circular economy practices; big data analytics; environmental performance; agri-food industry; Ghana.

Outward foreign direct investment and sustainability performance: A case study of Greek MNEs in Africa

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Abstract

This study explores how Greek multinational enterprises (MNEs) with outward foreign direct investments in Africa integrate environmental, social and governance (ESG) practices into their international operations. Drawing on International Business Theory, it conceptualises ESG capability as a firm-specific advantage and a strategic resource that can influence cross-border investment decisions and operations. The study examines evidence from nine Greek MNEs operating across African markets. The findings identify Egypt, Ghana and South Africa as important destinations for Greek investment on the continent. However, the extent and nature of ESG commitment vary considerably among firms, including those operating within the same host countries. This variation suggests that firms' sustainability approaches are shaped not only by host-country institutional and business conditions but also by organisation-specific priorities, capabilities and strategic orientations. The study contributes to research on outward foreign direct investment by providing Africa-focused evidence on how MNEs from a relatively underexamined home economy approach sustainability across diverse institutional settings. It also highlights the importance of considering firm-level differences when evaluating corporate responses to environmental, social and governance expectations. The findings can assist managers and policymakers in designing more context-sensitive strategies and institutional measures that encourage responsible foreign investment and stronger sustainability practices across African markets.

Keywords: outward foreign direct investment; environmental, social and governance; sustainability performance; multinational enterprises; Greek investment; Africa.

Strategies for Transitioning from Importation to Local Production in Ghana: The Case of An Emerging Paint Manufacturer in Ghana

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Abstract

Ghana's industrial transformation agenda increasingly prioritizes reducing dependence on imported finished goods in favor of strengthening domestic manufacturing. While policy frameworks such as import substitution and the One District One Factory initiative provide strategic direction, practical guidance on how entrepreneurs successfully transition from importation to local production remains limited. Understanding this shift is critical for sustainable industrial growth. This paper examines strategic pathways for transitioning from import-based trading to domestic manufacturing in Ghana, drawing evidence from paint and sachet/bottled water production ventures. It aims to identify the drivers, constraints, and practical strategies that shape successful localization efforts. The transition to local production is driven by the need to conserve foreign exchange, create employment, enhance supply chain resilience, and increase value addition to local resources. However, entrepreneurs face significant challenges, including high start-up capital requirements, limited access to long-term financing, high utility costs, regulatory compliance demands, quality assurance pressures, and competition from low-priced imports. Evidence from the case sectors suggests that phased investment models, appropriate technology acquisition, strategic local sourcing, workforce development, adherence to Ghana Standards Authority certification, and proactive Environmental Protection Agency compliance are critical success factors. Market-oriented strategies—competitive pricing, differentiated quality, relationship-based distribution networks, digital marketing, and regional expansion within ECOWAS—further strengthen competitiveness.

Keywords: import substitution; local production; domestic manufacturing; industrialisation; entrepreneurship; Ghana.

AI-Driven Supply Chain Resilience in the U.S. Hospitality Sector

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Abstract

Hospitality supply chains are highly vulnerable to disruption due to demand volatility, service intensity, perishability, and reliance on multi-tier supplier networks. Recent shocks including pandemics, geopolitical instability, climate events, and labour shortages, have exposed structural weaknesses in U.S. hospitality supply ecosystems. In response, firms increasingly deploy Artificial Intelligence (AI) tools such as predictive analytics and real-time data platforms to enhance supply chain resilience. However, resilience research has largely emphasized redundancy and recovery speed, offering limited insight into how resilience is dynamically enacted across service-based, multi-tier networks. Drawing on Dynamic Capabilities Theory (DCT), this study examines how AI reshapes dynamic capabilities across hospitality supply chains. The study adopts a qualitative abductive design and a multi-tier supply chain perspective. Semi-structured interviews were conducted with ten supply chain professionals across a U.S. luxury hotel, regional distributors, and a national supplier. Data was analyzed abductively, iterating between empirical insights and DCT to examine AI-enabled sensing, seizing, and transforming across supply tiers. Findings show that AI disproportionately strengthens sensing capabilities, particularly among upstream actors through algorithmic forecasting and real-time analytics (Dubey et al., 2019). Seizing capabilities develop unevenly due to governance and contractual constraints, while transforming remains incremental across tiers. Resilience emerges from distributed and asymmetric dynamic capabilities rather than firm-level capability strength alone. The study extends DCT by conceptualizing sensing as algorithmically embedded and resilience as a system-level outcome shaped by cross-tier capability asymmetry. Managerially, AI should be viewed as a dynamic capability amplifier requiring complementary organizational and governance changes to enable adaptive resilience.

Keywords: artificial intelligence; dynamic capabilities; supply chain resilience; hospitality supply chains; multi-tier networks; adaptive resilience.

Climate Perception as Catalyst: Process Innovation, Management Support, and Performance of Firms in a Climate-Vulnerable Environment

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Abstract

This paper delineates the moderating role of climate perception (CP) on the effect of process innovation (PI) and management support (MS) on the environmental and financial performance (EP and FP) of manufacturing firms in an emerging market and climate-vulnerable environment. The paper adopted the quantitative, explanatory survey; stratified random sampling techniques; and PLS-SEM to analyze data from 342 respondents across selected ISO 9001-certified manufacturing companies in Ghana. The results show that PI strongly influences EP but has a weak influence on FP. FP and EP are observed to be significantly and positively influenced by MS. Further, CP plays a significant moderating role on the effect of PI on both FP and EP. CP also moderates significantly the nexus between MS and FP but not EP. A critical shift in the strategic calculus of companies is required to view investment in PI as a strategic requirement with long-term focus and not only as a profit mechanism. Priority must be placed on cultivating a robust and sustainable MS by companies through resource allocation, time usage, and tangible commitment to green and environmental initiatives, while intentionally articulating and internalizing climate vulnerability due to the significance of CP. A positive climate supporting environmental initiatives enhances financial benefits when aligned with MS and PI via sensing precision mechanisms, seizing, and reconfiguration to achieve organizational performance. The study establishes context-specific strategic intervention, both industrial and geographical, and offers novel theoretical evidence to the contextualization of PI and MS strategies in the global south.

Keywords: climate perception; process innovation; management support; environmental performance; financial performance; manufacturing firms.

Digital Marketing Capabilities, Customer Relationship Management Effectiveness, and Financial Performance of Small and Medium Enterprises: Evidence from Sub-Saharan Africa

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Abstract

Despite the rapid proliferation of digital technologies across Sub-Saharan Africa (SSA), empirical understanding of how digital marketing capabilities (DMC) translate into financial performance for small and medium enterprises (SMEs) remains nascent. Drawing on the Resource-Based View (RBV) and Dynamic Capabilities Theory, this study examines the direct effect of digital marketing capabilities on SME financial performance, the mediating role of customer relationship management (CRM) effectiveness, and the structural pathways connecting these constructs. Using World Bank Enterprise Survey (WBES) archival data from 2,400 SMEs across 12 SSA countries, the study employs Partial Least Squares Structural Equation Modelling (PLS-SEM) with mediation analysis. Results reveal that DMC significantly and positively influence both CRM effectiveness ($\beta = 0.497$, $p < 0.001$) and financial performance ($\beta = 0.255$, $p < 0.001$). CRM effectiveness significantly mediates the DMC–financial performance relationship (indirect effect = 0.113, 95% CI [0.095, 0.130]), accounting for 44.2% of the total effect (partial mediation). These findings underscore that DMC without purposeful CRM integration yields attenuated performance gains. The study advances SSA-specific theory and provides actionable insights for SME managers, digital ecosystem architects, and policymakers.

Keywords: digital marketing capabilities; customer relationship management; financial performance; small and medium-sized enterprises; digitalisation; sub-Saharan Africa.

Strategic Capabilities, ESG Orientation, and Green Entrepreneurship: Evidence on Inclusive Industrialization in African SMEs

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Abstract

The question of how emerging economies can achieve industrial transformation while maintaining environmental sustainability has become one of the most pressing challenges in contemporary development discourse. Across Africa, policymakers increasingly view small and medium-sized enterprises (SMEs) as critical engines of inclusive industrialization because of their contributions to employment creation, innovation, and local value-chain development. However, growing climate pressures, evolving global sustainability standards, and stakeholder expectations are simultaneously reshaping the strategic environment in which these firms operate. Although recent scholarship highlights the importance of Environmental, Social, and Governance (ESG) practices and green entrepreneurship for promoting sustainable business models, existing studies largely examine these phenomena in developed economies or large corporations, offering limited insight into how resource-constrained SMEs in emerging markets mobilize internal capabilities to pursue sustainability-oriented opportunities. Drawing on dynamic capabilities' theory, this study develops and empirically tests a capability-driven framework linking strategic capabilities, ESG orientation, green entrepreneurship, and inclusive industrialization among African SMEs. Using survey data from 412 firms operating in Ghana, Kenya, and Nigeria and structural equation modelling analysis, the study demonstrates that strategic capabilities stimulate green entrepreneurial activity both directly and indirectly through ESG orientation, ultimately contributing to inclusive industrial development. This study advances sustainability governance and strategic management scholarship by showing how internal organizational capabilities can translate sustainability-oriented entrepreneurship into broader developmental outcomes in emerging economies.

Keywords: strategic capabilities; ESG orientation; green entrepreneurship; inclusive industrialization; small and medium-sized enterprises; Africa.

Stakeholder Inclusion and “Foolish” Approaches to Waste Management

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Abstract

Despite two decades of growing research on environmental governance, debate continues over why waste management and recycling become wicked problems in some urban contexts. This study investigates why repeated efforts to improve solid waste management and recycling in Kinshasa, Democratic Republic of Congo, have produced insufficient and unsustainable outcomes. Drawing on the concepts of wicked problems and stakeholders, it examines how the interactions among diverse actors, competing interpretations and institutional conditions contribute to the persistence of the problem. The study adopts a qualitative longitudinal single-case design. Empirical evidence comprises 45 semi-structured interviews with key stakeholder groups, ranging from informal waste pickers to representatives of recycling businesses and government agencies. The analysis also incorporates public and internal documents, including policies, pilot-study reports, research publications and white papers concerning the sector and previous improvement initiatives. The findings reveal that no individual stakeholder group possesses a comprehensive understanding of the causes, interdependencies and potential solutions associated with the city’s waste-management challenges. This fragmentation complicates collective problem definition and coordinates action, allowing an initially manageable problem to develop increasingly wicked characteristics over time. The study highlights the interplay between rational and irrational processes in the governance of wicked problems. It provides practical insights into the need for inclusive stakeholder engagement, shared problem framing and coordinated governance mechanisms to improve waste management and recycling in complex urban environments.

Keywords: wicked problems; waste management; recycling; stakeholder governance; urban sustainability; Kinshasa.

Household Attitudinal and Cognitive Readiness for Food Waste Management Apps in Ghana

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Abstract

Reducing household food waste is essential for promoting sustainable consumption and requires coordinated leadership across policy, community, and technological domains. Digital innovations such as food waste management applications (FWMAs) present a promising solution; however, limited research has examined households' readiness to adopt these emerging technologies. This study investigates households' attitudinal and cognitive readiness to adopt FWMA. Using a cross-sectional survey design, data were collected from 211 households responsible for food management and analysed using partial least squares structural equation modelling (SmartPLS version 4). The results show that environmental concern significantly influences attitudinal readiness but does not affect cognitive readiness, while partially mediating the relationship between performance expectancy and attitudinal readiness. In addition, optimism fully mediates the relationship between social influence and cognitive readiness and partially mediates the effect of facilitating conditions on cognitive readiness. These findings extend the UTAUT framework and provide useful insights for policymakers and organisational leaders seeking to promote digital sustainability initiatives by identifying the psychological and infrastructural factors shaping household readiness to adopt food waste management applications.

Keywords: household food waste; food waste management applications; technology adoption; attitudinal readiness; cognitive readiness; sustainable consumption.

Demystifying the Circular Outcomes of Digital Technology Orchestration and Circular Capabilities

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Abstract

Digital transformation has become a strategic imperative, yet empirical understanding of how firms convert digital investments into sustainability outcomes remains limited. This study investigates how digital technology orchestration (DTO) the purposeful integration and coordination of heterogeneous digital resources drives circular economic performance (CEP). Drawing on dynamic capabilities theory, we theorise that DTO enhances CEP through its influence on circular dynamic capabilities (CDC) and that this relationship is contingent on organisational data maturity (ODM). A cross-sectional survey of 293 manufacturing firms in Ghana was analysed using PLS-SEM, complemented by Necessary Condition Analysis (NCA) and Importance Performance Map Analysis (IPMA) to provide deeper causal and practical insights. The findings reveal that DTO significantly improves economic, environmental, and social performance, underscoring the importance of orchestrating rather than merely adopting digital technologies. Among CDC micro foundations, reconfiguration and seizing capabilities emerge as key mediators, while sensing capability shows no significant effect, suggesting that circular outcomes are shaped more by firms' ability to mobilise and repurpose resources than by opportunity identification alone. ODM strengthens the effects of DTO and CDC on CEP, highlighting the centrality of data governance and analytics in enabling digitally enabled circularity. This study contributes to digital transformation and circular economy research by unpacking the capability mechanisms linking DTO to sustainability outcomes and by establishing ODM as a critical boundary condition. The results offer actionable guidance for managers seeking to leverage digital resources to accelerate progress toward circularity and advance SDG 9, SDG 12, SDG 13, and SDG 17.

Keywords: digital technology orchestration; circular dynamic capabilities; organisational data maturity; circular economic performance; digital transformation; manufacturing firms.

Green Student Development through Education for Sustainable Development Activities

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Abstract

Higher education institutions (HEIs) have an important role in developing students with the knowledge, competencies, values and behaviours required to address contemporary sustainability challenges. This conceptual paper examines the institutional actors and resources involved in green student development through Education for Sustainable Development (ESD) activities. It proposes a framework that positions academic and non-academic staff as complementary actors in creating an enabling environment for sustainability-oriented learning and action. Academic actors contribute by integrating sustainability into teaching, learning and relevant institutional policies, while non-academic actors provide administrative, financial and operational support, as well as opportunities for students to translate theoretical knowledge into practice. The framework emphasises that effective green student development depends on sustained collaboration between these actors and the coordinated mobilisation of tangible and intangible resources. Such resources include funding, infrastructure, institutional policies, expertise, partnerships and opportunities for practical engagement. Through their interaction, these elements can foster students' environmental knowledge, sustainability competencies, responsible values and commitment to sustainable behaviour. By placing students at the centre of institutional sustainability activities, HEIs can extend ESD beyond the classroom and become catalysts for broader environmental and societal change. The proposed framework offers HEI leaders, educators and administrators a strategic guide for coordinating institutional efforts and unlocking students' potential to contribute meaningfully to sustainable development.

Keywords: green student development; Education for Sustainable Development; higher education institutions; sustainability competencies; institutional collaboration; sustainable behaviour.

Sustainability and Risk Management in International Real Estate Projects: Insights from the UK and Saudi Arabia

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Abstract

The global real estate industry is shifting from traditional financial metrics to emphasize environmental impact, resource efficiency, and resilience. Despite the sector's significance to national economies, limited research has examined how sustainability correlates with risk management across diverse regulatory environments. This study addresses this gap by comparing the integration of sustainability and risk within two contrasting markets—the United Kingdom and Saudi Arabia—which exemplify a mature regulatory framework and an emerging mega-project-driven economy, respectively, through a qualitative approach. Preliminary findings suggest that both countries demonstrate commitment to sustainable real estate but differ significantly in their regulatory approaches, enforcement, and stakeholder involvement.

Keywords: sustainable real estate; risk management; regulatory environment; resilience; United Kingdom; Saudi Arabia.

Green Distribution Strategies and Inclusive Industrialisation in Ghana's Beverage Industry: Bridging Entrepreneurship, Practice and Policy

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Abstract

The pressing need to strike a balance between environmental sustainability and economic growth is increasingly defining Africa's development trajectory. As a result, the idea of "green transitions" has taken centre stage in business and policy discourse, especially when it comes to inclusive industrialization and sustainable value creation. The fast-moving consumer goods (FMCG) business in Ghana, particularly the beverage industry, is vital to the country's economy, job creation, and market expansion. However, efficiency and market penetration have historically taken precedence over the inclusion of ecologically sustainable practices in the sector's distribution systems. By coordinating corporate performance with social and environmental sustainability goals, this study explores how green distribution techniques might support inclusive industrialization within Ghana's beverage sector. The study investigates how distribution networks might act as conduits for long-term change, drawing on both academic background in entrepreneurship and innovation and real-world company experience in sales and account management. Furthermore, the study takes into account new legal viewpoints, acknowledging the increasing significance of regulatory frameworks in determining corporate environmental responsibility. This paper directly addresses the conference theme of "Green Transitions and Inclusive Industrialization in Africa: Theory to Policy and Practice," providing a practitioner-informed viewpoint on how private sector actors can promote sustainable development outcomes by connecting industry practice with more general sustainability discourse.

Keywords: green distribution; inclusive industrialisation; beverage industry; sustainable logistics; green entrepreneurship; Ghana.

Customer Bonding: How ‘Routine’ Activities Continue in ‘Unexpected’ Circumstances within the Banking Sector in Developing Economies

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Abstract

Customer bonding has long been recognized as a critical component of relationship marketing within the banking sector. This study investigates how routine banking activities continue to sustain customer bonding under unexpected circumstances such as economic instability, institutional disruptions, and technological constraints. The study employs a qualitative research design to understand the mechanisms through which banks and customers maintain relational continuity despite challenging operational environments. Data were collected through semi-structured interviews with bank customers and commercial banks employees in a developing economy (Ghana). Thematic analysis was employed to examine patterns in participants’ experiences and perceptions regarding service continuity, relational engagement, and trust maintenance during periods of disruption. The findings reveal that customer bonding is sustained through a combination of relational practices and adaptive service mechanisms. The study further demonstrates that “routine” banking activities such as deposits, withdrawals, advisory services, and customer support continue largely due to relational resilience rather than purely technological or institutional efficiency. These findings extend existing relationship marketing literature by highlighting the importance of relational embeddedness and adaptive service practices in maintaining customer bonding during disruptions. The study contributes to theory by contextualizing customer bonding within the realities of developing economies, where unexpected circumstances frequently shape service delivery environments. Practically, the findings provide insights for bank managers and policymakers on strengthening relationship-based service strategies that enhance resilience and customer retention during periods of uncertainty.

Keywords: Customer bonding, banking sector, Developing economies.

Agribusiness, Green Transitions, and Youth Entrepreneurship in Ghana: Lessons from the Supervised Agribusiness Projects (SAPs) at the University of Cape Coast, Ghana

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Abstract

Agribusiness is increasingly recognized as a driver of economic transformation in Africa, with projections indicating that agriculture and agribusiness could become US\$1 trillion industries in Sub-Saharan Africa by 2030. In Ghana, agriculture employs 56% of the labour force and contributes 21.1% of GDP, yet the sector remains heavily focused on farm-level production with limited attention to value chain development, processing, and circular economy practices. Graduate unemployment has emerged as a pressing challenge, compounded by limited entrepreneurial skills and negative attitudes toward agribusiness careers. To address these gaps, the University of Cape Coast integrated entrepreneurship into its BSc. Agriculture and BSc. Agribusiness programmes, introducing Supervised Agribusiness Projects (SAPs) as a practical training component. This study examined the impact of SAPs on entrepreneurial competencies and their potential to foster green transitions in Ghana's agribusiness sector. Using a census of students and graduates who completed six-month SAPs, data were collected through questionnaires and analyzed using descriptive and inferential statistics. Findings revealed that SAPs significantly improved entrepreneurial skills, particularly in business planning and implementation, with 25% of graduates successfully initiating agribusiness ventures. However, challenges such as limited funding and difficulties in accessing financial resources constrained the growth of startups. The study recommends strengthening university–industry linkages, establishing an Agribusiness Innovation Centre with emphasis on agro-processing and circular economy practices, and creating a revolving fund to support student ventures. Embedding green transition principles into SAPs can align youth entrepreneurship with Ghana's sustainability agenda, thereby addressing unemployment while advancing inclusive and climate-resilient agribusiness development.

Keywords: agribusiness education; entrepreneurial competencies; supervised agribusiness projects; green transition; graduate entrepreneurship; Ghana.

Entrepreneurship, ESG and Climate-Aligned Growth Strategies: Rethinking Inclusive Industrialisation in Africa

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Abstract

Africa's development trajectory is increasingly shaped by the twin imperatives of economic transformation and climate responsibility. As global capital markets, regulators and consumers intensify their focus on environmental, social and governance (ESG) standards, entrepreneurship has emerged as a critical mechanism through which ESG principles can be translated into climate-aligned growth strategies. This paper examines how ESG-oriented entrepreneurship can drive inclusive industrialisation in Africa by fostering innovation, mobilising sustainable finance and embedding climate considerations into firm-level decision-making. Drawing on recent peer-reviewed literature and high-authority policy research, the paper conceptualises ESG not merely as a compliance framework but as an entrepreneurial opportunity structure capable of catalysing green value creation and employment. The analysis highlights institutional constraints, policy gaps and strategic pathways for aligning entrepreneurial ecosystems with climate-aligned development goals. The paper contributes to debates on green transitions by positioning ESG-driven entrepreneurship as a cornerstone of Africa's sustainable industrial future.

Keywords: ESG-oriented entrepreneurship; inclusive industrialisation; sustainable finance; green innovation; climate-aligned development; Africa.

**Exploring the Effectiveness of SME Loan Schemes and the Operational Role of Bank Employees:
Insights from Bank of Africa, Kumasi**

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Abstract

Small and Medium Enterprises (SMEs) are central to Ghana's economic development, contributing to employment and poverty reduction. However, their growth is constrained by limited access to formal credit. This study examines the effectiveness of SME loan schemes at the Bank of Africa, Kumasi, with emphasis on the operational role of bank employees in shaping loan access and outcomes. Adopting an interpretivist paradigm, the study employs an exploratory case study design. Data were collected through semi-structured interviews with 25 purposively selected participants, including SME owners and bank staff such as credit officers and relationship managers. The data were analysed using thematic analysis based on Braun and Clarke's approach to identify key patterns and insights. Findings reveal that bank employees play a crucial role in influencing SMEs' understanding of loan requirements, application procedures, and perceptions of fairness. Positive employee practices, including clear communication, advisory support, and empathy, enhance client confidence and facilitate access to credit. Employees further indicated that institutional constraints, such as regulatory requirements and workload pressures, affect their ability to provide personalized support. Additionally, subjective assessments of SME viability highlight the role of employee discretion in credit decisions. The study concludes that employee conduct is pivotal to the effectiveness of SME loan schemes. Enhancing staff capacity, communication, and customer orientation is essential for improving SME access to finance in Ghana.

Keywords: SME, Loans, Bank employees, financial inclusion, Ghana

The Role of Tax Officials in Promoting Voluntary Compliance: Evidence from Ghana Revenue Authority

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Abstract

Tax compliance remains a persistent challenge in developing economies such as Ghana, where effective revenue mobilization depends not only on policy frameworks but also on the quality of tax administration. This study examines how the professional conduct and service delivery practices of employees of the Ghana Revenue Authority (GRA) influence voluntary taxpayer compliance. A cross-sectional survey design was employed, with data collected from 270 registered taxpayers in selected metropolitan and municipal areas in Kumasi. Structured questionnaire captured perceptions of GRA employees' professionalism and service delivery, alongside self-reported compliance behaviour. Data were analysed using SmartPLS structural equation modelling to examine relationships between employee conduct and compliance outcomes, including filing compliance, reporting accuracy, and timely payment. Findings reveal that professional conduct significantly influences voluntary compliance. Ethical behaviour, integrity, and fairness enhance trust and compliance intentions, while efficient service delivery, characterised by timely information, courteous interactions, and responsiveness positively predicts compliance. While prior research has largely focused on taxpayer characteristics and institutional determinants, limited attention has been given to the behavioural and service-oriented roles of tax officials, despite their direct interaction with taxpayers. Insights from the Theory of Planned Behaviour and SERVQUAL dimensions, the study explores how ethical conduct, responsiveness, communication quality, transparency, and perceived fairness shape compliance behaviour. The study underscores the importance of strengthening professionalism, ethics, and service quality within tax administration to enhance revenue mobilization.

Keywords: Tax compliance, Theory of Planned Behaviour, Service quality, GRA, Ghana

Exploring Organizational Stress and Coping Strategies Among Marketing Employees in the Insurance Industry: A Qualitative Study

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Abstract

This study explores organizational stress and coping strategies among marketing employees in the insurance industry, a sector characterized by intense competition, performance-driven targets, and high customer expectations. The study aims to identify key organizational stressors affecting marketing personnel and to examine the coping mechanisms they employ to manage work-related pressures. Insights from organizational behavior and stress management literature, the research provides a contextualized understanding of employee experiences within the insurance marketing environment. A qualitative research design was adopted to capture the depth and complexity of participants' lived experiences. Data were collected through semi-structured interviews with marketing employees working in selected insurance firms in Ghana. The data were analyzed using thematic analysis, enabling the identification of recurring themes related to sources of stress and coping strategies. The findings reveal that organizational stress is primarily driven by factors such as stringent sales targets, job insecurity, role ambiguity, and demanding client interactions. Employees adopt a range of coping strategies, including problem-focused approaches (time management and strategic planning) and emotion-focused strategies (social support and cognitive reframing). However, the effectiveness of these coping mechanisms is influenced by organizational support systems and individual resilience. The study contributes to existing literature by highlighting the unique stress dynamics within the insurance marketing sector and offers practical implications for managers seeking to foster supportive work environments that enhance employee well-being and performance.

Keywords: Organizational stress, coping strategies, insurance industry, marketing employees, qualitative research, thematic analysis, employee well-being.

Perceived Value, Planned Behaviour and Residential Greening Intention: An Integrated Model with Evidence from Urban Ghana

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Abstract

This study examines residential greening intention in urban Ghana by integrating consumer value theory (CVT) with the theory of planned behaviour (TPB). It investigates how functional, emotional, ecological, and aesthetic values influence attitude and intention, while also assessing the roles of subjective norms, perceived behavioural control (PBC), and selected contextual factors. The study employed a quantitative cross-sectional survey of private residential households in Accra and Kumasi, Ghana. Data were collected through structured face-to-face questionnaires, yielding 501 usable responses. The data were analysed using structural equation modelling (SEM), with confirmatory factor analysis for the measurement model, bootstrapping for mediation, and interaction terms for moderation analysis. Ecological value and emotional value had significant direct positive effects on intention, while functional and aesthetic values did not. Functional, ecological, and aesthetic values positively influenced attitude, whereas emotional value showed a negative relationship with attitude. Attitude was the strongest predictor of intention, followed by PBC. Subjective norms did not directly affect intention but positively influenced attitude. Attitude fully mediated the effects of functional and aesthetic values on intention and partially mediated the effect of ecological value. Money availability strengthened the attitude–intention relationship, whereas time availability weakened it. The study extends research on pro-environmental behaviour by developing and testing an integrated CVT–TPB model in the context of residential greening. It shows that different value dimensions influence attitude and intention in distinct ways and provides evidence from urban Ghana, a setting that remains underrepresented in the literature.

Keywords: residential greening; consumer values; Theory of Planned Behaviour; pro-environmental behaviour; behavioural intention; urban Ghana.

Religiosity and Green Entrepreneurship: The Role of Environmental Passion, Knowledge and Self-Efficacy

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Abstract

This study examines the influence of religiosity, passion, knowledge and self-efficacy on green entrepreneurial intentions. Also, the influence of intrinsic religiosity, extrinsic religiosity, and environmental knowledge on environmental passion was tested. Using a quantitative approach and structural equation modelling, the findings reveal that intrinsic religiosity, extrinsic religiosity, and environmental knowledge significantly enhance environmental passion. In turn, environmental passion, intrinsic religiosity and green entrepreneurial self-efficacy significantly influence green entrepreneurial intention, with self-efficacy emerging as the strongest predictor. While extrinsic religiosity and environmental knowledge do not directly affect green entrepreneurial intention. The results highlight the importance of emotional engagement with environmental issues and individual confidence in shaping green entrepreneurial behaviour. The study contributes to the growing literature on sustainable entrepreneurship by integrating religiosity, cognitive factors, and motivational mechanisms, and offers practical implications for promoting green entrepreneurship through education, value orientation, and capacity building.

Keywords: religiosity; environmental passion; environmental knowledge; entrepreneurial self-efficacy; green entrepreneurship; entrepreneurial intention.

The Mediating Role of Innovation Capacity in the Relationship Between Digital Transformation and SME Performance in Ghana

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Abstract

This study investigates the impact of digital transformation on the performance of small and medium-sized enterprises (SMEs) in the Kumasi Metropolis of Ghana, with particular emphasis on the mediating role of innovation capacity. Although digital technologies are increasingly integrated into business operations, empirical evidence on how digital transformation drives SME performance in the Ghanaian context, especially through innovation mechanisms remains limited. This study aims to assess both the direct effects of digital transformation on SME performance and the indirect effects mediated by firms' innovation capacity. A quantitative, descriptive-correlational design will be employed, using a cross-sectional survey to collect data from 250 SME owners and managers across diverse sectors in Kumasi. Stratified random sampling will ensure sectoral and geographic representation. Data will be collected via a structured questionnaire incorporating validated measures for digital transformation, innovation capacity, and SME performance. Confirmatory factor analysis and structural equation modeling techniques will be applied to analyze the data. The study is expected to reveal a significant positive relationship between digital transformation and SME performance. Moreover, innovation capacity is anticipated to partially mediate this relationship, underscoring its pivotal role in translating digital efforts into performance gains. These findings are expected to offer new theoretical insights into the pathways through which digital transformation influences organizational outcomes. Practically, the study aims to guide SME managers and policymakers in fostering innovation-driven digital strategies that enhance competitiveness and long-term sustainability.

Keywords: digital transformation; innovation capacity; SME performance; structural equation modelling; digitalisation; Ghana.

Green Transitions and Inclusive Industrialisation in Africa: The Role of Transactional and Private Banking in Bridging Policy and Practice

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Abstract

Africa's pursuit of green transitions and inclusive industrialisation is gaining momentum as governments seek to address climate change, economic vulnerability and employment creation. Although policy frameworks increasingly emphasise sustainable development and private-sector participation, their effectiveness depends partly on how financial institutions translate sustainability objectives into routine banking activities. Banks play a central role in mobilising capital, facilitating trade, managing liquidity and supporting enterprise development. Nevertheless, existing discussions of green finance largely concentrate on macro-level instruments, with limited attention to how transactional and private banking can contribute to sustainable and inclusive industrial development. Using a practitioner-informed analysis of private banking activities at Stanbic Bank Ghana, this study examines how transactional services and client advisory practices can operationalise green-transition policies. It argues that integrating environmental, social and governance principles into payment systems, cash-management services, investment advice and client relationships can influence capital allocation, encourage sustainable investment and expand access to appropriate financial services. The analysis further highlights the potential of private banking to connect policy objectives with the financial decisions of businesses and individual investors. By focusing on routine banking practices, the study broadens understanding of the financial mechanisms supporting Africa's green transition. It offers practical insights for banks, regulators and policymakers seeking to align financial services with sustainable investment, financial inclusion and inclusive industrialisation.

Keywords: green transition; inclusive industrialisation; transactional banking; private banking; sustainable finance; financial inclusion.

Digital Banking Operations, Green Finance and Inclusive Industrialisation in Ghana: A Financial Intermediation Perspective

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Abstract

This paper examines how digital banking operations can support green finance and inclusive industrialisation in Ghana through the lens of financial intermediation theory. It argues that digital banking enhances access to finance, reduces transaction costs, widens financial inclusion, and strengthens the flow of capital towards productive and sustainability-oriented sectors. Drawing on conceptual analysis, relevant literature, and the authors' professional practice in the Ghanaian banking sector, the paper shows how digital financial systems can enable renewable energy uptake, support green SMEs, and reduce barriers to clean energy access. The study positions digital banking as a practical enabler of Ghana's and Africa's green transition. The central argument is that sustainable industrial transformation in emerging economies is not driven only by large scale climate finance, state policy, or infrastructure investment, but also by the routine financial services that improve access to liquidity, facilitate transactions, mobilise savings, and connect firms and households to formal financial systems. In this respect, digital banking should not be understood merely as an operational upgrade. It should be seen as a strategic mechanism through which banks support productive activity, widen inclusion, and strengthen the financial foundations required for sustainable development. This framing aligns well with the iCAD 2026 emphasis on green transitions and inclusive industrialisation in Africa because it connects everyday banking practice to wider questions of structural transformation, energy transition, and development outcomes.

Keywords: digital banking; green finance; inclusive industrialisation; financial intermediation; financial inclusion; Ghana.

Greening from Within: How African Cultural Logic Drives Green Supply Chains in Ghana

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Abstract

This study examined how survival-oriented cultural logic and informal institutional embeddedness shape green supply chain practices (GSCP) in Ghanaian manufacturing firms, with environmental hostility adaptation (EHA) as the mediating mechanism and factor market rivalry (FMR) as a boundary condition. Drawing on contingency theory and environmental hostility adaptation theory, the study tested a moderated mediation model using time-lagged, two-wave survey data from 312 manufacturing firm-supplier dyads in Ghana, analysed through Structural Equation Modelling (SEM), Necessary Condition Analysis (NCA), and Importance-Performance Map Analysis (IPMA). Results confirmed that survival-oriented cultural logic and informal institutional embeddedness positively predicted GSCP, with EHA serving as a significant partial mediator. FMR significantly weakened the mediated pathways under conditions of high resource competition. NCA revealed that informal institutional embeddedness constitutes a necessary condition for GSCP adoption. IPMA identified informal institutional ties as the highest-leverage but currently underperforming antecedent. These findings challenge Western compliance-based models of green supply chain adoption and offer an Africa-originating theoretical framework for understanding environmental practices in informal economy contexts.

Keywords: green supply chain practices; informal institutional embeddedness; survival-oriented cultural logic; environmental hostility adaptation; factor-market rivalry; Ghana.

Walking the Ethical Tightrope: Distinguishing Public Relations from Propaganda in Sub-Saharan African Higher Education Institutions

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Abstract

Public Relations (PR) and propaganda are increasingly intertwined in contemporary communication practice, generating persistent misconceptions regarding their conceptual and ethical boundaries. This study critically examines the understated dissimilarities between PR and propaganda within selected universities in Sub-Saharan Africa. Grounded in an interpretivist paradigm, the study adopts a qualitative methodology, utilizing a multiple case study design. Data were collected through semi-structured interviews with practitioners across selected universities, guided by an interview protocol, and analysed thematically to identify recurring patterns and meanings. The findings reveal that PR is predominantly characterized by ethical and strategic communication practices, including crisis management, trust-building, reputation management, stakeholder relationship development, transparent information dissemination, and institutional marketing aimed at enhancing corporate image. In contrast, propaganda is perceived as grounded in ethically questionable tactics, such as the dissemination of biased or misleading information, manipulative messaging, emotional exploitation, one-way communication, and deliberate attempts to shape perceptions through deception or coercion. Importantly, the study underscores that while both PR and propaganda seek to influence public perception, their divergence lies in intent, transparency, and ethical orientation. By contextualizing these practices within Sub-Saharan African tertiary institutions, the study contributes to clarifying the conceptual ambiguity between the two domains. It further provides a framework for ethical communication, offering practical insights for practitioners and scholars seeking to delineate professional PR from propagandistic communication.

Keywords: Public Relations, Propaganda, Ethical Communication, Practitioners' Perspective, Sub-Saharan Africa

Analysing Differences in Effectiveness of Digital Versus Traditional Marketing in Eemerging Markets for Enhancing Consumer Engagement and Brand Awareness

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Abstract

This research examines the differences in effectiveness between digital marketing and traditional marketing strategies in emerging markets, highlighting their impact on consumer engagement and brand awareness. Adopting a qualitative methodology, this study conducted thirty comprehensive interviews in Ghana. Participants were chosen using convenience sampling to gain insights into their experiences and perceptions regarding both marketing strategies. The findings indicate a strong inclination towards digital marketing among younger consumers, who appreciate its accessibility, interactivity, and extensive reach. Conversely, traditional marketing continues to have significant relevance among older demographics and in areas with limited access to technology. The study underscores the vital role of digital channels while also recognizing the importance of integrating traditional methods to develop well-rounded marketing strategies. The research faced several constraints, including a narrow range of participant insights, limited time for data collection, and technology-related difficulties during interviews. These challenges required adjustments in the research process and illuminated the intricacies of conducting studies in emerging markets. This paper adds valuable depth to existing academic work by exploring marketing effectiveness in emerging markets and advocating for integrated marketing strategies that address the varied preferences of consumers.

Keywords: Digital marketing, traditional marketing, emerging markets, consumer engagement, brand awareness, qualitative research, Ghana.

The Mediating Role of Organizational Culture on Open Innovation and Green Product Development among Manufacturing SMEs in Ghana

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Abstract

This study examines the mediating role of organizational culture in the relationship between open innovation and green product development (GPD) among manufacturing small and medium-sized enterprises (SMEs) in Ghana. Despite growing scholarly interest in open innovation and sustainability, the mechanisms through which inbound and outbound open innovation influence GPD remain underexplored, particularly in developing economy contexts. Drawing on a cross-sectional survey of 254 managers and innovation officers of Ghanaian manufacturing SMEs, data were analyzed using Structural Equation Modelling (SEM) with a bootstrapping procedure of 5,000 resamples. The findings reveal that inbound open innovation exerts a positive and significant direct effect on GPD ($\beta = 0.426, p < 0.05$) and on organizational culture ($\beta = 0.457, p < 0.05$), while outbound open innovation shows no significant effect on either variable. Organizational culture positively and significantly influences GPD ($\beta = 0.289, p < 0.01$) and fully mediates the relationship between inbound open innovation and GPD ($\beta = 0.132, p < 0.01$). No significant mediation was found for outbound open innovation. The model explains 41.3% and 40.7% of the variance in organizational culture and GPD respectively. These findings underscore the critical role of a supportive organizational culture in translating inbound knowledge flows into green product outcomes. The study contributes to the open innovation and sustainability literature and offers practical guidance for SME managers and policymakers seeking to advance green innovation in developing economies.

Keywords: inbound open innovation; outbound open innovation; organisational culture; green product development; manufacturing SMEs; Ghana.

Ubuntu as Strategy for Green Transitions: Informal Collaboration and Inclusive Industrialisation in Ghanaian Supply Chains

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Abstract

This study challenged the universality of Western supplier development theory by testing an Africa-originating model of inclusive industrialisation in Ghanaian manufacturing supply chains. Drawing on resource dependence theory adapted for informal economy contexts, Ubuntu philosophy, and institutional complexity theory, the study tested a moderated mediation model in which Ubuntu-oriented supply chain collaboration (UOSCC) mediates the relationship between informal economy embeddedness (IEE) and inclusive industrialisation outcomes (IIO), and institutional complexity (IC) moderates the mediated pathway. Time-lagged, two-wave survey data were collected from 306 manufacturing firm-supplier dyads in Ghana and analysed using Structural Equation Modelling (SEM), Necessary Condition Analysis (NCA), and Importance-Performance Map Analysis (IPMA). Results confirmed that informal economy embeddedness positively predicted UOSCC, which in turn positively predicted inclusive industrialisation outcomes. UOSCC served as a significant partial mediator. Institutional complexity significantly weakened the mediated pathway. NCA established UOSCC as a necessary condition for inclusive industrialisation. IPMA identified informal economy embeddedness as the highest-leverage but currently underperforming antecedent. These findings offer an Africa-originating model of supply chain-driven inclusive industrialisation that does not presuppose formal institutional infrastructure, directly challenging the Western supplier development paradigm.

Keywords: Ubuntu; informal economy; supplier development; inclusive industrialisation; institutional complexity; supply chain collaboration.

Young Consumers Behaviour Towards Climate-aligned SMEs in Ghana: A Qualitative Study

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Abstract

Young consumers represent an important market for climate-aligned small and medium-sized enterprises (SMEs), yet limited evidence explains how their positive environmental attitudes shape actual purchasing decisions in Ghana. This study explores young Ghanaian consumers' perceptions of and willingness to purchase products and services from climate-aligned SMEs. Qualitative data were collected through focus group discussions with young consumers. The findings reveal generally positive attitudes towards businesses that demonstrate environmental responsibility. However, participants' purchasing decisions are influenced more strongly by price, convenience and product quality than by sustainability considerations alone. The findings therefore reveal an attitude-behaviour gap in which support for climate-aligned consumption does not consistently translate into actual purchasing behaviour. Participants also demonstrate limited awareness of specific climate-aligned SMEs and rely heavily on social media for product and sustainability information. These findings suggest that environmental positioning alone may be insufficient to generate sustained consumer demand. Climate-aligned SMEs must combine credible sustainability practices with affordability, accessibility and consistent product quality. They should also strengthen their digital communication by providing clear and trustworthy information about the environmental benefits of their offerings. The study contributes context-specific insights into sustainable consumer behaviour in Ghana and provides practical guidance for SMEs, marketers and policymakers seeking to stimulate demand for climate-aligned products and services among young consumers.

Keywords: young consumers; climate-aligned SMEs; sustainable consumption; attitude-behaviour gap; purchasing behaviour; Ghana.

From Waste to Mobility Assets: Investigating Circular Retrofitting of Used Buses for Nigerian Private Schools

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Abstract

This paper examines circular retrofitting as a pathway to green transitions and inclusive industrialization in African cities. It investigates how end-of-life petrol and diesel school buses in Nigeria can be converted into solar-powered electric buses through remanufacturing processes integrated with decentralized renewable energy systems. Grounded in circular economy and circular business model theory, the study introduces the concept of a “solar-retrofit nexus,” linking vehicle reuse, renewable energy infrastructure, and localized industrial capability development. An exploratory mixed-methods design is employed, combining stakeholder interviews, technical feasibility assessments, and pilot case documentation. Data collection is ongoing. Expected findings indicate that circular retrofitting can reduce lifecycle emissions, lower operational costs, and generate green employment while improving transport accessibility. The study contributes to circular business model literature by conceptualizing retrofitting as a circular value retention strategy and demonstrating its application in African mobility systems.

Keywords: circular retrofitting; solar-powered electric buses; circular business models; sustainable mobility; inclusive industrialisation; Nigeria.

Applied African Speculative Fiction: Innovative Methods to Consider the Future of AI in Africa

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Abstract

This paper outlines and provides the methodological rationale for the project *Applied African Speculative Fiction and the Future of Work in Africa*. The project employs applied speculative fiction to explore how artificial intelligence and technological development may reshape work, labour conditions and society across the continent. It will commission up to twelve short stories, each co-produced by an African speculative fiction writer and a contributor with lived experience of working in Africa's technology sector. Together, the stories will form the second volume of the *Applied African Speculative Fiction* anthology series. The methodology responds to the limitations of conventional forecasting approaches and dominant technology narratives, which often privilege the perspectives of political leaders, technology companies and external experts. By centring workers' experiences, the project seeks to generate alternative narratives concerning technological opportunity, labour exploitation, worker recognition, mental health, collective organisation and the social consequences of AI expansion. Pairing writers with technology-sector contributors enables lived experiences to inform imaginative accounts of plausible futures while creating space for perspectives frequently overlooked in management and organisation research. As an early-stage project, the paper focuses on its methodological foundations rather than empirical findings. It positions applied speculative fiction as a participatory foresight method capable of encouraging unconventional thinking, supporting empathetic engagement and extending inquiry beyond empirical extrapolation. The project is expected to provoke academic and policy debate and broaden participation in shaping narratives about AI and the future of work in Africa.

Keywords: Applied speculative fiction; artificial intelligence; future of work; participatory foresight; technology workers; Africa.

Green Entrepreneurship Education in TVET and Youth Employment: The Mediating Role of Entrepreneurial Intention and the Moderating Effect of Access to Finance

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Abstract

The global transition toward green economies has heightened the demand for workforce systems that integrate sustainability and entrepreneurship to mitigate youth unemployment, particularly in emerging economies such as Ghana. Technical and Vocational Education and Training is widely recognized as a principal mechanism for cultivating job-relevant skills; however, its role in fostering green entrepreneurship and employment remains conceptually underexplored. This study formulates a theoretical framework to elucidate how green entrepreneurship education within TVET contributes to youth employment outcomes. Grounded in an integrated theoretical perspective, the framework delineates a moderated mediation model wherein entrepreneurial intention mediates the relationship between green entrepreneurship education and youth employment, while access to finance moderates the relationship between entrepreneurial intention and employment outcomes. Green entrepreneurship education cultivates sustainability-oriented competencies and shapes individuals' attitudes, perceived behavioural control, and subjective norms, thereby fortifying entrepreneurial intention. This intention constitutes a pivotal mechanism by which individuals transition to self-employment and green enterprise establishment.

Keywords: green entrepreneurship education; technical and vocational education; entrepreneurial intention; youth employment; access to finance; Ghana.

From Brand Ghana to Green Ghana: ESG Compliance as a Strategic Tool for Nation Branding and Sustainable Industrialisation

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Abstract

Past approaches to industrialisation have often depended on extractive and carbon-intensive activities without delivering broad-based or environmentally sustainable development. The global shift towards low-carbon growth, together with the increasing influence of sustainability considerations on international finance, requires countries to reconsider how they pursue industrial transformation and attract investment. Ghana has invested substantially in nation-branding and investment-promotion initiatives that portray the country as stable, welcoming and open for business. However, these initiatives have largely emphasised international visibility and favourable perceptions. As investors increasingly evaluate environmental, social and governance (ESG) performance, national reputation must be supported by credible institutions, transparent governance and demonstrable commitments to sustainable development. This conceptual paper examines how ESG compliance can strengthen Ghana's nation brand while supporting sustainable industrialisation. It proposes a transition from "Brand Ghana," centred primarily on image and promotion, to "Green Ghana," grounded in measurable environmental performance, social responsibility and institutional accountability. The paper argues that integrating ESG principles into national development policies, investment-promotion strategies and industrial governance can enhance Ghana's credibility, attract sustainability-oriented capital and encourage responsible industrial activity. It contributes to discussions of nation branding by positioning ESG performance as a substantive source of national competitiveness rather than merely a corporate reporting concern. The paper also offers policy insights into how Ghana can align its international image with its green-transition and sustainable-development ambitions.

Keywords: ESG compliance; nation branding; sustainable industrialisation; green transition; foreign investment; Ghana.

From Failure to Prevention: Bridging the Governance Handover Gap in Community Tree Plantations in Rural Ghana

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Abstract

Community tree plantations are widely used to address environmental degradation, rural poverty and climate vulnerability, yet many fail after external support is withdrawn. This study examines why some publicly funded plantations in rural Ghana remain viable after handover while others deteriorate or are destroyed. Drawing on common-pool resource design principles, social capital and institutional theory, it adopts a two-phase qualitative comparative case-study design across Sene West and Sene East Districts. Evidence comprises 56 semi-structured interviews with district officials, traditional leaders, management committees and plantation workers, supplemented by documentary analysis of project, policy and audit reports. The findings reveal that governance arrangements established by implementing agencies during funded periods do not necessarily endure after withdrawal. Successful plantations depend instead on community-generated institutions characterised by inclusive representation, trust, transparent accountability, committed local leadership and learning from previous failures. The study introduces the “governance handover gap” to describe the institutional vacuum arising between the withdrawal of external monitoring, payments and technical support and the maturation of community-led governance mechanisms. Where this gap remained unaddressed, grievances, exclusion, weak conflict-resolution systems and declining maintenance contributed to abandonment, fire and asset loss. Conversely, inclusive governance and locally generated collective-action mechanisms supported plantation continuity and community benefits. The study extends common-pool resource theory by distinguishing externally scaffolded from community-generated governance. It recommends formal handover agreements, community authority over site selection, graduated transitions, inclusive governance structures and continued post-handover technical support.

Keywords: community tree plantations; governance handover gap; common-pool resources; community governance; climate resilience; Ghana.

Inclusive Green Industrialisation in Ghana: Institutional Readiness, Policy Sequencing, and Pathways for Equitable Transition

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Abstract

Africa's green transition requires the integration of energy transformation, industrial development and social inclusion. In Ghana, the challenge extends beyond adopting low-carbon technologies to ensuring that the transition promotes structural transformation, decent employment and domestic value creation. This study reframes the green transition as a question of institutional readiness and industrial policy. It conceptualises inclusive green industrialisation as a development pathway that creates employment opportunities for young people and women, strengthens local value chains and distributes economic and environmental benefits equitably. To assess Ghana's readiness, the study applies a Political–Economic–Technological–Environmental framework combined with Analytic Hierarchy Process weighting. The United Kingdom is used as an analytical contrast rather than a normative benchmark, enabling the study to distinguish potentially transferable institutional features from conditions specific to each national context. The findings indicate that Ghana's principal barriers to an inclusive green transition arise from economic and governance conditions rather than a lack of technological potential. Consequently, effective transition strategies require carefully sequenced interventions that strengthen institutions, mobilise finance, develop domestic industrial capabilities and protect groups at risk of exclusion. The study contributes to green-transition and industrial-policy research by connecting multi-criteria readiness assessment with development-oriented policy sequencing. It also provides stakeholder-specific insights for policymakers, financial institutions, businesses and development partners seeking to align decarbonisation with employment creation, local value development and equitable industrial transformation.

Keywords: inclusive green industrialisation; institutional readiness; policy sequencing; equitable transition; Analytic Hierarchy Process; Ghana.

Digital Identity Management and Green Human Resource Practices in Ghana's Public Sector: Evidence from the National Identification Authority

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Abstract

The global imperative for sustainable development is encouraging public-sector organisations to redesign their human resource practices around environmentally responsible, inclusive and digitally enabled systems. In Africa, integrating digital identity management with Green Human Resource Management represents a promising but underexplored pathway for institutional transformation, particularly where public organisations face resource constraints and growing demands for efficient service delivery. This study examines how digital identity infrastructure can support green human resource practices in Ghana's public sector, focusing on the National Identification Authority as an institutional case. It considers how digital identity management may facilitate paperless HR processes, improve employee-data accuracy, strengthen workforce planning and support more accessible and inclusive administrative services. The study also examines the institutional conditions required to connect digital transformation with environmental and human resource objectives, including governance capacity, employee competencies, data protection and organisational commitment. By linking digital public infrastructure with Green Human Resource Management, the study broadens understanding of how technology-enabled administrative systems can contribute to public-sector sustainability. It also offers a basis for developing practical strategies through which public institutions can align digitalisation, workforce management and environmental responsibility while improving operational efficiency and service delivery in Ghana.

Keywords: digital identity management; green human resource management; public-sector sustainability; digital public infrastructure; National Identification Authority; Ghana.

Turning End of Life Tyres into Industrial Energy: Opportunities and Challenges for Green Transition Pathways in Africa

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Abstract

This paper examines the role of end-of-life tyre pyrolysis in advancing green transitions and inclusive industrialisation in Africa. Drawing on circular economy theory, sociotechnical transitions theory and the resource-based view, it analyses how waste tyres can be converted into pyrolytic oil, carbon black, steel and gas to address energy insecurity, waste mismanagement and industrial underdevelopment. The paper identifies opportunities, including waste management, alternative fuel generation, value chains, employment creation and reduced dependence on virgin materials. It also highlights key barriers, notably weak regulation, outdated technologies, financing constraints, fragmented feedstock supply chains and unresolved environmental risks. The analysis argues that tyre pyrolysis can become a viable pathway for sustainable industrial development if supported by coherent policy, product standards, inclusive collection systems, finance, research partnerships and regional cooperation. The paper concludes that transforming tyre waste into energy can convert an environmental burden into a development asset in Africa.

Keywords: end-of-life tyres; pyrolysis; circular economy; inclusive industrialisation; waste valorisation; Africa.

Human Capital for Africa's Green Transition: HR Strategies for Workforce Readiness, Skills Development, and Inclusive Industrialisation

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Abstract

Africa's green transition presents a significant human resource challenge as the continent pursues low-carbon industrialisation. Despite its importance, the role of human resource management (HRM) in enabling this transition remains under researched in the African context. This study addresses this gap using a mixed-methods explanatory sequential design, incorporating a survey of 247 HR managers across 12 countries, 16 interviews with senior leaders, and a systematic analysis of 38 policy documents. Findings reveal that green skills gaps are the most urgent HR challenge (mean = 3.91/5.0), while policy alignment with green economy goals remains moderate (mean = 3.28/5.0). ESG integration into core HR practices is nascent (mean = 2.98/5.0), with significant variation by sector and organizational size. Qualitative and document data highlight that current HR policies lag behind national green growth ambitions and often lack inclusivity provisions for women, youth, and informal workers. Across all data streams, there is high convergence on the urgency of skills development and the inadequacy of existing frameworks. In response, the study proposes the Africa Green Transition Workforce Readiness Model (AGTWRM), a five-pillar framework encompassing green skills architecture, inclusive workforce development, policy and ESG alignment, leadership and culture, and measurement. This research contributes to emerging sustainable HRM literature in the Global South and provides evidence-based recommendations for HR practitioners, policymakers, and development partners to better align workforce capacity with green industrial goals.

Keywords: green transition; sustainable human resource management; green skills; workforce readiness; inclusive industrialisation; Africa.

Women Entrepreneurship and Job Creation: Do Female-Owned Firms Employ More Women? Evidence from the World Bank Enterprise Survey

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Abstract

This study empirically investigates whether female-owned micro, small, and medium enterprises (MSMEs) generate disproportionately greater job opportunities for women workers and whether this effect varies with country-level institutional quality. Drawing on social identity theory, homophily principles, and institutional theory, the study advances three core arguments: female business owners hire more women than their male counterparts; this employment advantage intensifies with greater female ownership depth; and the effect is strengthened in institutional environments where women's legal and economic rights are more robustly protected. Using firm-level data from the World Bank Enterprise Survey (WBES) spanning over 150 countries, combined with country-level institutional data from the Women, Business and the Law (WBL) index, the study employs a three-stage analytical strategy comprising descriptive analysis, multivariate OLS regression with country and sector fixed effects, and interaction regression models to test institutional complementarity. The primary outcome is female permanent employment share, with a secondary binary indicator capturing female workforce majority status. Expected findings suggest that female-owned MSMEs employ significantly higher proportions of female workers, with stronger effects in majority female-owned firms, service sector enterprises, and smaller firms. Critically, institutional quality is anticipated to strengthen this relationship, establishing entrepreneurship and legal reform as mutually reinforcing rather than alternative pathways to gender equity. These findings carry direct implications for the design of integrated gender-sensitive entrepreneurship policies, legal reform agendas, and development interventions aimed at advancing inclusive economic growth beyond individual-level empowerment toward systemic labor market transformation.

Keywords: Female entrepreneurship; women's employment; institutional quality; MSMEs; gender equality; inclusive growth.

Driving Inclusive Green Retail Transformation in Ghana: The Role of SME Supermarkets in Sustainable Supply Chains and Local Economic Development

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Abstract

Small and medium-sized enterprises (SMEs), particularly those operating in retail, have an important role in Africa's transition towards sustainable and inclusive industrialisation. Supermarkets connect producers with consumers, influence supply-chain practices and contribute to local economic development. However, many SME retailers in Ghana continue to rely on resource-intensive operating models that constrain environmental performance and inclusive value creation. This paper examines how SME-led supermarkets can contribute to green transitions and inclusive industrialisation through sustainable supply-chain practices, effective inventory management and community-centred business strategies. Adopting a practitioner-informed perspective based on more than fifteen years of experience in financial services and supermarket management, it considers how retail businesses can integrate sustainability into routine commercial operations. The analysis identifies local sourcing, improved stock control, waste reduction, stronger supplier relationships and support for local producers as potential pathways through which SME supermarkets can improve resource efficiency and generate community-level economic benefits. It argues that green industrialisation requires not only supportive public policies and investment but also the active participation of smaller businesses embedded within local markets and supply networks. The paper contributes a grassroots perspective to discussions of sustainable retail and SME-led transformation in Ghana. It also offers practical insights for retailers, policymakers and business-support organisations seeking to align environmental responsibility with local enterprise development, employment creation and more inclusive supply chains.

Keywords: SME supermarkets; sustainable supply chains; green retail; inclusive industrialisation; local economic development; Ghana.

ESG Compliance as a Catalyst for Green Corporate Growth: Evidence from Registered Companies in Ghana

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Abstract

Africa's green transition requires substantial changes in corporate strategy, governance and investment. Ghana's Office of the Registrar of Companies occupies an important institutional position in this transition by overseeing the registration, compliance and governance of a corporate sector dominated by small and medium-sized enterprises (SMEs). However, whether environmental, social and governance (ESG) compliance frameworks generate tangible green-growth outcomes among registered companies remains underexplored. Drawing on Institutional Theory and Stakeholder Theory, this study examines how ESG-related regulatory frameworks and pressure from relevant public institutions influence corporate sustainability strategies and performance in Ghana. A mixed-methods design combines survey data from 200 registered companies with documentary analysis of corporate filings held by the Registrar. The findings show that fewer than 30% of registered SMEs actively engage with ESG reporting frameworks. Although the transition towards mandatory sustainability disclosure is creating greater urgency, many firms demonstrate limited institutional readiness. Companies that integrate ESG principles also report stronger access to green finance instruments and greater investor confidence. Based on these findings, the study proposes a Corporate Green Compliance Index anchored in company-registration data as a scalable policy instrument for monitoring and encouraging corporate sustainability. It recommends capacity development, simplified ESG disclosure requirements for SMEs and stronger coordination among regulatory and environmental institutions. These measures could strengthen corporate accountability and support inclusive, sustainability-oriented industrial development in Ghana.

Keywords: ESG compliance; green corporate growth; sustainability disclosure; green finance; registered companies; Ghana.

Marketing Capabilities as Microfoundations of Women Entrepreneurs

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Abstract

Micro-foundations provide entrepreneurial level results, and these have been advanced by their expertise, cognitive thinking, and interpersonal relationship with others. Although international business and strategy scholarship overlook individual level cognitive behaviour that of women entrepreneurship is barely available. From developing countries such as sub-Saharan African the situation is very challenges due to voids from institutional weakness, economic volatility, social embeddedness and bounded rationality but all have compound effect on strategic decisions and related firm performance. Nonetheless, women entrepreneurs need to confront these external challenges for continuous growth and survival of their businesses. Moreover, strategy scholars emphasise that individual-level actions and mechanisms form organisational capabilities. Besides, how marketing capabilities that form behavioural foundations of these women entrepreneurs have been neglected to capture to understand how they inform firm-level capabilities to survive and grow especially under uncertainty. This proposed research therefore stands to answer three key questions: first, it addresses the neglected perspective of how women entrepreneurs compete, survive, adaptation strategies, and growth avenues. This will be explored to understand capabilities bothering on customer intelligence gathering, branding, subjective pricing, and development and translation of promotional communication convert into performance. Second, it seeks to explore how women entrepreneurs acquire knowledge, internalise, and systemise more affordable digital tools under resource-limited environment for firm survival and growth. Third, it understands how network development relates with capability building, confidence, and access to market opportunities among women-owned businesses.

Keywords: women entrepreneurs; micro-foundations; marketing capabilities; digital capabilities; entrepreneurial networks; sub-Saharan Africa.

From Local Restaurant to Registered Community Service Hub: A Practitioner Case of a Small Hospitality Business in Ghana

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Abstract

This practitioner case examines the development of a small hospitality enterprise in Ghana that combines restaurant and pub operations with mobile money and cosmetic retail services. Established in 2019 and formally registered in 2024, the business has evolved from an informal local venture into a recognised enterprise with a clearer legal and commercial identity. It currently employs 17 workers and reports a minimum monthly salary of GHS 1,500. The case illustrates how service diversification can strengthen the relevance and resilience of a small business within its local community. Rather than operating solely as a restaurant or pub, the enterprise functions as a community service hub where customers can purchase meals and drinks, conduct mobile money transactions and obtain selected convenience products. This combination embeds the business within customers' everyday routines and creates multiple sources of demand and revenue. Food services provide a relatively stable operational foundation, while the availability of both local and continental dishes broadens the potential customer base. The case highlights formalisation, service diversification, local embeddedness and employment creation as important dimensions of grassroots enterprise development. It offers practical insights into how small hospitality businesses can respond to local market needs, strengthen their commercial identity and pursue gradual growth. The case also provides a foundation for examining the support required to improve the long-term sustainability of locally embedded enterprises in Ghana.

Keywords: hospitality enterprise; service diversification; business formalisation; community service hub; local entrepreneurship; Ghana.

The Facilitative Role of Social Capital in the Adoption and Implementation of Knowledge Management Systems

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Abstract

Organizations adopt and implement knowledge management (KM) strategies to ensure effective knowledge use across the organization. The goal of KM is to capture valuable knowledge, store it, and make it accessible to all employees so that they can use it to improve decision-making, become more innovative, and increase organizational performance. A knowledge management system (KMS) supports this goal by providing technological tools that help with knowledge creation, storage, sharing, and application. However, deploying a KMS does not provide surety that employees will use it effectively for knowledge sharing. This study examines how shared norms, trust, and social connections help employees collaborate and use KMS more effectively for knowledge sharing. The case study strategy was used to investigate the role of social capital in the use of KMS within a specific organizational context. We used qualitative and quantitative techniques to gather and analyze data. The questionnaires and semi-structured interviews were used for data collection. We further examined organizational documents for triangulation to ensure reliability and validity of the instruments. 73 respondents completed the questionnaires, and they were selected using simple random sampling. Also, a total of 15 respondents participated in the interviews. The results show that social capital has a positive and significant effect on KMS usage. Shared norms, trust, and social connectedness contributed to employees' high recognition of the usefulness of KMS and hence developing a positive attitude toward using it. Thus, recognizing and strengthening social capital within organizations can increase the usage of KMS and improve knowledge sharing outcomes.

Keywords: knowledge management; knowledge management systems; social capital; knowledge sharing; employee attitudes; organisational performance.

Effective Recruitment and Selection Practices for Organisational Performance: Evidence from the Ghana Tertiary Education Commission

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Abstract

This paper explores the link between green transition, inclusive industrialization in Africa, and the role of effective recruitment and selection practices in enhancing organizational performance within public institutions. Drawing on theoretical perspectives and policy discussions, the study examines how sustainable industrial development and environmentally friendly practices can support economic growth while promoting social inclusion. It further analyzes how strong human resource strategies, particularly effective recruitment and selection practices, contribute to institutional efficiency and successful policy implementation. Using literature review and institutional observations, the study highlights opportunities in renewable energy adoption, green technologies, and sustainable manufacturing, while emphasizing the importance of competent personnel in driving these initiatives. The findings reveal that transparent and merit-based recruitment processes improve staff productivity, strengthen policy execution, and support inclusive industrial development. However, challenges such as limited financing, infrastructure deficits, and delays in recruitment were identified. The paper recommends integrated policy frameworks that promote green industrialization alongside standardized recruitment practices and capacity building within public institutions. The study concludes that aligning sustainable industrial policies with effective human resource management is essential for achieving inclusive growth and improved organisational performance in Africa.

Keywords: recruitment and selection; organisational performance; public institutions; human resource management; inclusive industrialisation; Ghana.

Sustainable Competitive Advantage Using Circular Economy Strategies in Storage and Warehouse Management: An Amalgamation of CE–TBL–3R Framework

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Abstract

Traditional storage and warehouse management systems are frequently characterised by linear material flows, single-use packaging and waste-intensive operational processes that increasingly conflict with sustainability requirements. Although Circular Economy principles, the Triple Bottom Line and 3R strategies have been widely examined, their combined application to storage and warehouse management remains underdeveloped. This paper proposes an integrated CE–TBL–3R framework for translating circularity into sustainable competitive advantage within storage and warehousing operations. The framework uses Circular Economy principles to provide strategic direction for redesigning resource flows and operational systems. The Triple Bottom Line connects these strategies to economic, environmental and social performance, while the 3R approach translates circular objectives into practical activities involving material recovery, reuse and lifecycle extension. Through this integration, the framework links strategic sustainability goals with operational decisions concerning packaging, inventory handling, storage infrastructure, waste management and resource efficiency. The paper argues that circular warehousing can reduce material consumption and operational waste while lowering costs, strengthening stakeholder relationships and improving organisational resilience. It contributes to sustainable operations research by consolidating previously fragmented perspectives into a structured framework tailored to storage and warehouse management. The framework also provides managers with a basis for evaluating circular initiatives and aligning operational improvements with wider sustainability and competitiveness objectives. Future empirical application can assess its effectiveness across different warehouse types, industries and institutional contexts.

Keywords: circular economy; Triple Bottom Line; storage and warehousing; 3R strategies; sustainable competitive advantage; resource efficiency.

Bridging Policy and Practice: Repositioning Human Resource Systems as Enablers of Green Transitions and Inclusive Industrialisation in Africa

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Abstract

Africa's green transition and pursuit of inclusive industrialisation depend not only on appropriate policies, infrastructure, finance and technological innovation but also on the institutional systems responsible for implementation. However, the role of internal human resource systems in translating national development objectives into organisational action remains underexamined. This study investigates how human resource policies, performance-management frameworks and organisational structures influence policy implementation within Ghana's public sector. Adopting a qualitative approach, it draws on institutional observations and relevant organisational documents, which were examined using thematic analysis. The findings reveal fragmented human resource systems, weak implementation structures and substantial misalignment between institutional objectives and available resources. Human resource functions frequently operate in silos, while inadequate performance-management arrangements weaken interdepartmental coordination, accountability and the monitoring of policy outcomes. The analysis also identifies a disconnect between national development priorities and institutional performance expectations, limiting public organisations' capacity to implement green and inclusive development policies effectively. The study argues that human resource management should be repositioned from an administrative support function to a strategic institutional capability. Strengthening performance management, clarifying accountability, developing sustainability-related competencies and aligning employee objectives with national priorities can help bridge the gap between policy formulation and implementation. The study contributes an institutional and people-management perspective to debates on green transitions and inclusive industrialisation and offers practical insights for public-sector reform in Ghana and comparable African contexts.

Keywords: human resource systems; policy implementation; green transition; inclusive industrialisation; performance management; public sector.

Sustainable Business Growth and Climate-Aligned Real Estate Development in Emerging Markets: A Case Study of Ghana

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Abstract

Rapid urbanisation and population growth are increasing demand for housing and commercial infrastructure in Ghana, creating opportunities for entrepreneurs and small businesses within the real estate sector. However, capturing these opportunities sustainably requires firms to balance commercial growth with environmental responsibility and climate resilience. This paper examines practical approaches to sustainable business growth and climate-aligned real estate development in Ghana. Drawing on industry experience, it explores key constraints affecting real estate enterprises, including limited access to finance, difficulties with land documentation, market volatility and inadequate integration of environmental, social and governance principles into business operations. The analysis identifies business diversification, strategic partnerships and digital technologies as potential mechanisms for improving operational efficiency, expanding market reach and strengthening organisational resilience. It also emphasises the importance of energy-efficient building design, responsible land use and sustainability considerations in property-development decisions. The findings suggest that long-term competitiveness in emerging real estate markets depends on firms' ability to combine profitability with environmentally responsible practices and adaptive business strategies. The paper contributes a practitioner perspective to discussions of sustainable enterprise development and climate-aligned investment in emerging markets. It also provides practical guidance for entrepreneurs, property developers and policymakers seeking to promote resilient businesses and more sustainable patterns of urban development in Ghana.

Keywords: sustainable business growth; climate-aligned development; real estate; business resilience; emerging markets; Ghana.

The Sustainability Intersection: Leveraging Academic-Industry Symbiosis for a Green Transition

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Abstract

The growing urgency of climate change and environmental degradation has intensified calls for green transitions in Africa, where industrialisation remains central to economic transformation. Achieving this transition requires sustained innovation and stronger collaboration between academia and industry. However, collaboration is frequently constrained by differences in priorities, timelines, incentives and performance measures. Industry commonly prioritises short-term commercial viability and marketable solutions, whereas academic research often emphasises longer-term knowledge development, publication and scholarly impact. This misalignment contributes to a persistent gap between knowledge production and industrial application, limiting the development and diffusion of locally appropriate green technologies and increasing dependence on imported solutions. This conceptual paper proposes an intersection–attraction framework for understanding and addressing the academia–industry divide. Drawing metaphorically on set intersection, it conceptualises sustainability as the shared domain emerging where academic knowledge and industrial capabilities converge, expressed as $Z = X \cap Y$, where X represents academia, Y represents industry and Z represents collaborative sustainability outcomes. A complementary magnetic-attraction metaphor illustrates sustainability as a unifying force capable of drawing actors with different orientations towards common objectives. The framework highlights the need for shared incentives, collaborative research agendas, knowledge-transfer mechanisms and jointly defined performance indicators. By repositioning sustainability as both a common interest and a coordinating mechanism, the paper offers a foundation for strengthening academia–industry collaboration and accelerating locally driven green industrialisation in Africa.

Keywords: academia–industry collaboration; green transition; sustainable innovation; knowledge transfer; conceptual framework; Africa.

Banking Efficiency Analysis: A Systematic Review Towards Benefit/Cost Logic

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Abstract

Data Envelopment Analysis (DEA) has been widely used to evaluate banking performance because it can handle multiple inputs and outputs without requiring a predefined functional form. However, persistent methodological inconsistencies and model variations have raised concerns about the robustness and comparability of DEA-based efficiency assessments. This paper presents a systematic review of contemporary DEA-based approaches to bank performance evaluation, aiming to identify prevailing trends, methodological variations, and emerging research directions. Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, 138 peer-reviewed journal articles published between 2014 and 2024 were systematically identified and analysed across major academic databases. The review reveals substantial heterogeneity in model specifications, including diverse returns-to-scale assumptions, orientation choices, and hybrid DEA extensions, which collectively limit cross-study comparability. Empirical findings indicate a strong geographical concentration of DEA-based banking studies in Asia, with comparatively limited evidence from Africa and South America. Deposits and labour (number of employees) are the most frequently selected input variables, while loans and non-interest income dominate output specifications. Despite methodological advances, the review highlights persistent weaknesses in traditional production-oriented DEA frameworks, particularly their limited capacity to capture multidimensional performance attributes such as risk, service quality, and sustainability. Building on these insights, this study argues for a paradigm shift from conventional input–output efficiency measurement towards a multi-criteria performance assessment framework. Such an approach explicitly distinguishes between cost and benefit variables, offering a more holistic, objectively grounded evaluation of Decision-Making Units (DMUs).

Keywords: Data Envelopment Analysis; banking efficiency; systematic review; benefit–cost logic; multi-criteria assessment; performance evaluation.

Understanding Digital Youth Entrepreneurial Ecosystem Using the Ghanaian Lens: A 4m Framework Approach

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Abstract

This study explores the nature of Ghana's digital youth entrepreneurial ecosystem from a multilevel perspective. It examines the extent to which the ecosystem reflects established entrepreneurial ecosystem dimensions and identifies context-specific features relevant to young digital entrepreneurs. The study organises ecosystem influences through a 4M framework comprising micro-, meso-, macro- and mega-level factors. Data were collected from 139 young digital entrepreneurs across six regions of Ghana using purposive and snowball sampling. The findings demonstrate that entrepreneurial ecosystems are dynamic and geographically embedded, requiring established models to be adapted to the social, institutional and technological conditions of particular contexts. The analysis shifts attention from an abstract understanding of digital youth entrepreneurship towards the practical application of entrepreneurial ecosystem dimensions within Ghana. It also identifies technology hubs and innovation-oriented collaboration as potentially important features of the digital youth entrepreneurial ecosystem. The study contributes to entrepreneurship research by using the 4M framework to organise the individual, organisational, institutional and wider environmental factors shaping young people's digital ventures. It further suggests that existing entrepreneurial ecosystem models should be refined to reflect the distinctive characteristics and support requirements of digital youth entrepreneurs. The findings provide practical insights for governments, entrepreneurs, venture capitalists, angel investors, technology hubs and international development organisations seeking to strengthen digital entrepreneurship and youth enterprise development in Ghana.

Keywords: digital youth entrepreneurship; entrepreneurial ecosystem; 4M framework; technology hubs; youth enterprise development; Ghana.

Effect of Autoclave Sterilisation on Metal-Ion Incorporation into and Release from Implantable Titanium Surfaces: Implications for Dental Implantology

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Abstract

Biofilm formation and effective integration with surrounding biological tissues are critical determinants of the clinical performance of titanium implants. Surface modification using bioactive metal ions, particularly silver ions, may provide antimicrobial activity while supporting osseointegration. However, sterilisation procedures can alter titanium's surface chemistry, wettability and roughness, potentially affecting metal-ion incorporation, release behaviour and cellular interactions. This study investigates the effect of autoclave sterilisation on the incorporation and release of silver ions from medical-grade titanium surfaces. It forms part of a wider effort to develop a simple surface-modification strategy that simultaneously enhances antimicrobial performance and supports titanium osseointegration. Twelve titanium discs, each measuring 12 mm in diameter, were cut, polished to a mirror finish and cleaned. Silver ions were subsequently incorporated onto the surfaces using a modified wet-chemical synthesis method. The experimental design evaluates whether autoclaving alters silver-ion loading and release from the modified titanium surfaces, thereby affecting their potential suitability for implant applications. By clarifying how sterilisation interacts with metal-ion surface modification, the study can inform the development of reproducible preparation protocols for antimicrobial titanium implants. The findings are expected to support the selection of sterilisation procedures that preserve the intended physicochemical and biological properties of modified implant surfaces and improve their potential application in dental implantology.

Keywords: titanium implants; autoclave sterilisation; silver ions; surface modification; antimicrobial surfaces; dental implantology.

Digital Innovation and Circular Economy Performance: The Mediating Role of Green Capabilities in Ghana's Manufacturing Sector

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Abstract

This study examines the drivers of circular economy (CE) performance in Ghana's manufacturing sector, focusing on digital innovation adoption, institutional support, and green organisational capabilities. Drawing on the Resource-Based View and Institutional Theory, the study employs a cross-sectional survey design using data from 183 manufacturing firms in Accra and Tema. Data were collected through structured questionnaires administered to senior managers and sustainability officers, with purposive sampling ensuring representation across subsectors and firms engaged in sustainability and digital initiatives. The model was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings reveal that while digital innovation and institutional support significantly influence CE performance, their effects are relatively modest and largely indirect. Green organisational capabilities emerge as the most critical driver, exerting both strong direct and mediating effects. The study highlights that sustainable industrial transformation depends less on technology alone and more on firms' internal capability development, offering important implications for policy and practice in developing economies.

Keywords: circular economy performance; digital innovation; institutional support; green organisational capabilities; manufacturing firms; Ghana.

A Benefit-Cost Framework for Banking Efficiency: A Stakeholder-Driven Perspective from Ghana and the UK

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Abstract

Efficiency assessment in banking has long been dominated by Data Envelopment Analysis (DEA), a technique that optimises performance by adjusting inputs and outputs. Despite its widespread use, scholars and practitioners continue to question its rigidity, sensitivity to modelling assumptions, and limited capacity to reflect the priorities of those who make strategic decisions within banks. This study responds to these concerns by advancing a stakeholder-centred benefit–cost framework that repositions efficiency analysis within a broader multi-criteria decision-making (MCDM) logic. Drawing on the COREQ-guided qualitative design, the study engaged 50 senior decision-makers across all banks in Ghana and 8 senior managers in the UK. A census–purposive sampling strategy was used in Ghana to ensure full institutional coverage, while convenience sampling was used in the UK. Thematic analysis was employed to identify how executives conceptualise benefits, costs, and performance trade-offs in real-world operational settings. Findings reveal that existing efficiency models often overlook the nuanced value judgements embedded in managerial decision processes. Participants emphasised the need for frameworks that integrate financial, operational, and stakeholder-driven considerations. The resulting benefit–cost structure categorises key banking variables into meaningful benefit and cost dimensions aligned with strategic objectives. This provides a more transparent and adaptable basis for evaluating performance. The study offers a novel methodological pathway that bridges production theory with MCDA, providing decision scientists with a richer, value-attuned alternative to traditional input–output efficiency models.

Keywords: banking efficiency; benefit–cost framework; multi-criteria decision analysis; Data Envelopment Analysis; stakeholder values; qualitative research.

Validating A Green Pentad Entrepreneurship Capabilities Construct in SME Innovation Performance Research: A Bibliometric Analysis and Systematic Literature Review

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Abstract

The transition towards green and inclusive industrialization has become a central development priority across Africa, with small and medium-sized enterprises (SMEs) identified as critical drivers of innovation and economic transformation. Despite growing scholarly attention to entrepreneurial capabilities and SME innovation performance, the literature remains fragmented, with limited consensus on the core dimensions of capabilities required to drive green innovation outcomes. This study addresses this gap by proposing and validating a Green Pentad Entrepreneurial Capabilities construct within the context of SME innovation performance research. Adopting a mixed bibliometric and systematic literature review approach, the study analyses peer-reviewed publications indexed in the Scopus database. Bibliometric techniques, including co-authorship, co-citation, and keyword co-occurrence analyses, are employed to map the intellectual structure and thematic evolution of research at the intersection of entrepreneurial capabilities, green innovation, and SMEs. This is complemented by a systematic review to synthesise empirical and conceptual insights, leading to the identification of five core dimensions of entrepreneurial capabilities, namely skills, abilities, competencies, capacity, and competence, collectively conceptualized as the Pentad framework. The findings reveal emerging research clusters linking entrepreneurial capabilities to eco-innovation, sustainability performance, and inclusive industrialization outcomes, while also highlighting significant gaps in African-focused empirical studies and policy integration. The study advances theory by refining and contextualizing the Pentad Entrepreneurial Capabilities constructed within the green innovation discourse. Practically, it offers a structured capability development framework for policymakers, agencies, and SMEs, bridging theory and practice to support Africa's green, inclusive industrial growth.

Keywords: entrepreneurial capabilities; green innovation; small and medium-sized enterprises; bibliometric analysis; inclusive industrialisation; Africa.

Green Minds, Green Acts: How Knowledge Sharing Powers Sustainable Behavior in Service Firms

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Abstract

This study examined the effect of green knowledge sharing on green employee behaviour in service firms, with a focus on the mediating role of green psychological empowerment. The study responds to growing interest in employee-driven sustainability outcomes within service environments where environmental performance depends on discretionary actions rather than technological systems. A cross-sectional design was adopted using a structured questionnaire administered to 398 employees from service firms in Ghana's financial, hospitality, and tourism sectors. Data was analysed using covariance-based Structural Equation Modelling (SEM) with AMOS (v.23). Service firms were selected due to the increasing demand for green workplace practices and the essential role employees play in shaping environmental outcomes. The findings revealed that green knowledge sharing had a significant positive effect on green employee behaviour and also significantly enhanced green psychological empowerment, which in turn positively influenced green employee behaviour. Further analysis confirmed that green psychological empowerment partially mediated the relationship between green knowledge sharing and green employee behaviour, indicating that knowledge exchange activates environmentally responsible behaviour both directly and through psychological mechanisms.

Keywords: green knowledge sharing; green employee behaviour; green psychological empowerment; service firms; employee sustainability; Ghana.

Ecosystem Functionality and Sustainable Tourism Entrepreneurship in Action: The Case of Ghana

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Abstract

In Ghana, tourism is closely connected to cultural heritage, livelihood diversification, youth employment, regional equity and diaspora engagement, positioning the sector as an important vehicle for green transition and inclusive development. Although tourism operates within an established architecture of legislation, public institutions and sector initiatives, limited understanding exists of how these formal arrangements translate into practical enabling conditions for entrepreneurs. This study examines how entrepreneurial ecosystem conditions influence the ways tourism entrepreneurs interpret, mobilise and recombine resources when pursuing sustainable tourism opportunities. It integrates Entrepreneurial Ecosystem Theory with entrepreneurial resourcefulness through the concept of ecosystem functionality, which captures how interdependent ecosystem domains collectively shape entrepreneurs' strategic room for manoeuvre. The study analyses 30 Ghana-focused secondary sources coded across seven domains: governance, finance, business support, infrastructure, human capital, market access and culture. An exploitation–exploration framework is applied to assess whether prevailing conditions encourage incremental adaptation or sustainability-oriented innovation. The findings reveal that weak functionality across interconnected ecosystem domains directs entrepreneurial activity primarily towards exploitation-led adaptation, including gradual business upgrading, phased reinvestment and selective adoption of digital technologies. By contrast, opportunities for sustainability-oriented exploration and more transformative innovation remain limited. The study contributes to sustainable tourism and entrepreneurship research by organising fragmented evidence around ecosystem functionality. It also establishes a conceptual foundation for examining how tourism entrepreneurs exercise resourcefulness within constrained environments and provides policy insights into the coordinated ecosystem improvements required to support more innovative and sustainable tourism development in Ghana.

Keywords: sustainable tourism; entrepreneurial ecosystems; ecosystem functionality; entrepreneurial resourcefulness; green transition; Ghana.

Social Media Adoption in Ghanaian Construction SMEs: Empirical Insights from a Developing Economy

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Abstract

This study examines the factors influencing the adoption and actual use of social media among small and medium-sized enterprises (SMEs) in Ghana's construction sector. A quantitative cross-sectional design was adopted, with data collected from 320 respondents through a structured questionnaire. The study assessed attitudes towards social media, subjective norms, trust, facilitating conditions, behavioural intentions and actual social media use. The proposed relationships were analysed using partial least squares structural equation modelling in SmartPLS. The findings support all the hypothesised relationships. Attitudes, subjective norms and trust have significant positive effects on construction SMEs' intentions to use social media. Behavioural intention, in turn, significantly influences actual social media use. Facilitating conditions also have a significant direct relationship with actual use, demonstrating that adoption depends not only on favourable intentions but also on access to the resources, knowledge and organisational support required to use social media effectively. The study contributes context-specific evidence on technology adoption among construction SMEs in a developing economy. It also provides practical guidance for SME managers seeking to strengthen their digital presence and exploit social media for communication, customer engagement and business development. Construction firms should therefore cultivate favourable employee and managerial attitudes, build trust in digital platforms and provide the infrastructure and support necessary to translate adoption intentions into consistent use.

Keywords: Social media adoption; construction SMEs; behavioural intention; facilitating conditions; technology adoption; Ghana.

Cohered Model of Business Resilience Capability for Small Banks in Ghana

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Abstract

This study examines how small banks in Ghana design and implements business resilience capabilities through the involvement of frontline employees and external stakeholders, including customers and investors. Drawing on Cohered Emergent Theory, the study explores how collaborative decision-making, stakeholder engagement, adaptive communication, and shared organisational learning contribute to resilience during disruptions and uncertainty. A qualitative research design was adopted using 48 semi-structured interviews conducted across eight rural banks in Ghana. Participants included managers, frontline employees, customers, and investors. The data were analysed thematically to identify patterns related to disruption management, stakeholder participation, communication, and organisational adaptability. Findings from 6 interviews out of 48 interviews reveal that disruptions commonly stem from system failures, transaction delays, service interruptions, and operational inefficiencies. Although banks depend heavily on managerial leadership, IT teams, and formal escalation procedures to manage disruptions, frontline employees and customers are often excluded from resilience planning and decision-making processes. The study further identified communication gaps, delayed responses, inadequate staff training, and weak stakeholder collaboration as factors that undermine resilience effectiveness and reduce customer trust. To address these challenges, the study proposes a Cohered Resilience Capability Model that integrates stakeholder engagement, collaborative governance, adaptive communication, and continuous organisational learning. The model aims to strengthen organisational resilience, improve service continuity, and enhance crisis responsiveness in small banks. The study also provides practical implications for improving resilience strategies within Ghana's rural banking sector.

Keywords: business resilience; rural banks; stakeholder engagement; adaptive communication; organisational learning; Ghana.

Digital Trust as a Relational Construct in SME Internationalisation under Weak Institutions: Evidence from Nigeria's ICT Cluster

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Abstract

Digital technologies have enabled SMEs to access global markets; however, most concepts of digital trust rely on assumptions from developed markets, which emphasise trust derived from technical security and institutional digital infrastructure. This conceptualisation limits insight into trust in digitally mediated cross-border exchange in markets with institutional voids; therefore, it misses how trust in this context is negotiated through personal ties, reciprocity, and informal arrangements. The Social Exchange Theory (SET) underpin this study, examining how SMEs in clusters build digital trust to support internationalisation in contexts characterised by institutional voids. The study uses a qualitative design, drawing on 25 in-depth interviews with SME internationalisation actors in Nigeria's top ICT cluster. Thematic analysis of interview data shows that although digital platforms serve as a medium to facilitate interaction, trust is not based on the platforms' technological attributes but is built through relational processes anchored in social exchange principles in situations of institutional void. The study makes two main contributions: First, it develops a novel SME internationalisation framework that frames digital trust as a relational concept moving beyond the prevailing focus on confidence in technical attributes. Second, it extends Social Exchange Theory to digitally mediated cross-border transactions in weak institutional settings, contributing to SME internationalisation and digital trust research in emerging markets. The findings and proposed SME internationalisation framework provide a mechanism for SME actors in weak regulatory environments to leverage interpersonal obligation, credibility, and exchange-based commitment to build digital trust, rather than relying solely on the technical features of digital platforms.

Keywords: digital trust; SME internationalisation; Social Exchange Theory; institutional voids; business clusters; Nigeria.

Surviving in Plain Sight: Constraint, Legitimacy, and Self-Formation Among Nigerian Migrant Women Entrepreneurs in the UK

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Abstract

Migrant and minority women entrepreneurs face conditions shaped by interlocking forces of gender, race, ethnicity, and migration status that interact in ways single-axis accounts cannot capture. Research has documented these conditions clearly; how they operate as ongoing processes, rather than fixed starting points for entrepreneurial journeys has received less sustained attention. This article examines that question through fifteen in-depth qualitative interviews with Nigerian migrant women running businesses in the United Kingdom. Drawing on a process-oriented intersectional framework, we trace how the practices through which these women sustain their businesses tend to reproduce the conditions they respond to rather than resolving them: exclusion from formal channels drives informal arrangements that constrain scale; constrained scale intensifies legitimacy demands in institutional encounters; and legitimacy work depletes the capacity available for development, shaping identity in ways that stabilise the conditions of constraint. The care economy emerges alongside this as a distinct pathway into entrepreneurship, complicating the assumption that migrant women enter self-employment primarily through labour market exclusion. Our analysis advances a process-oriented account of intersectionality in women's entrepreneurship, showing how intersecting disadvantages may be sustained through entrepreneurial practice rather than simply encountered within it, and extends the concept of inequality regimes to the everyday institutional encounters that shape migrant women's experience of running a business. The study has implications for women immigrant entrepreneurs of African origin who extend their business activities into African economies, where they may encounter and reproduce similar dynamics of constraint, legitimacy, and informal practice.

Keywords: migrant women entrepreneurs; intersectionality; legitimacy; informal practices; inequality regimes; United Kingdom.

Employee Health and Wellbeing Package Design: Insights from Cohered Emergent Theory and Commercial Banks in Nigeria

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Abstract

This paper employs Cohered Emergent Theory to examine how selected commercial banks in Nigeria can design adaptive health and wellbeing packages that respond to employees' evolving needs and enhance performance. Existing research on employee motivation in the banking sector largely prioritises organisational outcomes, with limited attention to employees' everyday expectations and intrinsic wellbeing needs. This gap is particularly significant in the Nigerian context, where prior studies highlight inadequate working conditions and insufficient welfare provisions, especially for newly recruited staff. Adopting an interpretive approach, the study utilises qualitative methods, including 25 semi-structured interviews with managers and employees across five commercial banks, complemented by document analysis. Data was analysed thematically within a framework derived from Cohered Emergent Theory. The study develops a Cohered Wellbeing Package (CoW-P) model to guide the systematic design and evaluation of employee wellbeing initiatives. The findings offer practical insights for managers seeking to design flexible and context-based wellbeing strategies that improve employee outcomes and organisational productivity. The paper contributes theoretically by advancing an emergent model of wellbeing design, and practically by informing HR strategy, policy development, and organisational resilience in emerging economies.

Keywords: employee wellbeing; commercial banks; human resource management; workplace health; organisational resilience; Nigeria.

Design and Production of Adinkra-Inspired Garments: Towards a Cultural Model of Green and Inclusive Industrialisation in Ghana

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Abstract

This study explores how Adinkra symbols can be re-interpreted in contemporary Ghanaian garment design to advance a culturally anchored, green and inclusive model of industrialisation. Using an interpretivist, studio-based qualitative methodology with eighty (80) participants in the Sekondi-Takoradi Metropolitan Area-comprising designers, textile shop owners and consumer-presenters-five Adinkra symbols (Akoko Nan, Dwennimmen, Akoben, Hye Won Hye and Wo Nsa Da Mu A) were translated into wearable silhouettes through a thirteen-stage studio process combining indigenous craft, locally sourced materials and computer-aided pattern making. Stakeholders enthusiastically endorsed the resulting garments as culturally meaningful, environmentally sustainable and commercially viable. The findings demonstrate that traditional symbolic design can simultaneously preserve cultural identity, empower local artisans and support Africa's green-transition agenda. The paper contributes a replicable studio protocol, extends diffusion-innovation theory to indigenous symbolic systems, and offers policy guidance on integrating heritage-led design into Africa's industrial strategy.

Keywords: Adinkra symbols; garment design; cultural heritage; sustainable fashion; inclusive industrialisation; Ghana.

Towards a New Paradigm for Business and Management Formation for Ghana in Africa?

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Abstract

This conceptual paper questions the assumption that a universally applicable model of management can adequately reflect the cultural, institutional and historical realities of all societies. Dominant approaches to management and Human Resource Development are frequently derived from Anglo-American traditions, despite the existence of culturally distinctive management paradigms associated with Japanese, European and Arab contexts. The paper examines whether African societies, particularly Ghana, can be meaningfully understood through these established paradigms or whether a distinct conceptual framework is required. It revisits the work of Ghanaian educationalist, diplomat and public servant Francis Ludovic Bartels Sr., with particular attention to the model of economic and societal development presented in *Journey out of the African Maze*. Through a critical review of Bartels' ideas, the paper explores their relevance to contemporary business, management formation and Human Resource Development in Ghana. It argues for closer engagement with African intellectual traditions when developing management theories, curricula and organisational practices. Rather than treating Western management concepts as culturally neutral, the paper invites scholars and practitioners to consider how indigenous values, historical experiences and societal priorities can inform contextually appropriate approaches to organisational development. The study contributes to debates on decolonising management knowledge and provides a foundation for articulating a Ghanaian perspective that may enrich wider African management scholarship and practice.

Keywords: African management; Francis Ludovic Bartels; Human Resource Development; indigenous knowledge; management education; Ghana.

Negotiating Power and Misalignments for Coherence in Curriculum Design Partnerships

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Abstract

University-industry curriculum collaborations encounter tensions arising from misaligned goals and unequal power relations, yet little is known about how these tensions are negotiated to achieve curriculum coherence. Although prior studies acknowledge these challenges, they offer limited explanation of how curriculum design stakeholders practically negotiate these conflicts during university-industry curriculum development to achieve coherence. This study responds to this gap by drawing on cohered emergent theory to design an integrative framework to explain how coherence emerges in collaborative curriculum design. We analyze data from 44 semi-structured interviews with university educators, industry practitioners, education policymakers, professional bodies, and alumni. We also complement this with five student focus group discussions made up of 30 students across five Ghanaian universities. Using an abductive approach, we identify how formal governance structures, emergent experiential knowledge and integrative mechanisms such as professional accreditation, boundary-spanning intermediaries, and participatory curriculum processes, interact to reconcile competing priorities and power asymmetries. The study contributes to the under studied teaching-focused university-industry collaboration by theorizing curriculum coherence as a learning condition shaped by negotiated authority and multi-actor governance. The study also extends cohered emergent theory to teaching-focused university-industry collaboration and offers a practical guide for policy and curriculum leadership in higher education.

Keywords: university–industry collaboration; curriculum coherence; collaborative curriculum design; multi-actor governance; higher education; Ghana.

Health and Medicine

Awareness and Knowledge of Elder Abuse and Neglect among Dental Practitioners in Southwestern England: A 2005 Baseline Survey

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Abstract

With global population ageing and more older adults retaining their natural dentition, elder abuse and neglect have become important public health concerns. Dentists are well positioned to identify signs of mistreatment. This study investigated dentists' awareness, knowledge, and attitudes regarding elder abuse and neglect within the Dorset and Somerset Strategic Health Authority (SHA). A cross-sectional postal survey was conducted in 2005 using a validated modified questionnaire adapted from Holtzman and Bomberg (1991). Questionnaires were distributed to General Dental Practitioners and Community Dental Officers (n=496). Data were analysed using descriptive statistics and chi-square tests. Of 485 valid questionnaires, 380 were returned (response rate: 78.4%). Most respondents were aware of elder abuse (84.7%) and elder neglect (78.1%), although few had encountered specific cases of abuse (8.4%) or neglect (11.9%). Dentists treating patients in residential and nursing homes were significantly more likely to encounter abuse or neglect ($p<0.001$). Female dentists were significantly more likely than males to report suspected cases ($p<0.05$). However, approximately 23% of practitioners who encountered suspected cases took no action. Although awareness of elder abuse among dentists was relatively high, clinical detection and intervention remained limited. These findings highlight longstanding barriers to safeguarding and support the need for updated national research to assess progress and strengthen training, policy, and clinical practice.

Keywords: Elder abuse; elder neglect; dental practitioners; safeguarding; older adults; England.

Compliance With International Asthma Management Guidelines in Low- And Middle-Income Countries: A Systematic Review Protocol

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Abstract

Low- and middle-income countries (LMICs) account for an estimated 96% of global asthma-related mortality despite evidence that compliance with international guidelines is associated with reduced exacerbations, hospitalisations, and asthma-related deaths. There is inconsistent adherence to international guidelines such as the Global Initiative for Asthma (GINA) strategy. This is driven by health system challenges such as weak medicine supply chains, limited workforce capacity, and fragmented primary care. Further, policy and governance factors influence misalignment of national treatment guidelines with international guidelines. Current evidence demonstrates improved guideline implementation in LMICs. However, empirical data is disparate. This systematic review protocol aims to systematically identify and synthesise barriers and facilitators to guideline-concordant asthma care in LMICs. The review supports policy-relevant action aligned with UN SDG 3.4: reducing premature NCD mortality; and 3.8: advancing universal health coverage. Following PRISMA guidelines, a comprehensive search will be undertaken in MEDLINE, Embase, CINAHL, Scopus, and WHO Global Index Medicus from 2015 to present date. Methodological quality will be assessed through CASP, JBI, and Cochrane tools. A structured narrative synthesis will be conducted with the identified facilitators and barriers to implementation of international guidelines. The findings will be mapped to WHO health systems building blocks framework to support systematic, policy-relevant interpretation.

This systematic review will generate policy-relevant and clinically actionable evidence on the pharmaceutical and health-system determinants of asthma guideline implementation in LMICs. Strengthening guideline-based asthma care will contribute directly to UN SDG-3 through improved access to essential respiratory medicines and services.

Keywords: asthma; clinical guidelines; implementation barriers; health systems; low- and middle-income countries; systematic review protocol.

Exploring the Mental Health Experiences of Black and Minority Ethnic (BME) Health and Care Students at Arden University: A Mixed-Methods Study

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Abstract

Mental health difficulties among university students are increasing globally. Black and Minority Ethnic (BME) students may face additional challenges, including cultural stigma, discrimination, financial pressures, language barriers, and difficulties accessing appropriate support services. However, their mental health experiences and support needs remain underexplored. To explore and quantify the mental health experiences, support needs, and service preferences of BME students in the Health and Care department at Arden University. A sequential mixed-methods design informed by Bronfenbrenner's Ecological Systems Theory will be used. Phase One will involve semi-structured interviews with 12–15 BME undergraduate and postgraduate students to explore academic, interpersonal, cultural, financial, and institutional influences on mental wellbeing. Data will be analysed using thematic analysis and mapped onto Bronfenbrenner's ecological systems model. Phase Two will involve a Discrete Choice Experiment (DCE) survey with 200 students to quantify preferences for different mental health support service characteristics. DCE attributes will be informed by qualitative findings and existing literature. The study is expected to identify key factors influencing mental health and the support service features most valued by BME students. Findings will inform the development of culturally responsive, student-centred mental health services and contribute to reducing mental health inequalities in higher education.

Keywords: BME students, student mental health, higher education, mixed methods, Bronfenbrenner's Ecological Systems Theory, Discrete Choice Experiment.

The USAID Shutdown: A Humanitarian Crisis but a Catalyst for Health Sovereignty in Africa

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Abstract

The 2025 suspension of health financing by the United States Agency for International Development (USAID) disrupted core programmes across multiple African countries and exposed structural vulnerabilities within national health systems. In many settings, external assistance financed recurrent operations including workforce compensation, family planning, maternal and child health services, infectious diseases (TB, HIV, malaria), and community-based delivery networks. The withdrawal of this funding triggered disruptions extended beyond individual projects to core system operations. However, the scale and severity of these disruptions varied across countries, suggesting that vulnerability is shaped not only by the volume of aid received but also by the institutional arrangements through which health systems are governed. This study proposes a structural framework for understanding health sovereignty in national health systems. Drawing on comparative evidence from countries affected by the financing shock, we conceptualize sovereignty as the capacity of governments to retain effective authority across three interdependent domains: fiscal authority over resource mobilization and allocation; operational ownership of service delivery infrastructure; and coordination capacity to align financing with governance framework. Health systems become more sovereign when these domains are progressively consolidated within domestic institutions. Reframing sovereignty as a question of institutional authority shifts policy attention from short-term donor substitution toward long-term consolidation of financing, delivery, and governance arrangements within national systems. As global development financing becomes increasingly uncertain, strengthening these structural domains will be critical for sustaining the provision of essential health services in Africa.

Keywords: Health sovereignty; USAID; health financing; health systems; donor dependency; Africa.

Towards Green, Low-Resource Diagnostic Technologies for Critical Care: A Four- Electrode Biosensor for Antibiotic Monitoring in Human Serum

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Abstract

Rapid and reliable therapeutic drug monitoring (TDM) is essential for critically ill patients, yet many health systems particularly in low-resource settings lack access to laboratory-intensive methods for quantifying antibiotics. This work presents a sustainable, low-resource electrochemical biosensor designed to measure meropenem concentrations in human serum, supporting precision dosing and improved antimicrobial stewardship in intensive care environments. For the first time, a four-electrode gold microband biosensor was developed and functionalised with a self-assembled monolayer, protein G, and monoclonal anti-meropenem antibodies to enable selective, label-free detection. This configuration reduces reagent consumption, and analytical complexity, aligning with the principles of green diagnostic technology. Electrochemical impedance spectroscopy was used to characterise sensor performance. The biosensor enabled sensitive detection of meropenem in spiked human serum over a concentration range of 1–100 µg/mL. Its validated working range was 2–16 µg/mL, which aligns with clinically relevant therapeutic concentrations. These results highlight the potential of electrochemical biosensing as an environmentally efficient and scalable alternative to conventional TDM approaches, reducing reliance on high-cost laboratory infrastructure. By integrating sustainability, affordability, and clinical utility, this biosensor contributes to the broader agenda of green transitions and inclusive industrialisation. It offers a pathway toward locally manufacturable diagnostic technologies that strengthen health-system resilience, enhance antimicrobial stewardship, and expand access to precision medicine for critically ill patients.

Keywords: meropenem; therapeutic drug monitoring; electrochemical biosensor; antimicrobial stewardship; precision medicine; sustainable diagnostics.

Flavone-Mediated Selective Inhibition of Acute Myeloid Leukaemia Cells *in vitro*: Preliminary Findings Toward Low-Carbon, Plant-Based Oncology Research

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Abstract:

Acute myeloid leukaemia (AML) contributes 20% of leukaemia cases in Africa. Environmental exposures, previous cytotoxic treatments, and inherited predispositions contribute to AML development. Conventional chemotherapy agents such as doxorubicin (Dox) cause significant toxicity, highlighting the need for safer and more sustainable therapy. With medicinal plants forming a culturally embedded and abundant source of bioactive compounds, plant-derived flavones provide promising alternatives aligned with Africa's ambitions for greener, more inclusive biomedical innovation. This study investigated the half-maximal inhibitory concentrations (IC₅₀) of selected flavones alongside Dox, and explored their effects on AML and non-cancerous cells. The study assessed cytotoxicity and proliferation by treating cell lines with flavones or Dox, followed by CyQuantGR assays and flow-cytometric analysis using CFSE staining. Cytotoxicity assays demonstrated dose-dependent responses to Dox, with MOLM-13 cells showing greater sensitivity and U937 greater resistance compared with non-cancerous models. Flavones exhibited higher cytotoxicity towards AML cells, particularly MOLM-13. Baicalein showed notable selectivity, being significantly more cytotoxic in AML lines than in non-cancerous cells, and significantly prolonged doubling time in both AML models. These findings indicated that flavones possess selective anti-leukaemic activity and may serve as environmentally sustainable, plant-derived adjuvants. Researching plant-derived compounds supports green transitions by enabling low-carbon, locally grounded production that could be further enhanced by advances in metabolic engineering and machine-learning-based discovery. Future work will apply computational approaches to identify additional flavonoids capable of modulating key signalling pathways in myeloid leukaemia.

Keywords: Acute myeloid leukaemia; flavones; baicalein; doxorubicin; cytotoxicity; plant-derived compounds.

When the Project Ends: Community Ownership, Institutional Vulnerability, and the Sustainability of Pro-Poor Tree Plantation Projects in Ghana

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Abstract

Community tree plantations can support climate resilience, ecological restoration and rural livelihoods, yet many deteriorate after external project support ends. This study investigates why some community-managed plantations survive after handover while others collapse, focusing on cashew plantation projects in Ghana's Sene East District. Integrating Community-Based Natural Resource Management with the Social-Ecological Systems framework, the study employed a convergent mixed-methods design. Qualitative data were collected through 20 semi-structured interviews with district officials, community leaders and residents, while quantitative data were obtained from a household survey of 303 respondents. Interview data were analysed thematically, and survey data were examined using chi-square tests and Cramér's V effect sizes. The findings identify a structural "sustainability gap" between the end of the three-year project cycle and the emergence of commercially viable cashew yields, which typically requires approximately five years. During this period, poor communities assume full maintenance responsibilities without plantation income. Although the programme generated substantial livelihood benefits and established participatory governance arrangements, resource constraints, informal handover procedures, weak bylaw enforcement and bushfire exposure undermined post-handover sustainability. Successful sites were distinguished by continuous local leadership, functional management committees, communal labour and adaptive practices such as intercropping and firebelt maintenance. The study demonstrates that community participation and ownership are necessary but insufficient without resources to bridge the post-handover period. It recommends graduated handovers, extended maintenance support, stronger fire governance, broader training and income-generating intercropping.

Keywords: Community tree plantations; sustainability gap; community-based natural resource management; social-ecological systems; rural livelihoods; Ghana.

Building a Community of Practice for Dementia Care in Ghana: Insights from a Participatory Research Dissemination and Solution Design Workshop

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Abstract

Knowledge confined within silos has limited utility to influence policy. To bridge the gap between evidence and action, a participatory co-creation workshop was convened involving patients, family caregivers, healthcare professionals, policy actors, faith-based leaders, and community advocates in dialogue, reflection, and solution design. This study aims to determine whether stakeholders' knowledge and attitudes of dementia improved following the workshop. Data were drawn from a participatory research dissemination and co-creation workshop held in Kumasi, Ghana. A non-parametric Wilcoxon signed-rank test was used as primary tool for the pre-post-test. A reflexive thematic analysis was implemented for the qualitative data. Participants reported feeling significantly more informed about dementia prevalence in Ghana ($Z=2.510$, $p=0.012$), challenges faced by family caregivers ($Z=3.030$, $p=0.002$), and caregiver coping strategies ($Z=3.247$, $p=0.001$). Understanding of socioeconomic ($Z=2.525$, $p=0.012$) and gender-related ($Z=2.569$, $p=0.010$) influences on dementia risk and caregiving improved. Attitudinally, participants expressed stronger agreement that family caregivers deserve more support ($Z=2.828$, $p=0.005$), dementia care should be a higher health system priority ($Z=2.445$, $p=0.014$), and faith-based organisations have an important role ($Z=2.001$, $p=0.045$). Proposed solutions included policy advocacy, systems thinking, community- and home-based care, collaborative networks, caregiver support programmes, stigma reduction, cultural reorientation, and involvement of religious leaders. There is need to formalise and resource a community of practice for sustained collaboration, collective action, and structured knowledge exchange, whilst simultaneously piloting a caregiver support programme and home-care model with rigorous monitoring and evaluation. Policymakers should enact comprehensive dementia care policy to guide/regulate stakeholders in the dementia care continuum.

Keywords: dementia; knowledge co-creation; family caregivers; participatory research; community-based care; Ghana.

Selenium Biofortification of *Amaranthus Tricolor* L. Through Agronomic Application: A Food-Based Strategy to Address Global Selenium Deficiency

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Abstract

Selenium (Se) deficiency is a global nutritional concern, affecting approximately 14% of the world's population and more than 230 million people in Africa. As plant-based foods are the main dietary source of selenium, agronomic biofortification has emerged as a sustainable strategy to improve selenium intake. This study evaluated the effects of foliar application of sodium selenite on photosynthetic pigments in *Amaranthus tricolor* L. Sodium selenite was applied at concentrations of 0, 10, 20, 40, 80 and 160 mg/L under field conditions. Chlorophyll a, chlorophyll b, and total carotenoid contents were determined using spectrophotometric methods. The results showed a concentration-dependent response. Treatments with 10, 20, and 40 mg/L sodium selenite increased chlorophyll and carotenoid contents compared with the control, suggesting a positive effect on photosynthetic pigment accumulation at lower sodium selenite concentrations. In contrast, the highest concentration (160 mg/L) reduced photosynthetic pigment contents, suggesting an inhibitory effect at elevated selenium levels. These findings suggest that appropriate selenium application may promote photosynthetic pigment accumulation, while excessive concentrations can negatively affect plant physiology. Agronomic selenium biofortification of *Amaranthus tricolor* L. represents a practical and sustainable approach to help address selenium deficiency, particularly in regions with limited dietary diversity.

Keywords: selenium biofortification; *Amaranthus tricolor* L.; sodium selenite; foliar application; photosynthetic pigments; micronutrient deficiency.

Exploring Consumer Awareness, Usage, And Demand Drivers of Plant-Based Milk in The Accra Metropolis

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Abstract

The global shift toward plant-based diets has intensified interest in plant-based milk (PBM) alternatives; however, consumer awareness and adoption patterns in sub-Saharan African urban contexts remain poorly understood. This study investigated consumer awareness, usage patterns, and demand drivers for plant-based milk, specifically coconut, millet, and soy milk, in the Accra Metropolis of Ghana. Grounded in the Theory of Planned Behavior, the Health Belief Model, and Social Cognitive Theory, the study employed a descriptive cross-sectional survey design. Data were collected from a sample of 357 respondents drawn from the resident population of Accra using convenience sampling. Findings revealed a moderate to high level of awareness of plant-based milk, particularly regarding its environmental benefits (mean=7.03) and positive emotional associations (mean=6.30). Despite this awareness, actual usage remained low, constrained by deeply entrenched dairy consumption habits, limited retail availability, and cost barriers. Price sensitivity emerged as a critical demand barrier, with respondents citing plant-based milk as "too expensive" (mean=4.43), alongside psychological resistance to novel food products (mean=4.37). Health conditions including lactose intolerance, food allergies, and diabetes were identified as primary necessity-driven demand factors, rather than voluntary lifestyle choices. The study concludes that while environmental and health consciousness is rising among Accra consumers, broader adoption requires coordinated public health education, regulatory standardization, and policies that support local PBM production to reduce retail costs. These findings contribute empirical evidence to the literature on sustainable food systems in Ghana and offer actionable strategies for promoting indigenous plant-based milk adoption in urban West Africa.

Keywords: Plant-based milk; consumer awareness; demand drivers; sustainable food systems; consumer behaviour; Ghana.

Weaving the Net: The Interplay of Micro- and Macro-Support in ART Adherence in Ghana

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Abstract

Sustained adherence to antiretroviral therapy (ART) is essential to HIV control and patient well-being, yet it remains difficult in resource-limited settings. This study examines ART adherence as a socially supported practice shaped by two interacting systems: micro-support (informal help from spouses, relatives, friends, and close networks) and macro-support (formal support from clinics, peer groups, counsellors, and health services). It explores how people living with HIV in Ghana experience, compare, and combine these systems in everyday treatment journeys. A qualitative descriptive design was used at Cape Coast Teaching Hospital, Ghana. Data were collected from June to September 2025 through semi-structured in-depth interviews and one focus group discussion with 21 purposively selected adults who had been on ART for at least six months. Data were analysed thematically using NVivo. Participants described adherence as dependent on a dynamic balance between micro- and macro-support. Micro-support served as an immediate safety net through financial assistance, reminders, encouragement, and discreet daily care. Macro-support provided broader institutional backing through clinic services and peer engagement but was sometimes weakened by long waiting times, inconsistent service delivery, and limited responsiveness. The findings show that adherence is not sustained by medicine alone but by interconnected social and institutional support. The study contributes to HIV and public health discourse by highlighting the need for hybrid, patient-centred adherence models that formally recognise household and peer support while strengthening the responsiveness, reliability, and equity of clinic-based systems.

Keywords: Antiretroviral therapy; treatment adherence; social support; patient-centred care; people living with HIV; Ghana.

Green Transitions in Rural Healthcare Systems: Assessing the Implementation and Sustainability of Environmental Health Practices in Ghana's Amansie West District

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Abstract

The growing emphasis on green transitions has highlighted the need for environmentally sustainable practices within healthcare systems, particularly in low- and middle-income countries where resource constraints limit large-scale interventions. In Ghana, while policy frameworks acknowledge the importance of sustainable healthcare, there is limited empirical evidence on how such practices are implemented at the sub-national level. This study examines the implementation and sustainability of green health practices in healthcare facilities within the Amansie West District. A quantitative cross-sectional survey was conducted among 160 healthcare professionals using a structured questionnaire. Data were analyzed using descriptive statistics to assess levels of awareness, implementation, and institutional support for green practices. The findings reveal that while basic practices such as waste segregation, staff training, and public awareness initiatives are moderately adopted, more advanced interventions—such as renewable energy use—remain limited. Key barriers include inadequate funding, weak infrastructure, low staff capacity, and poor policy enforcement. Despite these constraints, respondents identified practical, low-cost strategies, including staff training and stakeholder partnerships, as viable pathways for improving sustainability. The study contributes to ongoing discourse on green transitions in African healthcare systems by providing district-level evidence and highlighting the importance of context-specific, incremental approaches to achieving sustainable healthcare delivery.

Keywords: Green healthcare; sustainable healthcare; healthcare professionals; environmental practices; healthcare facilities; Ghana.

Green Transitions and Inclusive Industrialisation in Africa: Theory to Policy and Practice- Local Innovation and Community Resilience

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Abstract

Africa and for that matter Ghana stands at a critical juncture in its development trajectory. The continent faces the dual challenge of industrialising to meet the needs of a growing population while simultaneously addressing the climate crisis. Green transitions—shifts toward renewable energy, sustainable production, and circular economies—offer opportunities to reimagine industrialisation in ways that are inclusive, equitable, and resilient. Yet, the success of these transitions depends not only on policy frameworks but also on the capacity of local communities to innovate and adapt. This paper explores the theoretical underpinnings of green transitions, reviews policy approaches to inclusive industrialisation in Ghana and Africa, and highlights the role of local innovation and community resilience in bridging the gap between theory and practice. Green transitions are often framed within ecological modernization theory, which posits that environmental sustainability can be achieved through technological innovation and institutional reform. This perspective emphasizes the compatibility of economic growth and ecological protection, suggesting that industrialisation can be reoriented toward low-carbon pathways. Complementary to this is the inclusive growth paradigm, which stresses that industrialisation must generate broad-based benefits, reducing inequality and fostering social justice. The gap between policy and practice is often wide. Implementation challenges include limited financing, inadequate infrastructure, and political instability. Yet, local innovation offers pathways to bridge this gap: Decentralized Energy Solutions: Cooperative Manufacturing: Grassroots Recycling Enterprises: Digital Innovation.

Keywords: Local innovation; community resilience; green transition; inclusive industrialisation; sustainable development; Ghana.

Human Papillomavirus Infection: Factors Influencing Uptake of Screening by Commercial Sex Workers in Two Municipalities of Ghana

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Abstract

Human Papilloma Virus (HPV) is associated with several important cancers. Persistent infection with high-risk HPV types poses major risk for cervical cancer. Cervical cancer is more common among females with multiple sex partners and commercial sex workers (CSWs) are a major at-risk group. Screening allows pre-cancerous lesions to be identified at stages they can be treated and cancer prevented. This study employed an explanatory-exploratory design. Convenient sampling method was used in sampling the participants. Quantitative and qualitative data were collected using pretested semi-structured questionnaires and in-depth interview guides respectively. Quantitatively, data collected was analyzed using STATA version 17. Qualitatively, all recorded interviews were transcribed into a Word document from which thematic analysis was done deductively and inductively using ATLAS.ti. v9. It was found that 96.7% of CSWs have never received HPV screening. The results revealed that 58.3% of CSWs do not have any knowledge of HPV infection. It was noted that individual-level factors such as lack of knowledge about the screening and fear of pain serve as barriers to HPV screening services among CSWs. Also, social factors including, lack of cues to action, and Stigma (Stereotyping) by the community members hinder CSWs' willingness to seek HPV screening. Distance to health facility and the non-availability of HPV Screening Services are the major health system-related factors to HPV screening uptake among CSWs. Knowledge and uptake of HPV screening among CSWs were poor. Innovative interventions are urgently needed to promote HPV screening among CSWs and increase service uptake.

Keywords: human papillomavirus; cervical cancer; HPV screening; commercial sex workers; screening barriers; preventive healthcare.

Primary Healthcare Efficiency, Climate Change, and Progress Toward SDG 3 Targets: Evidence from Sub-Saharan Africa

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Abstract

This study investigates how climate change and socio-economic factors affect primary healthcare (PHC) efficiency in achieving Sustainable Development Goal (SDG) 3 targets—maternal mortality (SDG 3.1), neonatal and under-five mortality (SDG 3.2), and universal health coverage (SDG 3.8)—across 31 sub-Saharan African countries from 2016 to 2019. Although PHC-oriented systems are central to SDG 3 attainment, efficiency levels and vulnerability to environmental pressures remain poorly understood. Panel data are analyzed using PHC inputs comprising per capita primary healthcare spending and the density of medical assistants and community health workers per 10,000 population. Outputs are measured using SDG distance-to-target indicators. An output-oriented Data Envelopment Analysis under variable returns to scale is employed, with bootstrap procedures used to obtain bias-corrected efficiency scores. A Simar–Wilson bootstrap truncated regression examines the effects of carbon emissions, education, governance quality, electricity access, urbanization, and government health expenditure. Productivity dynamics are assessed using the Malmquist Productivity Index. The average bias-corrected PHC efficiency score is 0.7648, suggesting that SDG 3 outcomes could improve by about 23.5 percent using existing resources. Education, governance quality, electricity access, and government health expenditure positively influence efficiency, while carbon emissions have a significant negative effect. Productivity growth during the period is modest and mainly driven by technological progress, with stronger gains observed in low- and lower-middle-income countries. The findings highlight the importance of climate-resilient PHC systems supported by strong institutions and human capital development to accelerate progress toward SDG 3 in sub-Saharan Africa.

Keywords: primary healthcare efficiency; Data Envelopment Analysis; climate change; Sustainable Development Goal 3; health systems; sub-Saharan Africa.

Industry & Practitioners Workshop

Bridging Local Demand and Global Supply: Informal Trade, Digital Access, and SME-Led Development in Ghana's Mobile Accessories Market

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Abstract

This paper examines the role of small-scale trading enterprises in supporting inclusive economic development and digital access in Ghana, focusing on the mobile phone accessories market in Accra. Positioned within broader debates on inclusive industrialisation and Africa's digital transformation, it explores how informal and semi-formal businesses bridge the gap between global supply chains and local consumer demand. Drawing on practice-based insights from a sole proprietorship engaged in the wholesale and retail of mobile phone accessories, the study adopts a qualitative, experience-led approach. It highlights how direct sourcing from manufacturers in China enables competitive pricing, quality control, and responsiveness to technological trends, thereby improving product accessibility for consumers and supporting downstream retailers across regions including Accra and Kumasi. These activities contribute not only to market efficiency but also to employment creation and the expansion of Ghana's digital ecosystem, as affordable accessories enhance the ability of individuals to communicate, learn, and participate in digital work. The paper further considers how knowledge of public administration informs business operations, particularly in relation to import procedures, regulatory compliance, taxation, and customer relations. It argues that SME-led trading activities play a critical yet under-recognised role in linking local economies to global markets while supporting digital inclusion.

Keywords: small and medium-sized enterprises; informal trade; mobile accessories; digital inclusion; global supply chains; Ghana.

Driving Impact in Developing Economies: Five Pillars of the Green Industry Revolution: Evidence from the Jospong Group of Companies, Ghana

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Abstract

Developing economies must expand industrial capacity to create jobs, improve urban services, and deepen domestic value addition, while simultaneously reducing environmental degradation and meeting rising sustainability standards. However, green industry literature focuses mainly on national policy or single technologies, offering limited guidance for how diversified private firms can operationalise green industrialisation as an integrated business model. This article develops a five-pillar framework for the Green Industry Revolution and applies it to Ghana's Jospong Group of Companies (JGC) through a qualitative case study. Drawing on systems theory, circular economy thinking, socio-technical transitions theory, and the resource-based view of the firm, the study examines how JGC's cluster-based structure enables: (1) resource efficiency innovation (including methane avoidance through circularity and composting); (2) climate-resilient infrastructure and services; (3) local industrial capacity building and technology transfer; (4) collaborative partnerships and ecosystem building; and (5) sustainable leadership (governance, operational safety, and transparency). Evidence is synthesised from public corporate disclosures, policy and carbon-market documents, development partner reports, and peer-reviewed academic literature. The analysis shows that JGC's strategic value lies less in isolated projects than in cross-cluster integration, linking waste management to manufacturing, agriculture, infrastructure, digital systems, finance, and workforce development. The article argues that diversified firms in developing economies can function as transition platforms when they combine operational scale, local capability, partnership networks, and credible governance. It therefore offers a practical framework for analysing enterprise-led green industrialisation and contributes lessons for policy design, climate finance mobilisation, and SDG implementation in African cities and other emerging markets.

Keywords: Green industrialisation; diversified firms; circular economy; transition platforms; climate finance; Ghana.

Assessing Informal Sector Perception of Pension Schemes in Ghana: Exploring Pathways for Integration

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Abstract

The informal sector represents a significant share of Ghana's workforce, yet participation in formal pension schemes such as the Social Security and National Insurance Trust (SSNIT) remains low. This study examines the perceptions of informal sector workers toward pension schemes, identifies barriers to participation, and explores pathways for improved integration. A mixed-methods approach was employed, combining 1,600 questionnaires administered across all 16 regions of Ghana with 80 semi-structured interviews. Findings reveal that although awareness of pension schemes has increased, participation is constrained by irregular income patterns, limited financial literacy, and institutional distrust. Many respondents perceive existing pension schemes as inflexible and poorly aligned with the economic realities of informal work. Additionally, concerns regarding transparency and returns on contributions further discourage enrolment. The study highlights the need for tailored policy interventions to enhance inclusion. Recommended strategies include flexible contribution systems, improved public education, and the adoption of digital platforms to facilitate contributions. Strengthening trust through transparency and accountability is also critical. The findings contribute to ongoing policy discussions on expanding pension coverage and ensuring social protection for Ghana's predominantly informal workforce.

Keywords: informal sector; pension schemes; social protection; financial literacy; institutional trust; Ghana.

Green Transitions and Inclusive Industrialisation in Africa: A Case Study of La Dade Kotopon Municipal Assembly in Ghana

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Abstract

Africa's pursuit of industrial transformation must increasingly align with environmental sustainability and social inclusion. While green industrialization is widely discussed at national and continental levels, limited attention has been given to its implementation within decentralized municipal systems. This study examines how green transitions can promote inclusive industrialization at the local level, using La Dade Kotopon Municipal Assembly (LaDMA) in Ghana as a case study. Grounded in green growth, inclusive development, and structural transformation theories, the research adopts a mixed-methods case study approach, combining interviews, focus groups, enterprise surveys, and policy analysis. It investigates institutional capacity, governance coordination, financing mechanisms, and the environmental footprint of local industries, while assessing whether green initiatives generate inclusive outcomes for women, youth, and small and medium enterprises. The study contributes empirical evidence on subnational green industrial policy implementation and offers policy-relevant insights for advancing climate-resilient and inclusive local economic development in Ghana and across Africa.

Keywords: Green transition; inclusive industrialisation; municipal governance; local economic development; climate resilience; Ghana.

Biodegradable Packaging Adoption in the Restaurant Industry: Evidence from Accra, Ghana

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Abstract

This study documents the intention-implementation gap in the adoption of sustainable packaging among formally registered restaurants in urban Accra, Ghana, where environmental support (86.7%) vastly exceeds actual implementation (30.3%). Supply chain constraints and the automatic provision of conventional materials represent primary structural barriers beyond individual establishment control. The concentration of biodegradable adoption in specific applications (paper packaging) demonstrates feasibility when functional requirements align with material capabilities. The findings suggest that promoting sustainable packaging transitions needs coordinated supply chain interventions and economic support mechanisms. Policy success depends on addressing practical implementation barriers simultaneously while recognising the unique and developing market constraints. Findings apply specifically to formal restaurant operations and require validation across informal food vendors, which comprise the majority of Ghana's food service sector.

Keywords: Sustainable packaging; restaurants; intention-implementation gap; supply-chain constraints; biodegradable materials; Ghana.

Economics, Finance and Accounting

Bank-Level Uncertainty and Capital Adequacy: Evidence from ASEAN Commercial Banks

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Abstract

This study examines the impact of bank-level uncertainty on capital adequacy and stability among commercial banks in five key ASEAN economies: Malaysia, Singapore, Indonesia, the Philippines, and Thailand. Analysing 882 annual observations from 2009 to 2022, we uncover compelling evidence that heightened bank-specific uncertainty significantly undermines regional banking stability. Liquidity constraints, elevated loan ratios, reduced efficiency, and political instability further exacerbate this decline. These findings are robust across alternative measures of uncertainty, and they remain unaffected by variations in regional economic cycles. Notably, bank uncertainty alone accounts for a striking 60% reduction in regional stability levels. While financial constraints further erode the level of capital adequacy across the ASEAN economies, the interaction with uncertainty surprisingly exerts a stabilising influence, suggesting a complex dynamic. Overall, our results highlight that both bank-level uncertainty and financial constraints pose serious risks to the success of regional banking integration and its associated economic benefits.

Keywords: bank-level uncertainty; capital adequacy; banking stability; financial constraints; regional financial integration; ASEAN.

Strengthening Internal Audit Systems for Green Transitions and Sustainable Regional Development in Ghana: The Role of Public sector Auditing at the Ahafo Regional Coordinating Council

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Abstract

Africa's pursuit of inclusive industrialisation and green transitions requires strong public policies, effective development planning and sound public financial management systems that promote accountability, transparency and value for money. In Ghana, Regional Coordinating Councils play an important role in coordinating, monitoring and supporting the regional and district-level implementation of national development policies. Within these institutions, internal auditing can help ensure that financial controls are followed, public resources are used efficiently and development programmes achieve their intended outcomes. This practitioner-informed paper examines how internal auditing can support green transitions and sustainable regional development, drawing on professional experience within the Ahafo Regional Coordinating Council. The region's development priorities—including infrastructure, agriculture, local economic development, environmental protection and social-service delivery—require effective management of public expenditure and climate-conscious investment. Weak internal controls, inadequate risk assessment, poor procurement practices and ineffective monitoring can undermine project implementation and diminish public trust. The paper argues that internal auditors should be understood not merely as financial compliance officers but as strategic institutional actors who can identify implementation risks, prevent waste, strengthen procurement oversight and improve accountability for sustainable-development expenditure. It highlights the importance of integrating environmental and social considerations into audit planning, risk assessment and performance monitoring. The paper offers practical insights for strengthening public-sector governance and improving the implementation of inclusive and environmentally responsible development initiatives in Ghana.

Keywords: Internal auditing; public financial management; green transition; regional development; institutional accountability; Ghana.

Environmental, Social and Governance (ESG) Reporting and Financial Sustainability of Rural and Community Banks in Ghana

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Abstract

Financial institutions are being forced to include Environmental, Social, and Governance (ESG) factors into their operating and reporting systems as a result of the global financial sector's transformation due to the growing need for sustainable financing and responsible corporate governance. Rural and Community Banks (RCBs) continue to play a vital role in Ghana's financial inclusion, local economic growth, agricultural financing, and assistance for small enterprises in marginalized areas. However, despite their developmental importance, many RCBs face growing challenges relating to financial sustainability, governance inefficiencies, climate-related risks, and weak sustainability reporting structures. Calls for financial firms to implement sustainability reporting procedures that conform to international environmental and governance standards have grown in recent years from regulators and stakeholders. Large commercial banks in Ghana have progressively adopted ESG reporting standards, but rural and community banks have received less attention, especially when it comes to how ESG reporting practices affect their institutional resilience and financial sustainability. This study examines the effect of ESG reporting practices on the financial sustainability of Rural and Community Banks in Ghana. Specifically, the study explores how environmental accountability, social responsibility initiatives, and governance disclosure practices contribute to profitability, customer trust, operational efficiency, and long-term institutional growth. The research is particularly relevant within the context of Africa's green transition agenda and Ghana's efforts toward inclusive and sustainable financial sector development.

Keywords: ESG Reporting; Financial Sustainability; Rural and Community Banks; financial sector development

Sustainability Reporting under IFRS S1 and S2 in Ghana: A Catalyst for Green Transitions and Inclusive Industrialisation

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Abstract

Africa's pursuit of green transitions and inclusive industrialisation increasingly depends on access to green finance and sustainability disclosures. In this context, the International Sustainability Standards Board's IFRS S1 and IFRS S2 have emerged as a global baseline for sustainability and climate reporting. Ghana's adoption of these standards in 2024 positions the country as a frontrunner, yet their implications for inclusive industrial development remain under-examined. This study examines how accounting and disclosure challenges shape the translation of green industrialisation ambitions into practice in Ghana. Using a qualitative exploratory design, we combine a systematic review of national policy documents with 18 semi-structured interviews conducted between July and October 2025 with chartered accountants, sustainability practitioners, and regulators. Reflexive thematic analysis reveals four interrelated constraints: persistent sustainability data deficiencies, acute professional capacity shortages, disproportionate compliance burdens linked to weak institutional frameworks, and widening sectoral and inclusivity divides between formal and informal actors. While IFRS S1 and S2 can enhance investor confidence and mobilise green finance, our findings suggest that, without context-sensitive implementation, they may reinforce inequalities in access to green finance.

Keywords: ESG reporting; financial sustainability; Rural and Community Banks; sustainable finance; institutional resilience; Ghana.

Money Talks, Green Walks: Does Financial Inclusion Promote Green Sustainability in Africa?

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Abstract

This study explores the dynamic relationship between financial inclusion and green sustainability across 38 African countries. We construct an environmental pollution index and a financial inclusion index covering the period 2000–2021 to account for the several dimensions within both indicators and employ them in the System GMM approach. We also test for intra-regional heterogeneity in Africa. Our empirical results show that financial inclusion, while economically beneficial, poses a significant risk of environmental degradation and has a distinctive inverted U-shaped relationship. A direct link between increases in financial inclusion and pollution alters at a turning point, beyond which further increases in financial inclusion enhance green sustainability. The same pattern is observed for aggregate output. The results hold even when we control for a score of macro-level determinants. Our analysis highlights intra-regional heterogeneity, revealing differences in impact across income levels and regional groups within Sub-Saharan Africa. These results remain robust for alternative proxies of green sustainability. We offer valuable insights for policymakers to promote sustainability through inclusive financial practices and policies in Sub-Saharan Africa.

Keywords: financial inclusion; green sustainability; environmental pollution; system GMM; financial development; Africa.

Smart Cities and Sustainable Housing in Africa: Opportunities and Challenges

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Abstract

Smart cities are transforming urban development worldwide by leveraging digital technologies, data, and connected infrastructure to improve planning, service delivery, and sustainability. The paper aims to critically examine how smart city approaches can support sustainable housing development in Africa by identifying the main opportunities and challenges affecting affordability, resilience, and environmental performance. A mixed methods approach is adopted to provide a holistic analysis of opportunities and challenges of smart cities and sustainable housing in Africa. Data from reputable institutions such as the World Bank, IMF, AfDB, UN and Afrobarometer provide insights into economic indicators, development trends, and public perceptions. The study contributes to the literature by bringing together smart city and sustainable housing debates within an African context, where rapid urbanisation, infrastructure gaps, and climate vulnerability create distinct planning conditions. It also adds value by highlighting that smart housing must be assessed not only in terms of technology, but also through affordability, inclusion, governance, and local implementation capacity. The study concludes that smart approaches can improve efficiency, resilience, planning, and service delivery, but only when adapted to local contexts.

Keywords: Smart cities; sustainable housing; urban development; housing affordability; climate resilience; Africa.

Corporate Social Responsibility as a Lever for Green Transitions in Ghana's Petroleum Industry: Towards Inclusive Industrialisation

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Abstract

As Africa advances its green transition agenda within the African Continental Free Trade Area framework, Ghana's petroleum industry faces the dual challenge of decarbonizing operations while fostering inclusive industrialisation. This paper examines how corporate social responsibility (CSR) can move beyond traditional philanthropy to become a strategic lever for supporting low-carbon development and equitable growth in Ghana's oil and gas sector. Drawing on stakeholder theory and the just transition framework, the study employs qualitative analysis of policy documents, CSR reports, and stakeholder perspectives from regulators, communities, and civil society in Ghana's Western Region. Findings show that current CSR practices remain largely fragmented, with limited alignment to national climate commitments and minimal participation of local communities and SMEs in transition planning. The paper argues that redesigning stakeholder engagement to enable co-creation of green projects, coupled with policy reforms that link CSR incentives to sustainability outcomes, can strengthen local value chains, skills development, and social equity. It concludes that integrating CSR into Ghana's National Energy Transition Framework is essential for ensuring that the shift to a low-carbon economy does not exacerbate existing inequalities. The study offers practical recommendations for policymakers and industry actors seeking to align corporate practice with Africa's sustainable industrialisation goals.

Keywords: Corporate social responsibility; just transition; oil and gas industry; stakeholder engagement; inclusive industrialisation; Ghana.

CEO Religiosity, Audit Committee Attributes and Eco-Innovation Adoption: Evidence from Ghanaian Listed Firms

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Abstract

This study examines the relationship between chief executive officer (CEO) religiosity, audit committee attributes and eco-innovation among firms listed on the Ghana Stock Exchange. Drawing on Social Interaction Theory and Institutional Theory, it investigates how executives' religious values and corporate governance structures may shape environmental decision-making and oversight within an emerging-market economy. The study has three objectives. First, it assesses the direct relationship between CEO religiosity and corporate eco-innovation. Second, it examines whether audit committee attributes mediate the relationship between CEO religiosity and eco-innovation. Third, it investigates whether these attributes moderate the strength or direction of this relationship. A quantitative longitudinal design will be adopted using panel data from Ghanaian listed firms covering 2015–2025. Secondary data will be obtained from annual reports, integrated and sustainability reports, Ghana Stock Exchange records and relevant international financial databases. The proposed relationships will be analysed using dynamic panel regression, the generalised method of moments, instrumental-variable approaches and fixed-effects models with clustered standard errors. The study is expected to contribute to corporate governance and eco-innovation research by connecting executive values with board-level oversight and environmental innovation in an underexamined African context. Its findings may also inform shareholders, regulators and nomination committees about how leadership characteristics and audit committee structures relate to corporate environmental strategies.

Keywords: CEO religiosity; audit committee attributes; eco-innovation; corporate governance; listed firms; Ghana.

Public Service Delivery and Tax Compliance Behaviour in Ghana: The Mediating Role of Trust in Government

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Abstract

This study investigates how public service delivery influences tax compliance behaviour in Ghana and examines the mediating role of trust in government in this relationship. The study is informed by the persistent challenges of inefficient public service delivery, low institutional trust, and weak tax compliance in developing economies, particularly among small and medium enterprises. Grounded in fiscal exchange theory, the study posits that taxpayers' willingness to comply depends not only on enforcement but also on their perceptions of the fairness, efficiency, and responsiveness of public services, which shape trust in government. Focusing on SME owners and managers registered with the Ghana Revenue Authority in the Tema Metropolitan Area, the study adopts a positivist philosophy, a quantitative approach, and an explanatory research design. Data are collected using a structured questionnaire and analysed through Partial Least Squares Structural Equation Modelling (PLS-SEM) to test the direct and indirect relationships among public service delivery, trust in government, and tax compliance behaviour across both voluntary and enforced dimensions. The study is expected to enrich the literature by providing an integrated explanation of behavioural and institutional drivers of tax compliance and to offer practical insights for policymakers seeking to strengthen trust, improve service delivery, and enhance domestic revenue mobilisation in Ghana.

Keywords: Public service delivery; tax compliance; trust in government; small and medium-sized enterprises; domestic revenue mobilisation; Ghana.

Waste Management Practices and Maternal Health in the Ghanaian Primary HealthCare System: Implications for Green Transitions and Inclusive Industrialisation

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Abstract

Inadequate healthcare-waste management within Ghana's primary healthcare facilities poses substantial risks to maternal health, occupational safety and surrounding communities. Improper handling and disposal of infectious and hazardous materials can expose pregnant women, new mothers, newborns and healthcare workers to preventable infections while compromising the quality and safety of maternal health services. This paper examines the relationship between healthcare-waste management and maternal health within Ghana's primary healthcare system. It focuses on three persistent constraints: inadequate segregation and disposal procedures, insufficient staff training and limited waste-management infrastructure. These challenges weaken infection-prevention practices and increase the likelihood of unsafe exposure throughout the healthcare-waste chain. The paper argues that improving maternal healthcare requires waste management to be treated as a core component of service quality rather than as a separate environmental function. Recommended measures include standardised waste segregation, continuous staff training, appropriate storage and treatment infrastructure, routine compliance monitoring and stronger coordination between health facilities and environmental authorities. These interventions can contribute to greener healthcare systems by improving resource efficiency, reducing environmental contamination and creating demand for locally appropriate waste-treatment technologies and services. Strengthening healthcare-waste governance can therefore support safer maternal care while contributing to Ghana's broader green-transition and inclusive industrial-development objectives.

Keywords: Healthcare waste management; maternal health; primary healthcare; infection prevention; green healthcare; Ghana.

The Law and Politics of Green Tax Policy

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Abstract

This study explores the dynamic relationship between legal and political institutions and green tax policy across 87 countries from 1994–2024. We construct a legal institutions index and a political institutions index covering this period to account for several dimensions within both indicators, and employ them in the System GMM approach. We find that green tax policy is strongly path-dependent. Further, legal institutions, particularly the rule of law, judicial constraints, and government effectiveness, significantly increase green tax revenue, with government effectiveness emerging as the dominant determinant. This effect is amplified in democratic regimes, where legal credibility and political accountability operate as complements, and is nearly twice as large outside Europe, where no supranational environmental architecture substitutes for domestic institutional quality. Political stability further supports green taxation by extending policy time horizons. In contrast, civil society strength, media freedom, and academic freedom are associated with lower green tax revenues, attributable to policy substitution, distributional contestation, and amplified public resistance to visible fiscal burdens. In autocratic systems, legal institutions may constrain rather than promote green taxation, as judicial structures tend to serve regime interests over public environmental goals. These results remain robust across alternative proxies of green tax policy and institutional measures. Our analysis highlights regime heterogeneity, revealing that legal institutions may constrain rather than promote green taxation in autocratic systems. We offer valuable insights for policymakers seeking to advance environmental fiscal reform through coordinated institutional development and strategic public communication.

Keywords: Green taxation; legal institutions; political institutions; environmental fiscal reform; system GMM; institutional quality.

Public Financial Accountability and Institutional Readiness for Green Transition in Ghana's Tertiary Education Sector: A Practitioner Reflection from GTEC

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Abstract

This practice brief examines how sound public financial management can strengthen institutional readiness for Ghana's green transition within the tertiary education sector. Drawing on professional experience at the Ghana Tertiary Education Commission, it considers how treasury functions—including payables management, financial reporting, record-keeping and budgetary support—contribute to accountability, planning and financial control. The brief argues that the green transition is not solely a technological or infrastructure challenge but also a governance process requiring capable, transparent and financially responsible institutions. Effective public financial management can help tertiary education institutions allocate resources to sustainability initiatives, monitor environmentally related expenditure and demonstrate whether public funds deliver intended outcomes. Reliable financial records and reporting systems can also improve auditability, reduce resource leakage and support evidence-based planning for energy efficiency, sustainable infrastructure and other green investments. The brief highlights the need to integrate environmental objectives into budgeting, procurement, expenditure monitoring and institutional performance assessment. It recommends strengthening treasury capacity, introducing sustainability-sensitive budget classifications and improving coordination between finance, planning and environmental functions. By connecting routine financial administration with long-term sustainability objectives, the paper positions public financial accountability as an important foundation for institutional readiness and an inclusive, durable green transition in Ghana's tertiary education sector.

Keywords: Public financial management; financial accountability; institutional readiness; green transition; tertiary education; Ghana.

Do Local Content Outcomes in the Upstream Petroleum Sector Align with Resource Use Theories and SDGs? Evidence from an Emerging Economy, Ghana

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Abstract

This study evaluates whether local content requirements (LCRs) in Ghana's upstream petroleum sector (UPS) aligns with resource dependence, linkage-spillover, and social exchange theories, and whether they substantively advance sustainable development goals (SDGs) 8 and 9. Although LCRs are promoted as instruments of industrial transformation, empirical validation of their structural effects remains limited. Using mixed-methods design, a survey data from 204 firms were analysed through descriptive statistics, and principal component analysis (PCA), complemented by key informant interviews. Sixteen indicators captured workforce localisation, supplier integration, indigenous ownership, technology transfer, and collaborative governance. Results reveal a dual-structured outcome configuration. The dominant dimension reflects strong linkage-spillover dynamics, including local procurement, subcontract engagement, and skill transfer, indicating measurable progress towards SDG 8 through employment and value-chain participation. However, ownership deepening and new local subcontractor registration remains weak, signaling limited reduction in foreign capital and technological dependence. Overall, Ghana's LCRs operate effectively as a collaborative resource governance and value-chain coordination instrument but demonstrates only partial structural transformation consistent with SDG 9. The study contributes by empirically distinguishing participation-driven integration from substantive dependency reduction in resource-based industrial policy.

Keywords: Local content requirements; upstream petroleum sector; structural transformation; resource dependence; Sustainable Development Goals; Ghana.

Ethical Governance, Morality, and Answerability in Cooperative Financial Systems: Do Internal Control Dimensions Explain?

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Abstract

This study examines how internal control systems shape service quality, accountability, trust, and public-value, in cooperative financial institutions in emerging markets. It reconceptualizes internal controls as ethical governance mechanisms rather than mere compliance tools. Grounded in agency theory, stakeholder theory, the COSO framework, and ethics and public value perspectives, the study adopts a quantitative cross-sectional survey design. Data were collected from 142 officers of registered credit unions in Ghana's Oti Region and analysed using SPSS and Amos through reliability analysis, exploratory and confirmatory factor analysis, and structural equation modelling. Monitoring activities and information and communication systems significant positive effects on service quality, accountability, member trust, and Public-Value, whereas risk assessment, control environment, control activities, age of credit union, and staff education show no significant direct effects. Ethical governance is therefore driven less by formal control structures alone than by active oversight and transparent information flows. Cooperative financial institutions and regulators should prioritize monitoring quality, ethical communication, transparent reporting, and responsive oversight over symbolic compliance structures. The study shows that stronger monitoring, ethical communication, and transparency can build member trust, protect savings, and improve inclusive financial governance in underserved communities across emerging markets. This study reconceptualizes internal control systems as ethical governance mechanisms and shows that public-value outcomes arise less from formal control design than from monitoring and transparent information flows in emerging-market cooperative finance.

Keywords: Internal control systems; ethical governance; member trust; public value; cooperative financial institutions; Ghana.

Green Public Financial Management and Sustainable Transitions: Integrating Environmental, Social, And Governance Accountability into Ghana's Public Sector Finance

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Abstract

Africa's green transition requires a fundamental reorientation of public financial management (PFM) systems. In Ghana, the Controller and Accountant General's Department manages the Ghana Integrated Financial Management Information System (GIFMIS) and a Sustainable Financing Account. While Ghana introduced landmark reforms in 2024, including the region's first Green Finance Taxonomy, Securities Industry Green Bond Guidelines, and the Bank of Ghana's Climate-Related Financial Risk Directive, these primarily regulate private financial institutions. Ministries, Departments, and Agencies (MDAs) remain outside this sustainability framework, lacking obligations to track or report green expenditures. This paper utilizes qualitative policy analysis and comparative evidence from France, Austria, and Serbia to examine how Ghana's PFM architecture, governed by the PFM Act 2016 (Act 921), can embed ESG accountability. Currently, the public sector PFM cycle operates independently of the nation's accelerating green finance reforms. To bridge this gap, the study proposes four key recommendations: (i) integrating a green expenditure tagging module within GIFMIS aligned with the national taxonomy; (ii) incorporating sustainability outcome indicators into annual budget performance reports submitted to Parliament; (iii) extending ESG capacity-building programs to CAGD and local government finance officers; and (iv) institutionalizing an annual Green Public Accounts Statement. By focusing on these systemic shifts, the paper contributes a crucial public-sector perspective to Ghana's green transition discourse, which is currently dominated by private-sector analysis. This reorientation ensures that public spending aligns with national environmental goals, transforming GIFMIS from a standard accounting platform into a strategic tool for sustainable development and climate-resilient governance across all administrative levels nationally.

Keywords: Public financial management; green expenditure tagging; green finance; fiscal accountability; climate-resilient governance; Ghana.

The Impact of Sustainability Standards on the Public Financial Management in Ghana

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Abstract

This study examines the impact of sustainability standards on Public Financial Management (PFM) in Ghana, with particular emphasis on how environmental, social, and governance (ESG) frameworks and international reporting standards influence fiscal discipline, transparency, and accountability. In recent years, Ghana has increasingly aligned its public financial systems with global sustainability and reporting standards, including reforms anchored in the Public Financial Management Act, 2016 (Act 921), and emerging sustainability disclosure frameworks such as IFRS S1 and S2. These standards promote improved financial reporting, responsible resource allocation, and long-term fiscal sustainability. The study finds that sustainability standards positively contribute to strengthening PFM by enhancing transparency, improving accountability mechanisms, and supporting evidence-based budgeting. For instance, sustainability reporting requirements encourage the disclosure of non-financial information, enabling better assessment of environmental and social risks in public expenditure decisions. Additionally, PFM reforms in Ghana emphasize fiscal discipline, efficient resource use, and value-for-money principles, all of which align closely with sustainability objectives. However, the integration of sustainability standards into Ghana's PFM system also faces notable challenges, including weak enforcement of regulations, institutional capacity constraints, and political interference, which limit effective implementation. Despite these constraints, ongoing reforms such as digital financial management systems and strengthened expenditure controls demonstrate the potential for sustainability standards to enhance governance and support sustainable development outcomes. The paper concludes that while sustainability standards have significantly improved the conceptual framework of public financial management in Ghana, their full impact depends on consistent enforcement, institutional strengthening, and continued alignment with global best practices.

Keywords: Sustainability standards; public financial management; fiscal accountability; sustainability reporting; public expenditure; Ghana.

The Effects of Credit Management on the Financial Performance of a Microfinance Institution

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Abstract

Microfinance institutions (MFIs) are central to economic development and financial inclusion in Sub-Saharan Africa, yet their sustainability depends heavily on effective credit management. This paper investigates the impact of credit management, specifically client appraisal, credit risk control, and collection policy, on the financial performance of MFIs in Cameroon. Using primary data gathered via structured questionnaires from 125 MFI staff, alongside secondary data from financial statements, Ordinary Least Squares (OLS) regression analysis was applied to test three hypotheses. Results reveal that credit risk control and collection policy significantly affect financial performance, while client appraisal does not. The study recommends that MFIs adopt more disciplined collection frameworks and strengthen internal credit risk systems. These findings carry direct implications for microfinance policy in Cameroon and the wider Central African region.

Keywords: Microfinance, credit management, financial performance, credit risk, collection policy, Cameroon, Sub-Saharan Africa, African development

Capacity Gaps, Institutional Readiness, and the Pace of International Public Sector Accounting Standards Adoption in Ghana's Public Sector

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Abstract

The worldwide move toward accrual-based public sector accounting, promoted by International Public Sector Accounting Standards (IPSAS), is increasingly seen as a governance reform essential for sustainable fiscal management, donor alignment, and accountability. For African countries balancing green economic transitions and inclusive industrialisation, strong public financial management (PFM) institutions that deliver transparent and comparable reporting are foundational. Ghana offers a useful illustration: it has invested heavily in PFM infrastructure—including the Ghana Integrated Financial Management Information System (GIFMIS)—yet IPSAS adoption remains fragmented across public sector entities. This paper focuses on the institutional and capacity dimensions of IPSAS adoption, analysing how dedicated implementation structures, system readiness, and sufficient human capital determine the pace of IPSAS uptake. Grounded in contingency theory and institutional theory, the study treats human capital and institutional infrastructure as mediating variables between policy intent and IPSAS outcomes. Using data from 400 surveyed public sector finance professionals, the paper delivers policy-relevant insights for African governments seeking to use accounting reform as part of broader sustainable development strategies.

Keywords: IPSAS adoption; public-sector accounting; public financial management; institutional capacity; human capital; Ghana.

Rural Banking, Microfinance and Sustainable Livelihoods for Young Women In Ghana

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Abstract

This paper examines how rural banking and microfinance can empower young women in Ghana while supporting inclusive green growth and sustainable livelihoods. Although women's financial inclusion has improved, many young women, especially in rural areas, still face limited access to credit, savings, enterprise support, and growth opportunities. Women-owned enterprises remain underrepresented in formal finance, and many young women continue to operate small businesses with limited capital and weak institutional support. At the same time, microfinance has shown mixed outcomes, empowered some women while leaving others constrained by poor loan design, repayment pressure, and limited control over resources. This paper argues that rural banks can become stronger vehicles of empowerment when they go beyond lending to provide savings opportunities, financial literacy, and business support. By strengthening women's access to financial resources and enterprise capabilities, rural banking can help young women build resilient businesses, improve livelihoods, and participate more meaningfully in green local economic development in Ghana.

Keywords: Rural banking; microfinance; women's empowerment; financial inclusion; sustainable livelihoods; Ghana.

The Tug of War: Will Regulatory Quality and Green Innovation Outpace Carbon Emissions?

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Abstract

The study investigates the effects of regulatory quality, green innovation, and their interaction on carbon emissions in 13 Asian countries from 1991 to 2022. The factors influencing emissions reduction in the region are investigated using PMG, GEE, Quantile regression, Panel Corrected Standard Errors (PCSE), and Two Step System Generalized Method of Moments (GMM) for robustness. The study considers the dual effect of regulatory quality and green technology in mitigating emissions and the social and economic factors of urbanization, foreign direct investment (FDI), and education level. We find that regulatory quality has a significant disincentive effect on carbon emissions. It highlights why strong governance frameworks matter for the promotion of environmental sustainability. green innovation significantly reduces carbon emissions highlighting its importance in long-term decarbonization strategies. Beyond that, GreInn*RegQ increases emissions reductions further, illustrating the need for policy soundness and coherence. Nevertheless, these factors have different effects across emissions quantiles, and high-emission economies are more likely to benefit from regulatory quality and green innovation synergies. For example, control variables like urbanization are positively related to emissions, while FDI helps decrease emissions by allowing clean technology to be transferred. The findings provide policymakers with actionable insights, stressing the need for context-specific, tailored strategies to ensure sustainable development and meet global climate goals.

Keywords: Regulatory quality; green innovation; carbon emissions; environmental governance; quantile regression; Asia.

IFRS Implementation Approaches and Enforcement Mechanisms: A Case Study of an Enforcer in Ghana

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Abstract

Despite the growing importance of International Financial Reporting Standards (IFRS), qualitative research on their enforcement is notably limited. This study explores the approaches to IFRS implementation and enforcement mechanisms adopted by the enforcer in Ghana. Data was collected through semi-structured interviews with five key personnel of the enforcer who are involved in the implementation and enforcement of IFRS in Ghana. A thematic approach was employed to analyse the interview data with the aim of identifying the themes and patterns that emerged from the participants' responses. The findings indicate a range of implementation strategies, such as conducting impact assessment, collaborating with relevant stakeholders, and providing training and guidance. Further, the enforcer plays a pivotal role in ensuring compliance through measures like imposing penalties for non-compliance, conducting periodic reviews, managing licencing processes and issuing directives. The findings of the study can guide regulators and policy makers in emerging economies to design more effective IFRS enforcement framework. By understanding the qualitative approaches and enforcement mechanisms currently in use, stakeholders can identify gaps in compliance, strengthen institutional capacity, and develop context-specific strategies that enhance transparency and comparability in financial reporting. The study contributes to the IFRS enforcement literature by providing new insights into the qualitative approaches to IFRS implementation and enforcement mechanisms within the context of an emerging economy.

Keywords: Implementation approaches, Enforcement mechanisms, IFRS, Enforcer, Ghana

Rethinking the Role of Zakat Institutions in Financing Basic Education for Africa's Green Transition: A Teacher's Perspective from Ghana

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Abstract

Africa's green transition and inclusive industrialisation depend on strong foundational education systems capable of developing the literacy, knowledge and skills required for sustainable economic transformation. However, basic schools in many underserved Ghanaian communities continue to experience inadequate infrastructure, limited teaching materials and poor learning outcomes. This study examines how the Zakat and Sadaqa Trust Fund of Ghana allocates educational resources and assesses whether its spending priorities adequately support basic education. Drawing on Human Capital Theory and the Maqasid al-Shariah framework, the study adopts a qualitative design combining documentary analysis with practitioner reflective inquiry. Audited annual reports covering 2019–2023 were analysed to categorise educational expenditure, while the professional experience of a Ghanaian basic-school teacher was used to contextualise the implications of institutional spending patterns. The findings reveal that educational expenditure was concentrated overwhelmingly on tertiary scholarships, declining from 65.6% of total charitable disbursements in 2019 to 17.7% in 2023. No dedicated expenditure category addressed basic-school infrastructure, textbook provision or teacher development, apart from limited ad hoc support. The study identifies a mismatch between the Fund's educational mandate and the foundational needs of disadvantaged Muslim communities. It proposes allocating a defined proportion of educational disbursements to basic-school infrastructure, learning materials, teacher development and outcome monitoring. Reorienting Zakat towards foundational education could strengthen educational equity, future green-skills development and inclusive industrialisation.

Keywords: Zakat; Islamic social finance; basic education; human capital development; green transition; Ghana.

Effects of Exchange-Rate Movements on Businesses in Ghana

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Abstract

Exchange-rate movements have important implications for the financial performance, competitiveness and long-term sustainability of businesses operating in Ghana. Firms engaged in international trade are particularly exposed because currency fluctuations affect import costs, export revenues, debt obligations, expected cash flows and the value of foreign-currency transactions. The extent of these effects depends on a firm's foreign-exchange exposure, cost structure, dependence on imported inputs and ability to adopt effective risk-management strategies. This paper examines how exchange-rate instability affects businesses in Ghana and considers the mechanisms through which currency movements influence operating costs, pricing decisions, profitability, investment and competitiveness. It situates these business-level effects within Ghana's transition from historically controlled exchange-rate arrangements towards a more flexible system managed by the Bank of Ghana. The paper further considers how firms can respond to exchange-rate uncertainty through financial hedging, operational adjustments, local sourcing, currency diversification and improved cash-flow planning. It argues that effective management of foreign-exchange exposure requires coordinated action by businesses, financial institutions and policymakers. Greater macroeconomic stability, access to appropriate hedging instruments and stronger managerial capacity can help firms reduce vulnerability and make more informed financial and investment decisions within Ghana's evolving economic environment.

Keywords: Exchange rate; foreign-exchange exposure; business performance; currency risk; financial management; Ghana.

Environmental Regulation and Firm Performance in Ghana

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Abstract

This study examines the relationship between environmental regulation and firm performance in Ghana and evaluates the Porter hypothesis within a developing-economy context. The analysis uses pooled World Bank Enterprise Survey data covering 1,592 firms between 2007 and 2024. A doubly robust inverse-probability-weighting estimator is applied to address observable differences between regulated and unregulated firms. The findings show that environmental regulation significantly increases firm sales and operational efficiency while reducing exposure to competition from informal businesses. Product and process innovation strengthen these relationships, amplifying the performance benefits associated with regulation. Four-way decomposition analysis indicates that the total relationship is driven predominantly by direct regulatory effects, although innovation-related pathways also contribute. The results further reveal substantial firm-level heterogeneity. Performance benefits are stronger among larger firms, financially unconstrained firms and female-owned businesses, while domestically owned firms benefit more than foreign-owned firms. These findings support the proposition that appropriately designed environmental regulation can enhance firm competitiveness by encouraging innovation and improving resource efficiency. However, the unequal distribution of benefits indicates that regulatory measures should be accompanied by targeted innovation support and improved access to finance, particularly for smaller and financially constrained enterprises. The study contributes evidence on the conditions under which environmental regulation can promote both firm performance and more inclusive green industrial development in Ghana.

Keywords: Environmental regulation; firm performance; Porter hypothesis; innovation; resource efficiency; Ghana.

The Role of Internal Auditing in Promoting Green Transitions and Inclusive Industrialisation in Ghanaian Local Governments: A Case Study of Akuapim South Municipal Assembly

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Abstract

Weak accountability systems can impede efforts to achieve green transitions and inclusive industrialisation, particularly within local governments responsible for implementing infrastructure, agriculture, environmental management and rural-development programmes. Although Ghana's national policies emphasise renewable energy, sustainable infrastructure and climate-resilient development, implementation can be undermined by inadequate oversight of public expenditure, procurement and environmental compliance. Internal auditing may help address these weaknesses by strengthening risk assessment, financial control, regulatory compliance and institutional accountability. However, existing research largely focuses on corporate organisations or national institutions, with limited evidence concerning the contribution of internal auditing within municipal assemblies. This study examines how internal audit practices at the Akuapim South Municipal Assembly support the implementation of green and inclusive development initiatives. It considers the extent to which audit planning, expenditure review, risk management, compliance monitoring and follow-up procedures align municipal resources and activities with environmental and social objectives. By connecting routine assurance functions with sustainable-development outcomes, the study positions internal auditing as a potential strategic mechanism rather than merely a financial compliance activity. The case provides a local-government perspective on the relationship between policy commitments and implementation practices. It is expected to offer practical insights for municipal authorities, internal auditors and policymakers seeking to strengthen accountability, improve the use of public resources and support environmentally responsible and socially inclusive local development in Ghana.

Keywords: internal auditing; green transition; inclusive industrialisation; local government; public accountability; Ghana.

Financial Technology Penetration and Economic Growth in Nigeria, 2012–2023

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Abstract

This study explored the impact of financial technology (fintech) penetration on economic growth in Nigeria, between 2012 and 2023. Given the importance of fintech penetration and its dynamic relationship with economic growth, the aim was to assess how four fintech indicators such as Instant Pay Penetration Rate (IPPR), Internet Transaction Penetration Rate (ITPR), Mobile Payment Penetration Rate (MPPR), and Point-of-Sale Penetration Rate (PSPR) influence economic growth, using Real Gross Domestic Product (RGDP) as the primary measure. The study employed an Autoregressive Distributed Lag (ARDL) model to analyse time-series data on fintech indicators and economic growth, using co-integration and error-correction techniques to capture both short-run and long-run relationships. The findings revealed a significant, positive effect of MPPR on RGDP, suggesting that mobile payments boost consumer spending, improve financial inclusion, and facilitate faster transactions, thereby enhancing GDP performance. Conversely, PSPR was found to negatively influence RGDP in the long-run. This could be linked to structural and operational challenges such as high transaction costs, poor infrastructure, fraud risks, and uneven distribution. Based on these results, the study recommended that policymakers should focus on infrastructure expansion, financial inclusion, regulatory strengthening, and innovation support. By doing so, Nigeria can maximize the economic growth potential of mobile payment systems while ensuring equitable access and long-term sustainability.

Keywords: Fintech, Instant Pay Penetration Rate, Internet Transaction Penetration Rate, Mobile Payment Penetration and Economic growth

Green Finance, Regulatory Quality and Renewable Energy Consumption in West Africa

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Abstract

This study investigates the relationship between green finance, regulatory quality, and renewable energy consumption in West Africa, where the transition to sustainable energy remains a major policy priority amid low energy access and high dependence on fossil fuels. Renewable energy projects require substantial capital and carry significant risks, making green finance an important mechanism for supporting clean energy development. However, the effectiveness of these financial resources depends on the regulatory environment within which they operate. Using panel data from seven West African countries-Burkina Faso, Côte d'Ivoire, Mali, Senegal, Togo, Nigeria, and Niger over the period 2017–2024, the study employs the Two-Stage Least Squares (2SLS) technique to address endogeneity concerns, with the Generalised Method of Moments (GMM) used for robustness checks. Renewable energy consumption is modelled as a function of green finance, regulatory quality, economic growth, trade openness, and energy use per capita. The findings reveal that green finance has a negative and significant effect on renewable energy consumption, suggesting possible inefficiencies or misallocation of funds. Regulatory quality also shows a negative and significant relationship, indicating a misalignment between institutional frameworks and renewable energy objectives. Economic growth and trade openness are positive but insignificant, while energy use per capita is positive and marginally significant, implying a demand-driven transition. The study concludes that effective policy alignment, targeted financing, and demand-driven strategies are essential for advancing renewable energy consumption in West Africa.

Keywords: Green finance; regulatory quality; renewable energy consumption; energy transition; panel data; West Africa.

Decoupling Industrial Growth from Fossil Fuel Volatility: An Analysis of Cedi Depreciation and Petroleum Prices in Ghana's Green Transition

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Abstract

The pursuit of inclusive industrialization in Ghana is increasingly hindered by a "vicious cycle" of currency depreciation and petroleum price hikes, which destabilize the macroeconomic environment required for green investment. This study investigates the interconnectedness between the Ghanaian Cedi's depreciation and domestic petroleum pricing to highlight the risks of continued fossil fuel dependency. Using a quantitative research design, the study analyzed 120 monthly data points from the Bank of Ghana and the IMF through time-series regression and correlation modeling. The results demonstrate a statistically significant positive relationship between Cedi depreciation and rising fuel costs, with both inflation and petroleum prices serving as significant predictors of the exchange rate ($p < 0.05$). Furthermore, a robust correlation (0.75) between petroleum hikes and inflation suggests that fossil-fuel-driven cost-push inflation erodes the purchasing power necessary to fund sustainable development. These findings underscore the structural vulnerabilities of an import-dependent energy sector, which drains foreign exchange reserves and increases external debt. To foster a resilient industrial sector, Ghana must prioritize strategies that simultaneously strengthen fiscal stabilization and accelerate the transition to renewable energy. This study offers actionable policy insights for reducing reliance on imported petroleum to mitigate currency volatility and support long-term sustainable growth.

Keywords: Exchange-rate depreciation; petroleum prices; inflation; renewable energy transition; industrialisation; Ghana.

Macroeconomic Stability as a Bedrock for Green Transitions: An Empirical Analysis of Inflation Determinants in Ghana

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Abstract

Formulating effective policy for a "Green Transition" in developing economies requires a deep understanding of the macroeconomic environment, as persistent inflation can undermine long-term investments in sustainable infrastructure. This study creates a detailed empirical model to explain price-level movements in Ghana—a critical prerequisite for inclusive industrialization—using determinants like money supply, fiscal balance, and exchange rates. Using quarterly time-series data from 1990 to 2023, the research employs Autoregressive Distributed Lag (ARDL), Vector Error Correction (VECM), and Vector Autoregressive (VAR) models. The findings confirm that exchange rate volatility and money supply are the primary drivers of inflation, accounting for over 60% of changes in the Consumer Price Index (CPI). Specifically, the ARDL model identified a significant long-run relationship where a 1% depreciation in the cedi leads to a 0.45% increase in inflation. Conversely, real GDP growth was found to exert a significant dampening effect (-0.68), suggesting that supply-side expansion and industrial value addition are inherently anti-inflationary. The results highlight that for Ghana to successfully finance green innovations and job creation; policymakers must first ensure price stability through coordinated fiscal discipline and exchange rate management. This study offers a holistic empirical framework to guide Ghanaian authorities in fostering a stable macroeconomic climate, which is essential for de-risking the capital-intensive transitions required for sustainable continental development.

Keywords: Inflation; exchange rate; money supply; green investment; macroeconomic stability; Ghana.

Assessing the Impact of the 2017–2020 Banking Crisis in Ghana: A Causal Analysis of Systemic Stability, Public Trust, and Economic Growth

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Abstract

The 2017–2020 banking crisis in Ghana had far-reaching consequences for the financial industry, which continues to grapple with economic and social effects. This study moves beyond descriptive analysis to causally assess the crisis's impact on financial stability, public trust, and economic growth, testing a robust framework for a resilient banking sector. Employing a mixed-methods approach, the research combines quantitative data from 500 structured questionnaires with qualitative insights from 20 purposive interviews with bank personnel, regulators, and economists. A Difference-in-Differences (DiD) model was used to isolate the causal impact of the crisis on financial stability, while Structural Equation Modeling (SEM) tested hypothesized causal pathways linking regulatory frameworks, corporate governance, and risk management to national economic outcomes. The DiD analysis reveals that the crisis caused a significant, direct decrease in Ghana's financial stability score by 12.7 points ($p < 0.001$) relative to a control country. SEM results confirmed the recovery framework's validity (CFI = 0.971, RMSEA = 0.048), demonstrating that poor corporate governance was a primary driver of eroded public trust ($\beta = 0.48, p < 0.001$), while weak risk management determined financial instability ($\beta = 0.41, p < 0.001$). These failures were shown to have a negative impact on economic growth. Findings underscore costs, pinpointing failures in governance and risk management as core drivers. To foster a resilient financial sector, Ghana must prioritize strategies that strengthen regulatory enforcement and enhance corporate accountability. This study offers actionable, causally-informed policy insights crucial for restoring confidence and ensuring long-term stability in Ghana's post-crisis banking reform.

Keywords: banking crisis; financial stability; public trust; corporate governance; risk management; Ghana.

Two Pathways to Sustainable Digital Payments:Ecosystem Drivers and Development Outcomes in Vietnam and Ghana

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Abstract

Understanding how digital payment expansion translates into development outcomes remains a central question in the digital finance literature. This paper examines how variations in national digital payment ecosystems shape the relationship between payment expansion and sustainable development outcomes. While existing studies often assume a uniform development trajectory, this study argues that digital payment expansion is ecosystem-dependent and conditioned by institutional, technological, and financial structures. Vietnam represents a bank-led model characterized by strong formal financial infrastructure and policy support, whereas Ghana exemplifies a mobile money-driven ecosystem led by telecommunications firms. Building on an extended STOF (Service–Technology–Organization–Finance) framework, the study conceptualizes digital payment expansion as a three-stage process linking ecosystem readiness, payment growth, and sustainable development outcomes. Using panel data from international sources (IMF, World Bank, ITU) and applying Principal Component Analysis (PCA) to construct a composite STOF index, the empirical analysis proceeds through regression and moderation models. The findings show that ecosystem readiness strongly drives digital payment expansion. Increased digital transactions are positively associated with financial inclusion, economic development, and digital infrastructure, but show no significant impact on institutional development. Furthermore, the economic effects of digital payments vary across national contexts, indicating that development outcomes are partly context-dependent. Overall, the study contributes to the digital finance literature by demonstrating that multiple development pathways can coexist, producing both common and context-specific outcomes in the transition toward sustainable digital economies.

Keywords: digital payments; ecosystem readiness; financial inclusion; mobile money; sustainable digital economy; Ghana and Vietnam.

Chinese FDI, Trade with China, Digitization, and Carbon Emissions in Sub-Saharan Africa: Evidence from Dynamic Panel Models

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Abstract

This study investigates the moderating role of digitization in the relationship between Chinese foreign direct investment, trade, and carbon emissions in Sub-Saharan Africa. Using a panel dataset of 52 African nations from 2002 to 2022, the analysis employs the Generalized Method of Moments estimation to evaluate these complex interdependencies. The outcomes of this research yield a series of insights, specifically revealing that certain inflows of foreign direct investment may have the effect of reducing emissions, thereby lending credibility to the pollution halo hypothesis. There exist other trade dynamics, particularly those related to exports, which have been found to maintain a positive correlation with the output of carbon emissions. Of paramount importance within these findings is the suggestion that digitization serves as a crucial moderating factor, effectively mitigating the adverse environmental repercussions associated with both foreign direct investment and trade activities. This research, therefore, advocates for the integration of digital technologies and AI into economic activities in order to promote sustainable development in SSA. The study has policy implications, such as stronger environmental regulation, technology transfer, and the adoption of green technologies to reduce carbon.

Keywords: Chinese foreign direct investment; international trade; carbon emissions; digitalisation; pollution-halo hypothesis; sub-Saharan Africa.

Beyond Physical Assets: Benchmarking-Oriented Costing as Infrastructure for Climate-Resilient Industrialization in Africa

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Abstract

Climate-resilient industrialisation has become a central challenge for African economies seeking to achieve sustainable growth amid increasing environmental and market uncertainty. Existing policy discourse predominantly focuses on investments in physical infrastructure such as energy systems and transport networks, while relatively little attention has been paid to the internal analytical infrastructures that shape firms' operational resilience and decision-making capabilities. This study addresses this gap by examining benchmarking-oriented costing systems as organizational infrastructure supporting climate-resilient manufacturing competitiveness. Drawing on contingency theory and strategic management perspectives, the study investigates how competitive pressure and strategic orientation influence the adoption of Manufacturing Planning and Control Costing (MPPC) systems and how such systems contribute to firm competitiveness. Using a multi-informant survey of 575 senior accounting and production managers in manufacturing firms, structural equation modelling is employed to analyze the relationships among competition intensity, strategic orientation, MPPC usage, and firm competitiveness. The findings show that competitive pressure is the strongest driver of MPPC adoption, while strategic orientation is negatively associated with MPPC usage, suggesting a persistent strategy–implementation gap. The results further indicate that integrated MPPC systems significantly enhance firm competitiveness. The study contributes to management accounting and sustainability literature by demonstrating how benchmarking-oriented costing infrastructure supports climate-resilient industrialisation in African manufacturing systems.

Keywords: Management accounting; costing systems; manufacturing competitiveness; strategic orientation; competitive intensity; Africa.

Climate Disclosure, Corporate Governance, and Green Industrial Transformation in Africa

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Abstract

Despite growing global interest in climate disclosure and corporate governance, their joint implications for industrial sustainability outcomes remain underexplored in African capital markets. Prior research on sustainability accounting in Africa has largely focused on voluntary environmental disclosures and corporate social responsibility reporting, with limited attention to climate-specific transparency and its governance drivers. This study addresses this gap by examining how corporate governance influences climate disclosure practices and whether such disclosure contributes to green industrial transformation among listed firms in African capital markets. Using a panel research design, the study analyses 324 firm-year observations from manufacturing, energy, and industrial firms listed on the Johannesburg Stock Exchange (South Africa), Egyptian Exchange, Ghana Stock Exchange, and Nigerian Stock Exchange between 2016 and 2023. Climate disclosure is measured using a disclosure index constructed from sustainability, annual, and integrated reports. Panel regression and structural equation modelling are employed to examine the direct and indirect relationships among corporate governance, climate disclosure, and green industrial transformation outcomes. The findings show that stronger corporate governance mechanisms significantly enhance firms' climate disclosure practices. The results further indicate that higher levels of climate disclosure are positively associated with progress toward green industrial transformation. In addition, climate disclosure partially mediates the relationship between corporate governance and green industrial transformation. The study contributes to sustainability accounting and climate governance literature by providing new evidence from African capital markets on how governance-driven climate transparency can support green industrial transformation and strengthen the institutional foundations for low-carbon industrial development.

Keywords: Climate disclosure; corporate governance; green industrial transformation; sustainability accounting; listed firms; African capital markets.

Digital Transformation of Public Financial Management in Ghana and Developing Economies: A Systematic Review of Accountability, Transparency, and Efficiency

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Abstract

This systematic review evaluates the digitization of Public Financial Management (PFM) in Ghana and similar developing economies. Using peer-reviewed literature published from 2013 to 2025 and the PRISMA 2020 framework, the study examines how systems such as Integrated Financial Management Information Systems (IFMIS) and e-procurement influence accountability, transparency, and fiscal discipline. The synthesis indicates that digital tools enhance budget credibility and revenue monitoring, but their impact on Value for Money (VFM) is often constrained by infrastructure gaps and organisational resistance. The findings show that “hard” digital infrastructure achieves best results only when combined with “soft” governance components, such as ethical leadership and robust internal audits. In sum, digitisation alone is insufficient; policymakers must pair technology investments with capacity building and strong legal enforcement to curb fiscal waste and secure lasting reform.

Keywords: public financial management; digitalisation; financial management information systems; e-procurement; fiscal accountability; Ghana.

Strengthening Internal Audit Effectiveness Through Auditor-Auditee Relationships in Public Sector Organizations

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Abstract

Internal audit functions continue to evolve and gain strategic importance within the public sector. Yet, ineffective relationships between internal auditors and auditees remain a persistent governance challenge in public sector institutions, particularly in emerging economies where internal audit independence and management support are often constrained. Such tensions can weaken internal control systems, audit effectiveness, and the ability of internal auditors to contribute to organizational accountability and performance. Therefore, this study adopts agency theory to examine the relationship between internal auditors and auditees and its implications for internal audit effectiveness and organizational governance in public sector institutions. Adopting a quantitative research design, we utilized structured questionnaires to collect data from 60 internal auditors and auditees selected purposively from 4 public sector organizations. Data was analyzed with descriptive statistical methods, including frequency distributions and percentage analysis, to assess participant's perceptions regarding auditor independence, management support, internal controls, and cooperation between auditors and auditees. The findings indicate that perceived limitations on auditor independence and inadequate management support significantly affect the quality of auditor-auditee relationships, which in turn constrains the effectiveness of internal audit functions in strengthening internal controls and organizational efficiency. The study further demonstrate that institutional support and professional independence shape constructive auditor-auditee engagement. In terms of practical implications, the study calls for stronger institutional frameworks that safeguard auditor independence, enhance management support for internal audit activities, and promote collaborative relationships to improve efficiency in public sector organization.

Keywords: Internal auditing; auditor–auditee relationship; auditor independence; management support; public-sector governance; audit effectiveness.

Inclusive Microfinance for Poverty Reduction: Assessing Awareness, Impact and Institutional Constraints in Ghana

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Abstract

Microfinance institutions play a pivotal role in supporting small and medium-sized enterprises, improving living standards and promoting socio-economic development in emerging economies. Despite these benefits, the industry in Ghana is constrained by limited operational awareness and regulatory challenges. Financial institutions have neglected the poor due to their lack of collateral, creating a significant financing gap that this study seeks to address. Accordingly, this study examines existing regulatory frameworks to evaluate the impact and awareness of microfinance institutions in the Ashanti Region of Ghana. Using a mixed-methods approach, data were collected from 10 microfinance institutions and 150 customers through structured questionnaires and analysed using the Statistical Package for the Social Sciences (SPSS). The results revealed that although 98.75% of respondents were aware of microfinance institutions, only 12.5% had utilised their services. Furthermore, regulatory oversight by the Bank of Ghana was widely perceived as inadequate, with 71.9% of respondents rating it as poor or very poor, thereby undermining public confidence and contributing to institutional failures. The findings indicate that microfinance institutions should adopt cost-effective digital and communication technologies to effectively disseminate their mission, products and services, thereby improving public awareness and financial literacy. The Bank of Ghana as a regulator must reinforce its regulatory oversight through rigorous monitoring and evaluation mechanisms to rebuild trust and confidence within the sector. Furthermore, the study suggests that strengthening institutional capacity is critical to ensure operational sustainability and enhance the sector's impact on poverty alleviation.

Keywords: Microfinance institutions; financial inclusion; regulatory oversight; service utilisation; public awareness; Ghana.

Global Power Shifts and Investment Dynamics: Foreign Direct Investment, Informality, and Terrorism in Sub-Saharan Africa

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Abstract

This paper examines how foreign direct investment, terrorism and institutional quality interact to shape the informal economy in sub-Saharan Africa within an increasingly multipolar global order. As international power relations evolve and investment flows diversify among established and emerging economic actors, African economies face changing political, security and economic pressures that may influence the scale and persistence of informal activity. Informality remains central to employment, production and livelihoods across the region but can also limit taxation, labour protection and productivity growth. Foreign direct investment may promote structural transformation through capital formation, employment, technology transfer and integration into global value chains. However, its effects on informality may depend on investment composition, domestic institutional capacity and the extent to which foreign-owned activities develop linkages with local firms. Terrorism and political insecurity can further disrupt investment, weaken formal institutions and encourage firms and workers to operate outside regulated markets. This study addresses a gap in the literature by analysing these factors jointly rather than treating them as independent determinants of informality. It proposes that institutional quality conditions how foreign investment and security threats influence informal economic activity. By situating these relationships within shifting geopolitical alignments, the paper seeks to extend understanding of the structural determinants of informality and provide policy insights into how sub-Saharan African economies can attract productive investment, strengthen institutions and reduce insecurity without reinforcing informalisation.

Keywords: Foreign direct investment; informal economy; terrorism; institutional quality; multipolarity; sub-Saharan Africa.

Leapfrogging Africa's Sustainable Industrialization through Renewable Energy Transition and Innovative Capacity

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Abstract

An unresolved African dilemma lies in its ability to utilize its renewable energy endowments to achieve sustainable industrialization amidst other developmental goals. Based on this premise, this study empirically explores how transformative innovation mechanisms (Renewable Energy Transition and Innovative Capacity) can achieve sustainable industrialization in Africa. The study utilizes a sample of 22 African countries between 2011 and 2024. Sustainable industrialization is measured as a ratio of manufacturing value added to carbon emission per capita; renewable energy utilization is proxied by the renewable energy share of electricity capacity. The innovation index was obtained using the principal component analysis of the five innovation inputs (institutions, human capital, infrastructure, market, and business sophistication) from the World Intellectual Property Organization. Other control variables (inflation, economic growth, foreign direct investment, urbanization, and trade intensity) are using standard measures from the World Bank Development Indicator (WDI) and the International Renewable Energy Agency (IRENA). Overall, the findings document that renewable energy does not significantly influence sustainable industrialization but gradually improves across percentiles. On the contrary, the innovation index results show a positive and substantial influence on sustainable industrialization. The study recommends that African governance prioritize implementing local content frameworks to maximize the utilization of industrial renewable energy capacity.

Keywords: Sustainable industrialisation; renewable energy transition; innovative capacity; manufacturing value added; local content; Africa.

Alternative Fuel Adoption: How Consumer Attitudes Toward Green Energy Are Reshaping Petrol Demand in Ghana

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Abstract

The global transition toward sustainable energy systems is increasingly reshaping fuel consumption patterns within the transport sector. Growing climate change concerns, persistent volatility in fossil fuel prices, and policy commitments to low-carbon development have accelerated interest in alternative fuels such as biofuels, electric vehicles (EVs), and compressed natural gas (CNG) across both developed and emerging economies. In Ghana, petrol remains the dominant transport fuel; however, rising environmental awareness, economic pressures, and exposure to green energy narratives are gradually influencing consumer attitudes toward alternative fuel options. Anchored in the Theory of Planned Behavior (TPB), this study examines how consumer awareness, environmental attitudes, perceived economic benefits, and perceived behavioral control shape intentions to adopt alternative fuels and how these intentions may affect petrol demand. Using a qualitative research design, data are generated through in-depth interviews with vehicle owners, transport operators, fuel retailers, policymakers, and energy sector experts. The study anticipates that while positive attitudes toward alternative fuels are increasing, actual adoption remains constrained by high upfront costs, limited refueling and charging infrastructure, and policy uncertainty—resulting in a persistent attitude–behavior gap consistent with TPB assumptions. By providing empirical insights from Ghana, the paper contributes to the growing literature on consumer-driven energy transitions in emerging economies and highlights implications for energy policy and petroleum industry adaptation in a transitioning fuel market.

Keywords: Alternative transport energy; consumer adoption; Theory of Planned Behaviour; petrol demand; energy transition; Ghana.

Raising Eco-Billionaires through Nigeria's Renewable Energy Industry

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Abstract

The increasing investment by Nigerian billionaires in renewable energy startups is not only a testament to their visionary business acumen but also a pivotal development with far-reaching implications for Africa's sustainable future. This trend reflects a sophisticated recognition of the evolving global energy landscape, where clean, sustainable solutions are no longer peripheral but central to climate resilience, sustainable economic growth and environmental stewardship. Through systematic literature review and participant observation, this study identifies how eco-billionaires can be fostered through the renewable energy industry in Nigeria. This study further identifies that raising eco-billionaires in Nigeria's renewable energy sector requires a strategic approach that combines abundant natural resources like solar and biomass with increased green finance, favorable government policies, and robust private sector investment. It highlights that green entrepreneurial opportunities exist in solar PV manufacturing, bioenergy production from waste, and off-grid energy solutions, all of which can drive sustainable economic growth and create wealth by meeting the nation's increasing energy demand with cleaner, more reliable alternatives to fossil fuels. It concludes by asserting that cultivating eco-billionaires in Nigeria's renewable energy sector will be key to harnessing abundant natural resources and driving sustainable wealth creation.

Keywords: Renewable energy; green entrepreneurship; sustainable wealth creation; green finance; off-grid energy; Nigeria.

Rethinking Governance and Financial Stability: Board Composition and Bank Resilience in Ghana

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Abstract

This study investigates the critical link between corporate governance practices and bank stability in Ghana, addressing concerns about the efficacy of regulatory regimes following the 2017–2019 financial sector cleanup. While extensive reforms were enacted to modernise the sector, questions persist about the “implementation gap” between structural compliance and real-world risk oversight. A quantitative, cross-sectional design was used, and primary data were gathered via structured questionnaires given to senior executives—Chief Executive Officers (CEOs), Chief Financial Officers (CFOs) and Chief Risk Officers (CROs)—at 30 licensed banks in Ghana. The study applies Pearson correlation and multiple regression to evaluate how board composition—particularly independence and diversity—and risk-management systems affect key distress indicators: Non-Performing Loans (NPL), Capital Adequacy Ratios (CAR), and regulatory interventions. The results challenge conventional Agency Theory assumptions in a developing-economy setting. The analysis shows that board independence alone does not significantly predict asset quality or regulatory compliance. However, the Board Diversity Index proved to be a significant positive predictor of Capital Adequacy Ratios ($p = 0.039$), indicating that diverse boards strengthen capital buffers and resilience. Moreover, robust operational risk management was strongly linked to fewer regulatory interventions. The study concludes that regulators must move beyond “check-box” structural compliance to encourage substantive board diversity and risk-culture oversight, thereby ensuring the long-term financial stability required for sustainable economic development.

Keywords: Corporate governance; board diversity; bank resilience; capital adequacy; risk management; Ghana.

Does Off-Farm Work Affect Technical Efficiency and Household Income on Ghana's Cocoa Farms?

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Abstract

The Ghanaian cocoa sector faces challenges that have caused declining output, reduced export earnings, and increased vulnerability among smallholder farmers. To cope, many engage in off-farm income-generating activities, raising concerns about the effects on farm productivity. This study examines the impact of off-farm work on cocoa farmers' technical efficiency and household income in Ghana. Stochastic Frontier Analysis was used to estimate technical efficiency, and Heckman's two-step model addressed potential selection bias. Results show that farm size, capital, and fertiliser use positively influence cocoa output. Farming experience, off-farm work participation, farmer-based organisation membership, extension access, and credit reduce inefficiency, while farm age and disasters increase it. The mean technical efficiency score was 0.824, indicating farmers operate about 17.6% below the frontier. Farmers combining cocoa farming with off-farm work recorded higher efficiency (0.843) than those relying solely on farming (0.723). Heckman results indicate that household size, farming experience, and farm disasters increase the likelihood of off-farm participation, while credit access and farmer age reduce it. Predicted off-farm participation, off-farm income, and credit access improve efficiency, while disasters reduce it. On average, farm income contributes 38.06% of total household income, compared with 61.94% from off-farm activities. Overall, off-farm work improves efficiency and household income, but overreliance may weaken cocoa sector recovery. Improving farmgate prices could enhance income security and encourage reinvestment in cocoa production.

Keywords: Cocoa farmers; off-farm employment; technical efficiency; household income; stochastic frontier analysis; Ghana.

Risk Premia, Global Financial Conditions, and Foreign Direct Investment in Sub-Saharan Africa

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Abstract

This paper examines how risk pricing and global financial conditions shape foreign direct investment (FDI) inflows to Sub-Saharan Africa (SSA), with particular emphasis on the role of the United States (US) Treasury rate as the global risk-free benchmark. Distinguishing between expected risk premia derived from interest rate parity conditions and realised domestic lending risk premia, the study provides new evidence on the channels through which both forward-looking expectations and observed financial conditions influence investment behaviour. Using an unbalanced panel of 33 SSA countries over the period 2001–2024, the analysis employs a dynamic heterogeneous panel framework, combining system GMM for short-run dynamics with pooled mean group (PMG), fully modified OLS (FMOLS), and dynamic OLS (DOLS) estimators for long-run relationships. The results reveal a clear asymmetry across time horizons. In the short run, FDI inflows respond strongly and negatively to realised domestic risk premia, while expected risk premia exert only weak and economically small effects. In the long run, realised risk premia emerge as the dominant determinant of FDI inflows, whereas parity-based expected risk premia become insignificant. Global financial conditions also matter. While short-run responses to changes in the US Treasury rate are transitory, long-run estimates indicate that sustained increases in the global risk-free rate reduce FDI inflows, primarily through their impact on domestic risk pricing. Overall, the findings highlight the central role of realised financial risk and global monetary tightening in shaping long-term FDI dynamics in SSA.

Keywords: Foreign direct investment; risk premia; global financial conditions; United States Treasury rate; dynamic panel models; sub-Saharan Africa.

Law and Society

Tourism Security Governance in Ghana: Lessons for Sustainable Destination Management

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Abstract

Tourism is widely recognised as a catalyst for economic development, employment generation, and destination competitiveness. However, tourism growth also presents security challenges that can undermine visitor experiences, destination reputation, and long-term sustainability. Despite increasing attention to tourism development across Africa, tourism security governance remains underexplored, particularly within emerging destinations where tourism growth intersects with socio-economic inequalities and institutional constraints. This study examines how tourism security is negotiated and managed within destination environments in Ghana and explores the implications of tourism-related crime for policy and practice. The study develops a place-based analytical framework for understanding the spatial, situational, and behavioural dynamics of tourism-related crime. Adopting a qualitative research design, the study draws on 49 in-depth interviews and 8 focus group discussions involving offenders, law enforcement agencies, NGOs, tourism enterprises, and other stakeholders. Data were analysed using Reflexive Thematic Analysis to examine tourism security practices, governance arrangements, and associated challenges. The findings reveal that tourism security outcomes are shaped by variations in guardianship, stakeholder coordination, institutional capacity, and local socio-economic conditions. The study further demonstrates the dual role of local cultural norms, particularly hospitality, as both mechanisms of informal social control and sources of situational vulnerability. The paper argues that effective tourism security governance requires integrated and context-sensitive approaches that extend beyond traditional enforcement measures. It highlights the importance of multi-stakeholder collaboration, community engagement, and interventions that address socio-economic vulnerabilities. The findings offer practical lessons for policymakers and destination managers seeking to strengthen tourism security governance and support sustainable destination development.

Keywords: Tourism security; destination governance; tourism-related crime; stakeholder collaboration; sustainable tourism; Ghana.

Amplifying Green Transitions Through Media and Music: The Role of Television Presentation and Creative Communication in Promoting Inclusive Industrialisation in Ghana

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Abstract

Africa's green transition cannot be achieved through policy, technology, and industrial reform alone. It also requires public understanding, cultural participation, behavioural change, and inclusive communication. While governments, businesses, researchers, and development institutions continue to discuss climate action, sustainable industrialisation, and environmental accountability, many ordinary citizens remain disconnected from these conversations because the language of policy is often technical and inaccessible. In Ghana and across Africa, television, music, and popular culture remain powerful channels through which public opinion is shaped, social issues are discussed, and communities are mobilised. This study examines how television presentation and music can be used as tools for advancing public awareness, citizen accountability, and inclusive participation in Africa's green transition. The paper is positioned within the broader theme of the International Conference on African Development 2026, which focuses on green transitions and inclusive industrialisation in Africa. The conference calls for interdisciplinary engagement on how sustainable development can drive job creation, value addition, equity, and long-term transformation across the continent. As a television presenter and musician, the author's professional experience provides a practical foundation for examining the role of creative communication in development. Television presenters are not merely entertainers or broadcasters; they serve as public educators, agenda-setters, moderators of social debate, and interpreters of national issues. Similarly, musicians influence emotions, attitudes, identity, and collective action. In African societies where oral culture, storytelling, rhythm, and performance are deeply embedded in public life, music and broadcast media can make green transition messages more relatable, memorable, and socially acceptable.

Keywords: Green communication; television; music; popular culture; citizen participation; Africa.

Assessing International Public Sector Accounting Standards Implementation as a Catalyst for Green Public Financial Management Reforms in Ghana

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Abstract

The global shift toward "Green Transitions" and inclusive industrialisation requires robust governance frameworks to ensure that public resources are managed with the highest levels of transparency and accountability. Central to this agenda is the adoption of International Public Sector Accounting Standards (IPSAS), which provides the accrual-based reporting necessary to track climate-aligned investments and ESG-related public expenditures. This study examines the awareness, perceived benefits, and implementation challenges of IPSAS among 400 public sector practitioners in Ghana. Employing a quantitative cross-sectional survey design, the research analyzes data from five organization types through Python-based statistical modeling (ANOVA and Pearson correlation). The results demonstrate a near-universal consensus ($M = 4.70$) that these accounting reforms are essential for improving national accountability. While 72.5% of respondents report at least partial implementation, the study identifies critical systemic barriers: capacity/training deficits (mean $[M] = 4.00$), system incompatibility within the Ghana Integrated Financial Management Information System (GIFMIS) ($M = 3.56$), and regulatory misalignment. Significantly, practitioners maintain a strongly positive outlook ($M = 4.50$) regarding the role of IPSAS in aligning Ghana with international best practices. The findings suggest that the barriers to reform are structural rather than attitudinal. The paper argues that for Ghana to successfully manage the complex financial demands of a green economy, it must bridge the "implementation gap" by strengthening institutional infrastructure and establishing dedicated IPSAS teams. This study offers a practitioner-level blueprint for policymakers to ensure that Ghana's financial management systems are prepared to support sustainable and equitable industrial growth.

Keywords: IPSAS; public-sector accounting; financial accountability; implementation barriers; public financial management; Ghana.

Strengthening Governance for Sustainability: A Review of Public Financial Management Reforms and Accountability in Ghana's Green Transition

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Abstract

This systematic review examines recent Public Financial Management (PFM) reforms in Ghana, evaluating their role as essential governance pillars for achieving sustainable development and green transitions. Adhering to the PRISMA framework, the study synthesizes findings from 50 relevant works published between 2003 and 2025. The research explores how the modernization of public finance—through Integrated Financial Management Information Systems (IFMIS), fiscal decentralization, and digital procurement—provides the accountability structures required to manage climate-aligned growth and inclusive industrialization. The findings highlight that while these reforms have improved fiscal discipline and resource allocation, persistent hurdles such as political interference, corruption, and capacity constraints remain significant barriers to fully realizing a transparent governance model. Specifically, the paper argues that without robust PFM systems, the tracking of "green" expenditures and ESG-related public investments is compromised. The review identifies a critical need for policy interventions that integrate environmental sustainability criteria into existing financial reporting and procurement frameworks. By addressing data integrity and strengthening oversight bodies like the Public Accounts Committee, Ghana can better align its fiscal management with the urgency of a green economy. This article offers valuable insights for policymakers and development actors seeking to bridge the gap between financial theory and sustainable practice, ensuring that Ghana's transition to a low-carbon economy is supported by a transparent and accountable public sector.

Keywords: Public financial management; green budget tagging; fiscal accountability; e-procurement; sustainable development; Ghana.

The Impact of Ghana's Judiciary on Green Transition and Inclusive Industrialization

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Abstract

This conceptual paper examines how Ghana's legal and institutional framework supports green transition and inclusive industrialisation. It focuses on the Renewable Energy Act, 2011 (Act 832), the Renewable Energy (Amendment) Act, 2020 (Act 1045), the Environmental Protection Act, 2025 (Act 1124), and the National Energy Transition Framework. Collectively, these instruments establish mechanisms for renewable-energy licensing, competitive procurement, net metering, environmental governance, carbon-market regulation, and climate-related investment. The paper argues that an effective legal framework can stimulate private investment, promote cleaner energy production, strengthen environmental accountability, and create opportunities for employment and local enterprise development. It also considers the importance of accessible dispute-resolution mechanisms in addressing conflicts among renewable-energy market participants. Arbitration and mediation may reduce the financial and procedural burdens associated with litigation while supporting commercial certainty and continued investment. However, the effectiveness of these measures depends on consistent enforcement, institutional coordination, regulatory clarity, and equitable access to emerging green economic opportunities. The paper concludes that Ghana's legal institutions can facilitate an inclusive transition by protecting environmental and community interests, ensuring regulatory compliance, and providing credible mechanisms for resolving disputes. Strengthening these functions will be essential for translating Ghana's green policies into sustainable and broadly shared development outcomes.

Keywords: Green transition, inclusive industrialisation, environmental law, renewable energy, dispute resolution, Ghana.

Strengthening Local Governance Accountability for Sustainable Development: The Role of Municipal Client Service Systems in Advancing Inclusive and Green Transitions in Ghana

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Abstract

Strong governance structures that can convert sustainability policies into workable results at the local government level are necessary for Africa's pursuit of inclusive industrialization and green transitions. In order to achieve sustainable development throughout the continent, the International Conference on African Development (iCAD 2026) emphasizes the significance of institutional accountability, governance reforms, and rights-based methods (Ghana Scholarly Society [GSS], 2026). Metropolitan, Municipal, and District Assemblies (MMDAs) are Ghana's main point of contact between the public and the government, especially when it comes to community development, land administration, environmental regulation, and service delivery. Sustainable local government outcomes are still threatened by issues with openness, citizen involvement, administrative justice, and service responsiveness. In my capacity as Head of Client Service at the Akuapim South Municipal Assembly, this study looks at how municipal client service systems support citizen trust, accountability, and fair access to public services using institutional practice. Simultaneously, continuing legal education under the Bachelor of Laws (LLB) degree offers a jurisprudential perspective for examining rights protection, administrative justice, and governance accountability in decentralized systems. In order to promote climate-responsive governance, social inclusion, and the implementation of sustainable development in Ghana, this article contends that efficient client service frameworks within local authorities represent an understudied governance mechanism.

Keywords: Local governance, accountability, client service systems, green transition, social inclusion, sustainable development.

Local Government and Rural Development (Akuapim South Municipal Assembly), Aburi, Ghana

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Abstract

Achieving sustainable development and inclusive governance in Africa increasingly depends on the effectiveness of local government institutions responsible for implementing public policies. Although national governments formulate strategies for economic transformation, environmental sustainability, and social inclusion, decentralised institutions translate these priorities into services that directly affect citizens' daily lives. This paper examines how administrative leadership and institutional coordination can strengthen inclusive governance and sustainable service delivery in Ghana, drawing on practical insights from the Akuapim South Municipal Assembly. It considers the role of administrative leaders in coordinating departments, aligning institutional resources with development priorities, strengthening accountability, and promoting collaboration among public agencies, community organisations, businesses, and citizens. The paper argues that fragmented responsibilities, weak information sharing, resource constraints, and limited coordination can delay policy implementation and reduce the quality and accessibility of municipal services. Effective administrative leadership can address these challenges by establishing clear responsibilities, improving communication, supporting participatory decision-making, and embedding sustainability considerations within routine municipal operations. The paper concludes that capable leadership and coordinated administrative systems are essential for translating national development policies into equitable local outcomes. Strengthening leadership capacity, interdepartmental collaboration, performance monitoring, and citizen engagement can enhance institutional responsiveness and support inclusive, efficient, and environmentally sustainable service delivery in Ghana.

Keywords: Administrative leadership, institutional coordination, local government, inclusive governance, sustainable development, service delivery.

A Human Rights-Based Approach to Green Industrial Policy: A Comparison of Vietnam and Selected African Countries

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Abstract

Amid the global climate crisis and mounting pressure to transform conventional growth models, green industrialisation has become a strategic priority for many developing countries. However, industrial transformation involves more than technological innovation and economic restructuring; it also has significant implications for human rights, including the rights to work, a clean and healthy environment, public participation, and access to information. This study comparatively examines the integration of a human rights-based approach into green industrial policies in Vietnam and three African countries: Ghana, Kenya, and South Africa. Although these countries differ in their institutional structures and stages of industrial development, they face common challenges, including rising energy demand, pressure to reduce carbon emissions, employment vulnerability, and the need to balance economic growth with social and environmental responsibilities. Through a comparative analysis of relevant laws, policy frameworks, and institutional arrangements, the study assesses the extent to which participation, accountability, non-discrimination, transparency, and rights protection are embedded in national green industrial strategies. It also identifies common implementation gaps and transferable policy lessons. The study argues that integrating human rights principles into green industrial policy can help prevent the unequal distribution of transition costs and benefits. Its findings are intended to inform policies that promote just, inclusive, and socially accountable green industrial transitions across developing economies.

Keywords: Human rights-based approach, green industrial policy, just transition, Vietnam, Africa, sustainable development.

Enhancing Public Financial Management and Municipal Accountability for Green Transitions and Inclusive Local Development in Ghana

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Abstract

Africa's pursuit of inclusive industrialisation and green transition has increased attention to the capacity of local government institutions to implement sustainable development policies. Although national governments formulate fiscal policies and sustainability frameworks, their effectiveness depends substantially on the ability of decentralised institutions to mobilise, allocate, manage, and account for public resources. This paper examines how public financial management and municipal accountability can support green transition and inclusive local development in Ghana. Under the Local Governance Act, 2016 (Act 936), Metropolitan, Municipal, and District Assemblies perform important functions relating to local economic development, infrastructure provision, environmental management, and public service delivery. Accordingly, effective municipal financial systems are essential for translating national priorities into locally relevant outcomes. However, delayed statutory transfers, weak internally generated revenue mobilisation, inefficient budget execution, limited financial transparency, and inadequate monitoring can undermine climate-resilient infrastructure, sanitation, local enterprise development, and social inclusion programmes. The paper argues that strengthening municipal budgeting, expenditure controls, revenue administration, procurement oversight, financial reporting, and citizen participation can improve resource efficiency and public trust. It further emphasises the importance of integrating environmental and social indicators into municipal planning and financial reporting. Strengthening these institutional mechanisms would enable local authorities to direct limited resources towards equitable, climate-responsive investments and enhance their contribution to Ghana's sustainable development agenda.

Keywords: Public financial management, municipal accountability, green transition, local development, fiscal decentralisation, Ghana.

Harnessing Nature's Gift: Traditional Wisdom for Environmental Sustainability in Africa's Green Future

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Abstract

Embracing the *Sankofa* principle, "go back and fetch it," this paper revisits Africa's traditional wisdom through *Anansesem* (Folktales) infused with proverbs, to inform its environmental sustainability agenda. Amidst climate change and ecological degradation, Africa's indigenous knowledge systems offer valuable lessons in harmonious coexistence with nature. This qualitative study employs an interpretivist approach, analysing folktales embedding proverbs like "If one tree absorbs the wind alone, it breaks and falls" and "When the forest is gone, the firewood is gone," highlighting traditional practices such as sacred groves, communal land management, and eco-friendly agriculture. I employ *Content Analysis*, analysing the themes and messages in selected folktales and proverbs, *Thematic Analysis* by identifying and exploring the environmental sustainability themes in the narratives. I also use *Case Study* to Examine specific communities or regions where these traditional practices are prevalent. Findings reveal that these narratives underscore the relevance of indigenous knowledge to modern sustainability challenges facing the African Youth, emphasizing community-led conservation and intergenerational responsibility. By integrating these forgotten wisdoms with contemporary frameworks, Africa can chart a unique path to green development, prioritizing people, planet, and prosperity. This research underscores the power of Sankofa, demonstrating how revisiting traditional ecological knowledge can inspire innovative, context-specific solutions for a sustainable future.

Keywords: Sankofa, Anansesem, indigenous knowledge, environmental sustainability, African youth, traditional ecological knowledge.

Governance Reforms for Sustainability in Public Sector Supply Chain Management

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Abstract

Sustainability in public sector supply chain management (PSSCM) has gained prominence as governments face growing pressure to enhance transparency, accountability, and environmental and social outcomes. In many developing countries, however, sustainable supply chain performance is hindered by weak procurement governance, inadequate monitoring, poor inter-agency coordination, and inefficient supply processes. While existing studies discuss procurement reforms and green public procurement, limited research integrates governance reforms with broader sustainability outcomes in PSSCM. Prior literature tends to emphasise regulatory compliance and operational efficiency rather than examining how oversight, digitalisation, performance management, and stakeholder participation can embed sustainability in public sector supply chains. This study addresses the gap by exploring governance challenges and identifying reform pathways that support sustainable transformation. A qualitative approach was adopted, using purposive sampling to select 12 participants, including procurement officers, supply managers, auditors, regulatory representatives, and administrative heads. Semi-structured interviews focused on governance structures, compliance, sustainability integration, and digitalisation challenges, complemented by documentary analysis of policies and audit reports. Thematic analysis guided coding and interpretation. Four themes emerged. First, weak regulatory enforcement limits sustainability impact due to inconsistent application of laws and poor sanctions. Second, fragmented inter-agency coordination undermines information sharing and planning. Third, sustainability principles—such as environmental criteria and life-cycle costing—remain poorly institutionalised, with cost often prioritised. Fourth, digitalisation gaps, including limited e-procurement adoption, reduce transparency and accountability. Overall, the study demonstrates that sustainable PSSCM requires stronger governance systems, enhanced coordination, embedded sustainability criteria, and improved digital infrastructure to support long-term public sector performance.

Keywords: Public sector supply chains, procurement governance, sustainability, e-procurement, institutional coordination, developing countries.

Emerging Scholars Colloquium (For Doctoral & Pre-Doctoral Candidates)

Instructional Quality and Emotional Intelligence on Academic Success of Pre-Service Teachers: Mediating Role of Learning Behaviour

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Abstract

This study examined how Instructional Quality and Emotional Intelligence influence Preservice teachers' Academic Success through Learning Behaviour. Gagné's Conditions of Learning and Goleman's Emotional Intelligence theory were the basis. Data from 395 preservice teachers were analysed using structural equation modelling. Findings suggest that effective external instructional conditions and internal emotional competencies jointly enhance preservice teachers' success by fostering adaptive learning behaviours. Implications for educational psychology emphasize integrating Gagné-aligned instructional design with EI training in teacher education will strengthen self-regulated learning and academic outcomes.

Keywords: Instructional Quality, Emotional Intelligence, Learning Behaviour, Academic Success, Preservice Teachers

Leveraging Strategic Foresight for Digital Transformation: Demystifying the Role of Absorptive Capacity under Risk-taking Tolerance

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Abstract

Despite the increasing attention on digital transformation, little is done on the factors that drive the successful adoption of these technologies. A comprehensive understanding of the antecedents of digital transformation remains scanty. Thus, this study, based on the dynamic capability theory, proposes a research model that associates strategic foresight with digital transformation through absorptive capacity, where risk-taking tolerance is considered as a contingency factor. The research was examined based on the positivist philosophy via quantitative methodology. Six hypotheses were validated using reports from 210 managers from 3-5-star hotels in Ghana. Data was gathered through a pre-tested survey-based instrument. The model was assessed using variance-based structural equation modeling (PLS-SEM). The results show that SF significantly drives DT; also, absorptive capacity positively mediates the relationship between SF and DT. It was also revealed that risk-taking tolerance positively moderates the relationship between absorptive capacity and DT. The study contributes to the literature on digital transformation by conceptualizing strategic foresight and absorptive capacity as antecedents of digital transformation, and that risk-taking tolerance is a boundary condition to the effect of absorptive capacity on digital transformation. The analysis indicates that managers should prioritize SF as it has the highest impact on DT.

Keywords: Strategic foresight, digital transformation, absorptive capacity, risk-taking tolerance, dynamic capabilities, hospitality industry.

Incremental Housing in Sub-Saharan Africa: A Systematic Review of Housing Consolidation, 2000–2026

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Abstract:

Sub-Saharan Africa is the world's fastest-urbanizing region, with its urban population projected to reach 1.26 billion by 2050 [1]. This urbanisation faces severe housing deficits, while formal housing systems are unable to respond to the demand. As a result, incremental housing has become the dominant way through which households secure shelter in the region [2]. The step-by-step consolidation process, dictated by fluctuating resources and opportunities, is the most viable path to homeownership for low-income households with limited access to formal housing systems [3]. While previous research addresses material conditions and infrastructure, it is often analysed separately rather than as interconnected dimensions of housing transformation. This systematic literature review follows PRISMA guidelines, analysing 33 peer-reviewed articles and dissertations published between 2000 and 2026. The study uncovers a persistent modernity bias among residents. In the pursuit of social status, many prioritize industrial materials like cement and corrugated iron. However, these materials often provide poor insulation and create structural risks compared to traditional options. Ultimately, this paper reframes incremental housing as a unified social and technical process, and calls for future research to adopt longitudinal, participatory methods to overcome the limitations of "extractivist" research practices.

Keywords: Incremental housing, Sub-Saharan Africa, Materiality, Urban infrastructure, Socio-technological consolidation, Systematic literature review

Filtering the Margins: Visibility Mechanisms and Unequal Access to Green Industrial Support in Nigeria

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Abstract

Nigeria's green transition ambitions depend on private ventures in renewable energy, circular economy, and climate-smart agriculture. But access to the support systems that could enable these ventures remains deeply unequal and geographically concentrated. Current research attributes this to structural constraints such as infrastructure deficits and financing gaps, it overlooks a more fundamental barrier: many ventures never reach formal evaluation because they are never seen. This study employs legitimacy theory, signaling theory, and entrepreneurial ecosystem research, this study introduces visibility filtering as a mechanism that links structural marginality to unequal participation in Nigeria's digitally mediated green industrialisation. Using a fuzzy-set Qualitative Comparative Analysis (fsQCA) design across Lagos, Aba, Kaduna, and Kano, the study examines how combinations of visibility, network embeddedness, and structural position jointly shape access to green industrial support. Preliminary findings suggest that Lagos-based ventures dominate support pipelines not because of superior quality, but because geographic location and the use of recognisable "climate tech" framing determine which ventures become legible to investors and policymakers. Peripheral ventures, despite doing genuine green work, are excluded upstream. The study contributes a novel conceptual mechanism to the literature, challenges assumptions of inclusivity in Nigeria's digital economy strategy, and proposes decentralised, regionally embedded discovery pipelines to surface overlooked but environmentally relevant ventures.

Keywords: Visibility filtering, green entrepreneurship, entrepreneurial ecosystems, structural marginality, green industrialisation, Nigeria.

Assessing Residential Energy Transition Pathways in Nigeria: A LEAP-Based Scenario Analysis (2025–2055)

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Abstract

Access to clean and modern energy is a persistent challenge across sub-Saharan Africa, where residential energy end-use relies heavily on traditional biomass. In Nigeria, this challenge is particularly evident in the cooking sector, revealing a critical gap between improvements in energy access and actual transition outcomes. Despite increasing emphasis on electrification, its ability to drive clean cooking transitions remains limited. This study applies the Low Emissions Analysis Platform (LEAP) to analyse residential cooking energy pathways in Nigeria from 2025 to 2055, focusing on urban and rural electrified households. A scenario-based approach evaluates five pathways: baseline, clean cooking policy, electrification expansion, affordability constraint, and an integrated transition scenario. The analysis considers fuel shares and total final energy consumption. Results show that electrification alone does not produce a significant shift toward clean cooking, as household fuel choices are constrained by affordability and accessibility. While clean cooking policies improve LPG adoption, their impact is limited in isolation. The affordability constraint scenario shows minimal transition, underscoring the role of household income. In contrast, the integrated transition scenario produces the most substantial shift toward modern energy adoption. The findings highlight the need for integrated policy frameworks that simultaneously address electrification, affordability, and access to modern fuels, offering practical insights for inclusive energy transition strategies.

Keywords: Clean cooking, energy transition, electrification, affordability, LEAP modelling, Nigeria.

Internet penetration and economic development in Nigeria: Mediating Roles of Digital Literacy and Infrastructure

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Abstract

Nigeria, Africa's most populous nation with over 220 million people, stands at a pivotal development crossroads. Internet penetration surged from 7.4% in 2010 to 48% in 2022 (NITDA, 2022; Statista, 2025), unlocking potential for economic growth, poverty alleviation, and better living standards. Yet, Nigeria trails regional peers like Morocco (92%) and Egypt (82%), hampered by infrastructure deficits, low digital literacy, and inflated metrics from multiple SIM usage—despite initiatives like the National Broadband Plan (2020–2025) and National Digital Economy Policy. This study examines internet penetration's impact on Nigeria's economic development, emphasizing digital literacy and infrastructural capacity as mediators. Grounded in Romer's endogenous growth theory (1990) and Castells' network society (2000), it adopts a mixed-methods approach. Quantitative analysis leverages 2000–2024 secondary data from World Bank, ITU, NBS, and NITDA, employing regression and Granger causality tests. Qualitative depth comes from thematic analysis of interviews with five key tech ecosystem stakeholders. Findings reveal a strong positive link between internet penetration and economic development ($\beta=0.61$, $p<0.01$; Adj. $R^2=0.61$), with unidirectional causality to GDP per capita growth. Digital literacy partially mediates ($\beta=0.21$, $p<0.05$), highlighting human capital and infrastructure's role in maximizing connectivity benefits. Hypotheses confirm direct effects, moderated by socioeconomic contexts. Policymakers should invest over \$100 billion in broadband (World Bank, 2023), roll out digital literacy programs, and enact inclusive regulations to harness digital potential, drive sustainable growth, and overcome development barriers.

Keywords: Internet Penetration; Economic Development; Digital Literacy; ICT Infrastructure; Endogenous Growth Theory; Nigeria

Engineering and Construction

Evaluating the Integration of Lean Construction and BIM for Workflow Optimization in Construction Projects: A Critical Systematic Review

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Abstract

Despite technological, managerial, and organisational developments, construction projects still suffer from poor coordination amongst stakeholders, fragmented, poorly communicated and inconsistent information, as well as inefficient processes. A management model based on principles of lean manufacturing is being employed to improve the efficiency of construction projects. At the same time, Building Information Modelling (BIM) has emerged as one of the most transformational digital technologies in construction. While there are numerous studies on Lean Construction and BIM, few investigate their co-application in improving production efficiencies on construction projects. This is an identified gap in existing research. This study aims to evaluate how the integration of Lean Construction principles and Building Information Modelling (BIM) can optimise workflow efficiency in construction projects. This research will employ a qualitative, critical systematic literature review methodology through the use of secondary data extraction from peer-reviewed academic publications. This research is academically of interest because it investigates an emerging area of research between the integration of Lean Construction and Building Information Modelling. The paper contributes to industrialisation by showing how combining Lean Construction and BIM can promote more standardised, efficient, and production-oriented construction processes, similar to manufacturing systems, while improving coordination and enabling approaches such as modularisation and better-integrated supply chains. It advances sustainability by demonstrating how this integration reduces material waste, rework, and resource inefficiencies, leading to lower environmental impact. Overall, the study positions Lean–BIM integration as a pathway toward a more resource-efficient, digitally enabled, and industrialised construction sector.

Keywords: Lean Construction, Building Information Modelling, workflow efficiency, digital construction, waste reduction, industrialised construction.

Accra Technical University Library's Green Energy Transformation: A model for Sustainable Academic Spaces

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Abstract

The transition to renewable energy is central to sustainable development, with higher education institutions increasingly serving as models for environmental stewardship. Academic libraries, as key knowledge hubs, are evolving into active agents of sustainability through green infrastructure and advocacy. However, in many African context, including Ghana, there is limited empirical evidence on how academic libraries can adopt renewable energy to address energy instability and rising operational costs. This study addresses the gap in empirical documentation of renewable energy adoption in academic libraries within energy-constrained environments. This study examines the green energy transformation of Accra Technical University (ATU) Library under the EBSCO Solar Grant. A mixed-methods case study design was used, combining observation, document analysis, and quantitative analysis of post-installation solar data. Findings show that the library has progressively integrated sustainability through digital transformation, awareness creation, and partnerships. The 80kWp solar PV system demonstrated consistent performance, with an average daily yield of 229.37 kWh, projected annual generation of 83,720.05 kWh, and estimated annual savings exceeding GHS 269,505.05 (USD 24,500.46). Significant environmental benefits, including reduced carbon emissions, were also recorded. The study concludes that renewable energy adoption in academic libraries is feasible and impactful, recommending the development of sustainability policies, strengthened partnerships, and increased investment in renewable energy initiatives.

Keywords: Green energy, Sustainable energy, energy efficiency, library, Accra Technical University

Green Transition and Fuel Quality: Assessing Gasoline Performance and its Implications for Industrialisation in Ghana

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Abstract

This study examines the role of fuel quality in Ghana's evolving green transition and its implications for industrialisation, with a focus on gasoline performance in engines. The research analyses the chemical composition and combustion characteristics of gasoline supplied by selected Oil Marketing Companies (OMCs) in Ghana. Key physicochemical properties including density, specific gravity, viscosity, flash point, and solubility were evaluated to determine their influence on engine performance, and emissions. Fuel samples were purposively collected from OMC filling stations based on accessibility and strategic relevance. A benchmark sample sourced from Tema Oil Refinery (TOR) was used as a control for comparative analysis. Statistical analysis, including one-sample Student's t-test, was conducted using SPSS to evaluate variations in fuel quality and performance indicators. The results reveal significant differences in physicochemical properties across gasoline samples, with at least one sample failing to meet standard specifications. These variations have measurable effects on engine performance, fuel efficiency, and potential emissions, thereby influencing both environmental sustainability and mechanical durability. The findings highlight critical challenges in fuel standardisation within Ghana's downstream petroleum sector and underscore the importance of high-quality fuel in supporting the country's green transition agenda. Furthermore, the study demonstrates that improving fuel quality can enhance engine efficiency, reduce mechanical losses, and contribute to sustainable industrialisation by lowering operational costs and environmental impact. The study provides actionable recommendations for regulators, OMCs, and consumers to promote fuel quality optimisation and environmentally responsible energy use in Ghana's automotive sector.

Keywords: Gasoline quality, engine performance, fuel efficiency, emissions, green transition, Ghana.

Assessing Indicators for Measuring Value for Money in the Procurement of Construction Works at the Design Stage

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Abstract

Central to the concept of public procurement is the notion of Value for Money (VFM). The primary goal of public procurement is to achieve the best value for money. VFM has been widely adopted in both the commercial and public sectors as a key instrument for examining the relative costs and benefits of different choices in the implementation of public projects. Despite the recognised importance of VFM in public procurement, achieving it in practice remains a significant challenge, particularly in developing countries such as Ghana. As such, the aim of this study seeks to assess the indicators for measuring value for money in procurement of construction works. Several VFM indicators based on a comprehensive literature review. The quantitative research method was utilized. Questionnaire was developed to solicit the views of 240 construction stakeholders in Ghana. Data analysis was conducted using the mean score ranking and one sample t-test with a test value of 3.5. The results revealed that ‘appropriate risk allocation’ is the best indicator for measuring VFM in procurement of works. It was then followed by ‘detailed risk analysis’, time/prompt delivery in design procurement’, and ‘competition’ are also best VFM indicators. The study provided an in-depth understating in VFM indicators specifically for the construction industry in developing countries. Construction stakeholders can use this study as a guide to help achieve VFM in the design stage of every project.

Keywords: Value for money, public procurement, construction works, risk allocation, procurement performance, Ghana.

Bridging the Infrastructure Gap in Africa through Project Bankability: The Case of Ghana

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Abstract

Africa's infrastructure investment gap, estimated at over US\$ 1.7 trillion, remains a major constraint on growth and resilience. Financing and implementation bottlenecks persist, making project bankability, the ability of projects to attract debt and equity financial closure on acceptable terms, central to mobilising private and blended finance at scale. There is however an infrastructure paradox in Africa. While there is need and availability of funding, together with a large pipeline of potential projects, not enough projects reach financial closure, currently estimated at only 10% of initiated projects. Ghana with an infrastructure investment gap of about US\$ 44 billion, provides a highly relevant empirical context: despite strong institutional structures, project development and financing initiatives, recent macro-fiscal shocks, debt restructuring, and tight domestic credit markets have limited the state's capacity to underwrite or de-risk projects. Focusing on bankability therefore provides a pragmatic route to unlocking capital while protecting fiscal sustainability. A recent scoping study of project bankability in Ghana, with key stakeholders (project developers, financiers, advisors and public officials), suggests that institutional architecture and credibility can shape project pipelines and market confidence, enabling the mobilisation of private capital to fund technically sound projects. The study maps bankability barriers across financial, behavioural, project and institutional dimensions. Key factors identified include weak early-stage project preparation quality, unclear risk allocation, revenue realism and governance arrangements, contractual credibility, limited revenue models, sovereign-risk concerns and political-economy bottlenecks. Preliminary suggestions are made for the development of a bankability-enhancement framework for projects in Ghana.

Keywords: Project bankability, infrastructure finance, private capital, blended finance, project preparation, Ghana.

Experimental Analysis of the Effects of Thermostat Regulation in Automotive Cooling Systems and Engine Performance

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Abstract

The thermostat is a closed loop control system used to regulate the Heating Ventilation and Air Conditioning (HVAC) system based on temperature. It tries to minimize the error between the desired and measured state. A thermostat sometimes has all the elements of the control system in it. The aim of this study was to examine the effects of thermostat regulation in automotive cooling systems and engine performance. The experiment data was analysed and presented in the form of tables and figures. The instrumentation used for the set up includes coolant temperature, engine temperature, fuel consumption as well as engine efficiency/engine power output. The study revealed that as the coolant temperature increases, the thermostat gradually transitions from a fully closed to a fully open position and at temperatures below 80°C, the thermostat remains completely closed, preventing coolant from circulating through the radiator. This ensures that the engine warms up quickly to its optimal operating temperature. The result of the study again shows how crucial the thermostat's role is by ensuring that the engine operates efficiently by maintaining a steady temperature and preventing thermal fluctuations that could lead to mechanical stress or inefficiencies. It was again realized that beyond 90°C, fuel consumption begins to rise. As the engine temperature increases above optimal levels, efficiency decreases due to higher internal stresses, potential knocking, and increased cooling demands. This results in greater fuel consumption, emphasizing the importance of maintaining proper engine cooling to ensure optimal performance and efficiency.

Keywords: Automotive thermostat, engine cooling, coolant temperature, fuel consumption, engine efficiency, thermal regulation.

Performance Analysis of a 5kW Photovoltaic Model under Dynamic Environmental Conditions

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Abstract

Photovoltaic (PV) system performance varies considerably with environmental conditions, particularly solar irradiance and ambient temperature. However, PV systems are frequently evaluated under standard test conditions of 1,000 W/m² irradiance and 25°C, which do not adequately represent the dynamic conditions experienced in residential applications. This study develops a 5 kW PV model in MATLAB/Simulink to evaluate system performance under changing weather and electricity-demand conditions. A 24-hour residential load profile is implemented using the Three-Phase Dynamic Load block to subject the system to realistic variations in demand. Lookup tables supply time-series irradiance, temperature, and residential consumption data to the simulation, creating a dynamic operating environment. The model incorporates a DC–DC boost converter controlled by a Perturb and Observe maximum power point tracking algorithm to maximise power extraction as environmental and load conditions change. The simulation framework enables the assessment of PV output, voltage regulation, tracking behaviour, and the system's capacity to respond to fluctuations over a complete daily cycle. The model provides a foundation for evaluating alternative control strategies and incorporating battery storage, energy-management systems, and other components required for reliable off-grid residential applications. It therefore supports the development and optimisation of PV systems under realistic and variable operating conditions.

Keywords: Photovoltaic systems, dynamic conditions, MATLAB/Simulink, maximum power point tracking, residential load, off-grid systems.

Prospects for Using Dandelion (*Taraxacum officinale* L.) in the Phytoremediation of Heavy-Metal-Contaminated Soils

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Abstract

Heavy metal contamination of soil poses a serious environmental and public health challenge worldwide. In recent years, phytoremediation has emerged as a promising, eco-friendly approach for mitigating such pollution. This study investigates the capacity of dandelion (*Taraxacum officinale*) to accumulate heavy metals and evaluates its potential application in soil remediation. Plant and soil samples were collected from different environments with varying levels of contamination, and the concentrations of selected heavy metals (e.g., Pb, Cd, Zn, and Cu) were analyzed in roots and aerial parts of the plants. The results indicate that *Taraxacum officinale* is capable of absorbing and accumulating significant amounts of heavy metals, with higher concentrations generally observed in the roots than in the shoots. Notably, plants from urban areas exhibited substantially higher levels of metal accumulation compared to those from less polluted sites. The translocation and bioaccumulation factors suggest that dandelion has potential both as a bioindicator and as a candidate species for phytoremediation. These findings highlight the applicability of *Taraxacum officinale* in addressing soil contamination caused by heavy metals. Furthermore, the study provides a scientific basis for future research on optimizing plant-based technologies for the remediation of more complex and mixed metal pollutants.

Keywords: *Taraxacum officinale*, phytoremediation, heavy metals, soil contamination, bioaccumulation, bioindicator.

Exploring the Relationship Between Strategic Leadership and Construction Business Growth

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Abstract

This paper investigates the relationship between strategic leadership and construction business growth, examining how leadership-related factors drive growth, competitiveness and long-term sustainability in the construction sector. A quantitative research design was adopted, using survey data from 150 construction professionals, of which 120 valid responses were analysed. Structural Equation Modelling was employed using SPSS 26 and IBM AMOS 26 Graphics to test the influence of SL dimensions—innovation orientation, project management effectiveness and organisational culture—on construction business growth. The results indicated a significant positive association between strategic leadership and construction business growth, with a path coefficient of 0.791 and a critical ratio of 4.357, confirming SL as a strong predictor of business growth. High factor loadings for goal achievement (1.518) and project management effectiveness (1.581), together with satisfactory fit indices (CFI = 0.929; RMSEA = 0.077), supported the robustness of the model. This study provides empirical validation of the strategic leadership – construction business growth nexus in a developing economy construction context, where such evidence is limited. It offers actionable insights for construction executives and policymakers seeking to leverage strategic leadership to enhance innovation capability, strengthen competitive positioning and sustain the growth of construction firms.

Keywords: Strategic leadership; Construction business growth; Innovation orientation; Organisational culture; Project management effectiveness.

Urban Security as a Pillar of Sustainable Development: Integrating Security Guards into City Planning

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Abstract

Rapid urbanization has become a defining feature of contemporary development, particularly in emerging economies across Africa, Asia, and Latin America. While cities increasingly drive economic growth and innovation, rapid urban expansion has also intensified challenges related to crime, inequality, and the management of public spaces. Within this context, urban security has emerged as a critical yet underappreciated pillar of sustainable urban development. Global frameworks such as the Sustainable Development Goals—SDG 11 (Sustainable Cities and Communities) and SDG 16 (Peace, Justice and Strong Institutions)—underscore the importance of safe, inclusive, and resilient cities. However, urban security is often addressed reactively through policing, rather than being systematically embedded in urban planning and governance. Security guards and supporting security services play a vital role in maintaining order, protecting infrastructure, and supporting everyday safety in residential areas, commercial centres, transport hubs, and public institutions. In many Global South cities, including Ghana, pressures on public policing have increased reliance on private and community-based security arrangements. Despite their importance, security guards remain weakly integrated into formal city planning and sustainability agendas. This study examines urban security as a pillar of sustainable development, focusing on how security guards can be systematically integrated into city planning frameworks. Anchored in Sustainable Urban Development, Human Security, and Urban Governance theories, the study adopts a qualitative design using semi-structured interviews with security personnel, urban planners, and community stakeholders. Expected findings suggest that while security guards significantly contribute to urban safety, institutional gaps, weak coordination, and limited recognition constrain their effectiveness.

Keywords: Urban security, security guards, sustainable urban development, city planning, human security, urban governance.

Developing a Steady State Model to Analyse CO₂ Flow Behaviour in Pipeline Networks to Enhance Youth Employment in Ghana

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Abstract

As Ghana explores climate-conscious industrial development, carbon capture, utilisation and storage (CCUS) technologies are gaining traction. However, an underdeveloped technical pipeline network and limited local modelling capacity hinder implementation. This study develops a steady state model for analysing CO₂ flow behaviour in pipeline networks, with dual aims: to inform the design of safe, efficient carbon transport systems and to generate skills-based employment opportunities for Ghanaian youth in the energy transition sector. Using Aspen HYSYS and Python, the study simulates thermodynamic properties, pressure drops, and phase transitions in CO₂ transport pipelines. The research contributes both technically by outlining optimal design parameters and developmentally by recommending training and upskilling pathways aligned with emerging green infrastructure needs. Findings advocate for strategic investment in modelling capacity as a catalyst for youth employability in Ghana's growing low-carbon energy economy.

Keywords: Carbon capture, CCUS, pipeline modelling, carbon dioxide transport, green skills, Ghana.

Maintenance Workload and Workforce Development in Tertiary Institutions for Sustainable Construction in Nigeria

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Abstract

The study examined maintenance workloads across various maintenance units in selected tertiary institutions in Nigeria and assessed the adequacy of in-house maintenance operatives to cope with these workloads. This was with a view to enhancing workforce development and maintenance practices in tertiary institutions. Primary data were collected through a structured questionnaire, while secondary data were sourced from maintenance department records in selected tertiary institutions. Purposive sampling was used to select institutions that met the criteria of having buildings aged 20-70 years, with a theoretical constant failure rate, and with established maintenance departments. This gives a total sample size of 252. The data obtained were analysed using frequency distributions and percentages, mean response analysis, and the Spearman correlation coefficient. The results of the maintenance workload from various maintenance units in the selected tertiary institutions showed that five maintenance units with the highest rating were building and civil Engineering works with a mean score of (4.61), building cleaning and routine cleaning (4.55), electrical and lighting (4.39), plumbing and drainage (4.36) and parks and gardens with a mean score of (4.30). The assessment of the adequacy of in-house maintenance operatives to cope with the maintenance workload in the selected tertiary institutions found that, across all institutions, the number of technical maintenance operatives was inadequate and could not cope with the workload across various units, underscoring the need for workforce development.

Keywords: Development, Maintenance, Tertiary Institutions Workforce, Workload

Level of Satisfaction of End-Users with Cement Products for Sustainable Construction in Nigeria

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Abstract

This research determined the level of end users' satisfaction with cement products in Nigeria. The study identified the causes of satisfaction, categorize them according to Kano's satisfaction requirements, and measured end users' satisfaction levels. Data were sourced through a questionnaire survey (203) administered to construction industry professionals randomly sampled from a list of active sites on Lafarge Cement Lagos Island (Simawa) and Mainland (Ikeja and Lekki – Ajah) Sales Excellence archive, with one hundred and nineteen (119) returned (58.6% return rate). Findings revealed that the factors contributing to end-user satisfaction with cement included full bags (Mean Score = 5.83), prompt delivery (5.65), strength (5.50), and workability (5.50). Respondents attributed an indifferent satisfaction requirement to the colour of the cement. These causes, categorized on the 'extra-dimensional' Kano quality plane, were found to be one-dimensional (1-D). The study concludes that promptness in delivery is the foremost satisfaction requirement (S.I = 0.83). Also, respondents were satisfied with availability but tend to be dissatisfied with price, implying that the cost of availability is added to the production cost of cement. Still, the fulfillment of social needs attributable to the brand and the attractive packaging of cement is in doubt. Other implication includes the socio-ecological dimension of cement for sustainable construction and the effect of a cultural product on its price.

Keywords: Cement, End-user, satisfaction, Causes of satisfaction, Kano satisfaction requirements, Cultural product

Analyzing Cost-Optimal Electrification Technologies for Universal Electricity Access at the Subnational Level in Ethiopia using OnSSET

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Abstract

Access to affordable, reliable, and modern electricity is widely recognized as a fundamental enabler of development, underpinning essential services and economic activities. However, it remains a significant challenge in many developing countries. This study aims to identify the cost-optimal mix of electrification technologies necessary for achieving universal electricity access by 2030 in the Afar and Somali regions of Ethiopia, where electricity access rates are below 20%. Using the Open-Source Spatial Electrification Toolkit (OnSSET) and high-resolution geospatial datasets on population, grid infrastructure, topography, and sector-specific electricity demand (household, health, education), the study evaluates and compares grid extension with mini-grids (MGs) and standalone photovoltaic (SA PV) systems under three demand scenarios. Findings indicate that under a low-demand scenario, grid extension is the least-cost option for 63% of the population in Afar and 52.3% in Somali. SA PV systems serve 29% in Afar and 23.5% in Somali, while MG PV contributes 8.6% in Afar and 24.2% in Somali. In high-demand scenario, grid expansion becomes dominant, reaching 90% in Afar and 69.7% in Somali, while MG PV accounts for 7.1% in Afar and 25.4% in Somali. SA PV systems, in contrast, decline to 2.8% in Afar and 4.9% in Somali. Investment requirements range from \$45.8 to \$179.5 million in Afar and from \$344.1 million to \$1.23 billion in Somali, depending on demand levels. These findings highlight the importance of high-resolution, sector-integrated geospatial planning to identify the least-cost pathways tailored to settlement demand and infrastructure realities in regions with limited electricity access.

Keywords: Universal electricity access, geospatial electrification, grid extension, photovoltaic mini-grids, standalone solar systems, Ethiopia.

AI, Data Analytics, Computing, and Digital Technologies

Toward Inclusive AI Governance: Infrastructure, Interconnection, and Equity in the Global AI Economy

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Abstract

Artificial intelligence (AI) is transforming economies, societies, and internet architecture by generating new traffic patterns, data flows, and demands for computational infrastructure. Although AI offers considerable opportunities in healthcare, agriculture, education, and finance, its benefits remain unevenly distributed, particularly across least developed countries, landlocked developing countries, and other underserved regions. This conceptual paper examines how inequalities in digital infrastructure and interconnection shape participation in the global AI economy. Many AI systems are developed outside the contexts in which they are deployed and rely on datasets that inadequately represent local languages, knowledge, and social realities. These conditions may create a structural AI divide extending beyond internet connectivity to encompass access to computing capacity, local data processing, interconnection infrastructure, relevant skills, and participation in value creation. Dependence on international transit networks, high bandwidth costs, limited bargaining power, and the concentration of hyperscale infrastructure may further weaken local internet exchange points and digital ecosystems. The paper argues that inclusive AI governance must address not only ethical and regulatory concerns but also infrastructure geography, equitable data governance, technology transfer, and local capacity development. Collaboration among governments, regulators, industry, academia, and international organisations is essential to ensure that AI governance promotes digital sovereignty and equitable participation in the global AI economy.

Keywords: AI governance, digital infrastructure, interconnection, digital equity, data governance, digital sovereignty.

Hybridising MCDA and Production Theory: An Evidential Reasoning Model for Banking Efficiency Assessment

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Abstract

Efficiency assessment in banking has traditionally relied on Data Envelopment Analysis (DEA), a method that optimises performance by adjusting inputs and outputs. However, DEA struggles to accommodate qualitative indicators, ratio-based measures, and uncertainty—features that increasingly characterise modern banking environments. This study introduces an Evidential Reasoning (ER)-- based benefit–cost methodology that integrates production theory with Multi-Criteria Decision Analysis (MCDA) to provide a more comprehensive and uncertainty-tolerant approach to evaluating bank efficiency. Using data from all banks operating in Ghana between 2013 and 2024, the study applies swing weighting, derived from consultations with senior decision-makers, to establish the relative importance of benefit and cost attributes. The ER framework aggregates basic-level indicators into overarching benefit and cost dimensions, which are then optimised to generate efficiency scores. For benchmarking, efficiency scores were also computed using the classical CCR DEA model. Statistical comparisons using the t-test, the Wilcoxon signed-rank test, and the Simar–Zelenyuk Li test reveal significant differences between the two methods. DEA consistently underestimates efficiency and misclassifies several banks as inefficient, whereas the ER-based approach provides a more stable and context-sensitive evaluation. Trends across the 2013–2024 period show no significant shift in average efficiency before and after Ghana’s 2018 financial sector reforms, though the robustness of regulatory interventions is evident. The study contributes a hybrid methodological pathway that unifies MCDA, ER, and production theory, offering a richer, multi-perspective framework for future research on banking performance assessment.

Keywords: Bank efficiency, evidential reasoning, benefit–cost analysis, data envelopment analysis, multi-criteria decision analysis, Ghana.

AiShifters: Conceptualising the Future Workforce for AI and Automated Industries in the Global South, A Case Study of Ghana

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Abstract

The growing impact of artificial intelligence (AI) on global labour markets, combined with structural challenges such as informality and limited digital infrastructure, creates both risks and opportunities for workforce transformation in countries like Ghana. While AI is projected to affect a significant share of jobs worldwide, most workers in the Global South remain concentrated in informal and low-value segments of the digital economy, including data annotation and platform-based microtasks. This creates a gap between the potential of AI and the capacity of actual workers benefiting from it. In this study, we introduce the *AiShifter* framework as a practical approach to understanding how workers can transition from basic participation in AI systems to actively using AI to improve productivity and solve local problems. We focus on university graduates and gig-economy workers in Ghana and explore how AI can be applied in sectors such as retail, services, logistics, and small-scale agriculture. Using a qualitative, conceptual case study approach supported by secondary data and existing research, the study examines current labour conditions, skill gaps, and opportunities for AI integration. The findings suggest that AI is more likely to support and reshape work rather than replace it, particularly in informal and gig-based sectors and highlight clear opportunities for workers to move into higher-value roles. These results emphasise the need for targeted training, improved digital infrastructure, and support for local innovation, and provide policymakers, educators, and technology providers with insights for achieving a more inclusive, AI-driven workforce future.

Keywords: Artificial intelligence, workforce transformation, gig economy, digital skills, informal employment, Ghana.

Provision of Broadband Networks for Selected Mountainous Terrain Communities Using Television White Space Frequency

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Abstract

Broadband connectivity in under-served communities in Ghana are due to high infrastructure costs and inadequate investment, creating barriers to education, healthcare, and socio-economic development. This study was carried out in two main approaches: initial part of field visit, test and measurement during survey to select the communities and the final part of design and simulation of Television White Space (TVWS) Wireless Regional Area Network (WRAN) on Radio Mobile software environment. As a results, eight communities in the mountainous terrain of the Akuapem North District of the Eastern region, Ghana, namely Aburi, Tutu, Mamfe, Larteh, Akropong, Adawso, Adukrom, and Apirede, were selected for the study. The study has demonstrated how to determine key parameters such as azimuth and elevation angles, antenna gain and transmitter power. The study has also established that the frequency range for each TVWS WRAN, is suitable for evaluating the viability of the link for broadband connectivity. In addition, the simulation results for distance, free space loss and path loss were calculated and found to meet international standards.

Keywords: Television White Space, broadband connectivity, wireless networks, digital inclusion, rural communities, Ghana.

The Political Economy of Green Industrialisation in Africa: Inclusion, Capability, and Transformation

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Abstract

Green transitions are reshaping development pathways worldwide, yet the implications for late-industrialising African economies remain under-theorised and unevenly reflected in policy and practice. This paper interrogates how green transitions can be harnessed to support inclusive industrialisation in Africa, rather than reinforcing existing patterns of technological dependence, commodity specialisation and social exclusion. It develops an integrated analytical framework that connects structuralist theories of industrialisation, just transition thinking and emerging work on green industrial policy to examine the conditions under which climate-compatible strategies can drive structural transformation, job creation and productive inclusion. Empirically, the paper draws on recent African experiences with renewable energy deployment, green value-chain development and climate-linked industrial policy instruments, highlighting the role of state capability, policy coherence, financing architectures and political economy dynamics. It contrasts cases where green transition agendas have catalysed new productive capabilities and decent work with instances where they risk “green enclaves” and limited domestic spillovers. On this basis, the paper distils practical lessons for policymakers, regulators and development partners on aligning net-zero commitments with industrial strategies, strengthening institutions for coordinated implementation, and embedding inclusion (youth, gender, SMEs, informal producers) into green industrialisation pathways. The contribution is to bridge theory, policy and practice by offering a grounded account of how African countries can move beyond normative support for green transitions towards context-specific, inclusive industrial transformation strategies.

Keywords: Green transition, inclusive industrialisation, green industrial policy, structural transformation, just transition, Africa.

The Effects of Monetary Policy and Financial Technology on Inflation: Evidence from Emerging and Developing Countries

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Abstract

This paper investigates the effects of monetary policy and financial technology on inflation in emerging and developing countries. The study uses panel data of 80 over the period, 2000-2021. The Dynamic System General Moments Method is employed in the analysis. The empirical findings indicate that inflation is negatively influenced by monetary policy. Similarly, increased access to financial services through Fintech has a reducing effect on inflation. However, Fintech utilization promotes inflationary pressures in an economy. Additionally, the interaction between monetary policy and access to Fintech services has a positive correlation with price stability whereas the interaction of tight monetary policy and Fintech utilization reduces inflation in emerging and developing countries. The paper contributes to extant literature on the relationship between monetary policy, Fintech and inflation and further adds new contributions on how these two affect the stability of prices of goods and services in the era of technological financial innovations in an economy.

Keywords: Monetary policy, financial technology, inflation, price stability, financial inclusion, developing economies.

Building Human Capital for A Sustainable Future: The Role of Basic Education Leadership in Advancing Environmental Literacy and Green Skills in Ghana

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Abstract

Africa's pursuit of green industrialisation and sustainable development requires sustained investment in human capital, beginning with basic education. Schools influence the knowledge, values, attitudes, and behaviours of future generations and can therefore provide an important foundation for environmentally responsible citizenship and participation in emerging green economies. In Ghana, however, environmental education and sustainability practices remain insufficiently integrated into the routine activities of many public basic schools. Drawing on the practical experience of a headmistress in a public basic school in Accra, this paper examines how school leadership can promote environmental literacy and develop foundational green skills among learners. It considers the role of educational leaders in integrating sustainability into teaching and learning, modelling environmentally responsible behaviour, supporting school-based environmental activities, and building partnerships with parents and local communities. The paper argues that effective leadership can translate broad sustainability objectives into practical initiatives such as waste segregation, recycling, school gardening, energy and water conservation, and environmental awareness campaigns. Nevertheless, limited resources, inadequate teacher preparation, curriculum pressures, and weak institutional support may constrain implementation. The paper concludes that strengthening leadership capacity, teacher training, community participation, and access to sustainability-focused learning resources can position basic schools as catalysts for long-term behavioural change and human-capital development. These measures can help prepare young people to contribute meaningfully to Ghana's inclusive green transition.

Keywords: Basic education, school leadership, environmental literacy, green skills, human capital, Ghana.

Green Transitions and Inclusive Industrialization in Africa: Theory to Policy and Practice “The Use of Accreditation Management Information System by the Ghana Tertiary Education Commission for Programme Accreditation”

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Abstract

The shift from manual, paper-based accreditation to digital systems in Ghana highlights a critical link between inclusive industrial growth and environmental sustainability. Prior to 2024, programme accreditation required institutions to submit multiple hard copies of extensive documents, resulting in high paper consumption, increased administrative costs, and elevated carbon emissions. The introduction of the Accreditation Management Information System (AMIS) by the Ghana Tertiary Education Commission represents a strategic move toward digital governance. This study examines how AMIS supports the broader agenda of green transitions and inclusive industrialisation in Africa. It assesses environmental impact, efficiency gains, and improved accessibility, while positioning AMIS as a model for sustainable public sector innovation. An analytical and quantitative approach was used to compare the traditional accreditation process with the digital platform. Data from over 3,000 applications processed since 2024 were analysed to estimate paper savings, carbon emission reductions, and operational efficiencies. Findings indicate that AMIS has eliminated the need for approximately 2.7 million sheets of paper, conserving an estimated 336 trees and preventing about 12 metric tonnes of CO₂ emissions. Additionally, transport-related emissions have reduced by approximately 70% due to decreased reliance on physical submissions. The system has also enhanced efficiency, lowered administrative costs, and improved access for geographically dispersed institutions. Overall, AMIS demonstrates how digital public infrastructure can align regulatory processes with sustainability and inclusive development goals, offering a scalable model for policy-driven digitalisation across Africa.

Keywords: Digital accreditation, public-sector digitalisation, green transition, carbon reduction, inclusive development, Ghana.

Conformal PM_{2.5} Mapping Under Spatial Covariate Shift: Satellite–Reanalysis Fusion for Africa’s Green Industrial Transition

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Abstract

Africa’s green industrialisation requires reliable air quality monitoring, yet ground-based infrastructure remains sparse. This study presents a satellite–reanalysis PM_{2.5} fusion framework trained on 2,068,901 observations from 404 monitoring locations across 29 African countries (2017–2022). A LightGBM model is evaluated using leakage-resistant spatial cross-validation to ensure realistic geographic generalisation. Performance under this strict protocol yields RMSE $30.83 \pm 5.07 \mu\text{g m}^{-3}$, MAE $14.54 \pm 1.66 \mu\text{g m}^{-3}$, R² 0.134 ± 0.023 , and macro F1 0.336 across six AQI categories. Although lower than random-split benchmarks, these results reflect true deployment conditions. To quantify predictive uncertainty, split conformal prediction is applied targeting 90 percent coverage. Results reveal regional variability, with East Africa showing substantial degradation (65.3 percent coverage) linked to medium covariate shift in humidity and planetary boundary layer height. A reliability framework categorises predictions into High, Medium, Low, and Unreliable zones, supporting policy decisions. A monitor prioritisation score combining uncertainty and population density identifies high-need regions for infrastructure expansion. The framework directly supports climate finance verification, environmental regulation, and sustainable industrial policy. By integrating uncertainty-aware modelling with spatial validation, this work provides a practical measurement system for Africa’s green industrial transition, aligned with multiple sustainable development goals.

Keywords: Air-quality monitoring, PM_{2.5}, satellite data, machine learning, predictive uncertainty, Africa.

Forecasting Electricity Consumption in a Ghanaian Brewery

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Abstract

Electricity is a critical input in industrial production, and reliable consumption forecasts are essential for energy planning, cost control, and operational efficiency. This study develops and compares forecasting models for daily electricity consumption in a brewery. Secondary data comprising daily electricity consumption and production volumes were collected from a brewery in Ghana between July 2022 and June 2023. Two modelling approaches were evaluated: autoregressive integrated moving average (ARIMA) time-series models and curve-fitting models. The ARIMA specifications assessed were ARIMA (3,1,0), ARIMA (2,1,3), ARIMA (2,1,0), ARIMA (1,1,0), and ARIMA (0,1,1). The curve-fitting models comprised polynomial, Fourier series, Gaussian, and sum-of-sines functions. The most suitable ARIMA model was selected based on the lowest predictive mean square error. Curve-fitting performance was evaluated using root mean square error, sum of squared errors, and adjusted and unadjusted coefficients of determination. The results identify ARIMA (0,1,1) as the most accurate model for forecasting daily electricity consumption. Among the curve-fitting alternatives, the sixth-order sum-of-sines model provided the best fit for the relationship between production volume, measured in hectolitres, and electricity consumption. The findings provide brewery managers with practical forecasting tools for improving energy budgeting, production scheduling, demand management, and operational decision-making.

Keywords: Electricity consumption, energy forecasting, brewery operations, ARIMA, curve fitting, production planning.

Bridging the Digital and Green Divide: E-Learning and Digital Skills for Workforce Readiness in Africa's Green Economy

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Abstract

Africa stands at the intersection of two transformative forces: a rapidly expanding young population and an intensifying need for climate action. Approximately 12 million young Africans enter the labour market annually, while only about three million formal jobs are created. At the same time, climate change increasingly threatens livelihoods, particularly because much of the population depends on climate-sensitive sectors such as agriculture, forestry, and water management. The transition to a green economy offers an opportunity to address these employment and environmental challenges simultaneously. Renewable energy, climate-smart agriculture, circular economy systems, and green manufacturing are creating new occupational pathways that require specialised technical, digital, and environmental competencies. This study examines how e-learning and digital technologies can support human-capital development for Africa's green economy. It synthesises evidence from recent training initiatives, published survey findings, and policy frameworks across the continent. The analysis argues that integrating digital-skills training with environmental education can help bridge the gap between climate ambitions and workforce readiness. It further identifies investment in accessible learning platforms, locally relevant curricula, affordable connectivity, and inclusive participation mechanisms as essential to preparing African youth for emerging green employment. By addressing persistent inequalities in science, technology, engineering, and mathematics education and digital access, e-learning can expand participation in the green economy and support a more inclusive, skilled, and climate-resilient African workforce.

Keywords: E-learning, digital skills, green economy, workforce readiness, African youth, environmental education.

The Role of FinTech in Addressing Institutional Voids Affecting SMEs in Sub-Saharan Africa

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Abstract

Institutional voids, including weak regulatory systems, corruption, limited access to formal finance, and underdeveloped market-support structures, constrain the growth and competitiveness of small and medium-sized enterprises (SMEs) across sub-Saharan Africa. Financial technology (FinTech) may address some of these constraints by providing alternative financial services, improving transaction efficiency, and connecting underserved enterprises to formal economic systems. Drawing on institutional theory, the Behavioural Theory of Social Entrepreneurship, and the Unified Theory of Acceptance and Use of Technology, this study examines how FinTech firms function as disruptors and institutional intermediaries within the SME sector. It focuses on technologies such as mobile money, digital lending, electronic payments, and data-driven financial services and considers their contributions to financial inclusion, operational efficiency, and enterprise growth. The study adopts a mixed-methods approach to generate comparative evidence from Ghana, Nigeria, and Kenya. It also investigates barriers that may limit FinTech's effectiveness, including digital exclusion, cybersecurity risks, regulatory uncertainty, inadequate infrastructure, and limited user trust. By integrating institutional and technology-adoption perspectives, the research seeks to explain the conditions under which FinTech can compensate for or transform weak institutional arrangements. The study is expected to contribute to theory and provide practical insights for policymakers, financial service providers, and development institutions seeking to create inclusive and sustainable digital financial ecosystems for African SMEs.

Keywords: FinTech, institutional voids, small and medium-sized enterprises, financial inclusion, digital finance, sub-Saharan Africa.

Artificial Intelligence in Sub-Saharan Africa: A Systematic Review of Economic Impact, Job Market Readiness, and Ethical Risks for a Sustainable Green Economy

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Abstract

Sub-Saharan Africa now finds itself at a digital and environmental inflection point, demanding a strategic realignment of human capital to steer the shift toward a green economy. This article reports the outcomes of an exhaustive systematic review of 103 academic papers (published from 2000 to 2025) that investigate how Machine Learning (ML), a subfield of Artificial Intelligence (AI), is being integrated into the region's economic and financial arenas. Following PRISMA-AI protocols, the study assesses research trajectories using three distinct metrics: the Model Reproducibility Score (MRS), Local Data Ratio (LDR), and Ethical Disclosure Index (EDI). The findings show a marked increase in AI research activity since 2017, with deep-learning models emerging as key tools for poverty mapping, satellite-image analysis, and financial inclusion. While these technologies promise “technological leapfrogging,” they also pose intricate challenges for the future labour market. The analysis quantifies a high incidence of algorithmic bias (68 % of studies) and data-sovereignty concerns (42 %), which threaten equitable human-capital development. The review singles out East Africa—particularly Kenya and Rwanda—as the main hubs of tech-driven innovation. To cultivate a workforce prepared for a green economy, the paper stresses the importance of “decolonial AI” strategies that foreground local agency and digital literacy. Ultimately, it proposes a systematic ethical-risk assessment framework, concluding that nurturing human capital for a sustainable future hinge on aligning AI automation with responsible governance so that digital technologies become a catalyst for inclusive, green, and resilient economic transformation across Africa.

Keywords: Artificial intelligence, machine learning, human capital, green economy, ethical AI, sub-Saharan Africa.

Mobile Payment Innovation and Financial Inclusion: A Multi-Level Review Of Technology, Platforms, And Socio-Economic Impact

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Abstract

Mobile payment systems have become a key component of the global digital finance ecosystem, transforming financial transactions across both developed and emerging economies. Despite rapid growth in this field, the literature remains fragmented, spanning technological infrastructure, user adoption, platform ecosystems, and socio-economic impacts. Most studies focus on technology acceptance models, while broader ecosystem dynamics and spatial financial implications are less explored. This study conducts a systematic literature review of 136 peer-reviewed articles published between 2010 and 2025. Following the PRISMA protocol, the selected studies are analyzed using thematic synthesis. The review identifies four main research streams: technological infrastructure, behavioural adoption, platform ecosystem dynamics, and socio-economic development outcomes. Although research has expanded significantly, these perspectives are often examined in isolation, limiting a comprehensive understanding of how mobile payment systems transform financial ecosystems. To address this gap, the study proposes a multi-level conceptual framework integrating technological innovation, user behaviour, platform ecosystems, and socio-economic transformation. The framework explains how mobile payment systems evolve from standalone technologies into broader financial infrastructures that reshape market interactions, business models, and financial inclusion. It also highlights differing development trajectories: mature economies emphasize efficiency and platform integration, while emerging economies focus on accessibility and inclusion. This study contributes by bridging fragmented research streams and linking mobile payment studies with broader discussions on digital finance and financial geography, offering a comprehensive perspective and directions for future research.

Keywords: Mobile payments, digital finance, financial inclusion, platform ecosystems, financial geography, systematic literature review.

Reimagining SME Automation: Leveraging Agentic AI for Increased Productivity Among Local Businesses in Accra

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Abstract

The growing complexity of business environments, combined with limited access to advanced technological resources, makes an autonomous system built with artificial intelligence (AI) agents a compelling solution for enhancing productivity and competitiveness among local enterprises in Ghana. Digitalization, with AI as a key driver of growth for small and medium-sized enterprises (SMEs), enables firms to streamline operations, improve decision-making, and expand their market reach. However, the adoption of these advanced AI tools remains low, creating a significant digital capability gap. Evidence from Ghana shows that many SMEs face critical challenges that hinder productivity and competitiveness. This study investigates how agentic artificial intelligence can boost automation and productivity among SMEs in Accra by developing AI workflows for SMEs in the retail, services, and small-scale manufacturing sectors. We evaluate their impact on operational efficiency compared to manual processes and identify workflow opportunities, productivity gains, and barriers to adoption. The findings suggest that agentic AI can substantially improve SME performance in Accra, especially in resource-limited settings. These results highlight the need for targeted skills development, infrastructure improvements, and access to AI technologies tailored to local conditions. They also serve as evidence for policymakers and technology providers to design strategies that promote effective AI-driven automation, enhancing operational efficiency, competitiveness, and sustainable growth in local businesses.

Keywords: Keywords: Agentic artificial intelligence, small and medium-sized enterprises, business automation, productivity, digital transformation, Ghana

Building Public Trust in Central Bank Digital Currency: The Case of eNaira in Nigeria

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Abstract

Governments are investing in digital technologies like central bank digital currencies (CBDCs) to expand financial access, yet public skepticism threatens uptake of CBDCs. This study addresses the gap in understanding what builds public trust in CBDC by developing and testing a conceptual model grounded in the expanded innovation diffusion theory. Using Nigeria's eNaira as an empirical setting, the model explains 54% of variance in trust and 33% of variance in adoption intention. Four of six antecedents significantly predict trust. Perceived convertibility has the largest effect, followed by trialability, compatibility, and relative advantage. Perceived stability and observability do not significantly influence trust. Trust, in turn, positively and significantly predicts adoption intention. The findings indicate that policymakers should prioritize measures that ensure easy conversion between digital and cash, enable low-risk trials, and align CBDC features with users' lifestyles and perceived benefits. Targeted informational campaigns and practical pilot experiences can strengthen trust and accelerate adoption. The study advances theory by integrating convertibility and stability into IDT and offers actionable guidance for designing CBDC policies in contexts where public confidence remains low.

Keywords: Central bank digital currency, public trust, adoption intention, eNaira, innovation diffusion, Nigeria.

Beyond the Co-pilot: Architecting Trustworthy Agentic Workflows for Frontline Healthcare in Ghana

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Abstract

This study investigates how agentic artificial intelligence (AI) systems—autonomous “digital clinicians”—can be architected to foster patient trust in frontline African healthcare settings. Using a sequential mixed-methods design grounded in Rogers’ Diffusion of Innovations (DOI) Theory, the research comprises qualitative interviews and participatory design workshops with healthcare workers and patients in Ghana, followed by a quantitative survey. Preliminary findings indicate that trust in autonomous AI is contingent upon compatibility with local health beliefs, cultural norms, and existing clinical workflows. Users evaluate AI advantages in relational terms—such as enabling more direct patient care—rather than purely technical metrics. Trust also disseminates through social networks via observability and community endorsement. The study concludes that trustworthy agentic AI requires alignment with community values, integration into social systems, and opportunities for observational learning, offering actionable insights for deployment in resource-constrained African healthcare contexts.

Keywords: Agentic artificial intelligence, healthcare, patient trust, digital clinicians, technology adoption, Ghana.

Urban Futures (Social Science and Development)

Reframing Urban Informality: Gendered Skills, Structural Inequality, and the Future of Work in Ghana's Cities

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Abstract

Urbanisation in sub-Saharan Africa has diverged from conventional development trajectories, resulting in the dominance of informal economies in cities such as Accra, Kumasi, and Tamale. In Ghana, informal employment accounts for the vast majority of women's economic activity, reflecting entrenched structural inequalities rather than temporary labour market conditions. This paper applies participatory development theory to reframe understandings of informality, positioning women as active agents in shaping labour market transformation. Drawing on qualitative, participatory research conducted through the She Builds Ghana initiative, the study integrates stakeholder-generated knowledge from government actors, informal worker associations, financial institutions, and development organisations. Findings reveal that informality is a deeply embedded labour regime shaped by systemic exclusion, gendered constraints in skills acquisition, and limited access to institutional support. Participatory approaches highlight how unpaid care work, digital exclusion, and restricted decision-making opportunities constrain women's economic participation. The study emphasises the importance of inclusive skills ecosystems, digital inclusion strategies, and care infrastructure in addressing these barriers. Additionally, weak institutional coordination and the absence of gender-disaggregated data limit effective policymaking, underscoring the need for participatory data systems and a national Gender Data Hub. The paper proposes an integrated framework for labour market transformation that combines skills development, digital inclusion, enterprise support, social protection, and data-driven policy coordination. It concludes that sustainable urban economic transformation in Ghana depends on embedding participatory processes within policy design and implementation, ensuring that women in the informal economy are central to shaping the future of work.

Keywords: Urban informality, women's employment, participatory development, skills development, digital inclusion, Ghana.

Municipal Governance and Inclusive Green Urban Development: The Role of Local Assemblies in Advancing Sustainable Transitions in Ghana

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Abstract

Large-scale infrastructure, industrial transformations, renewable energy, and national policies are frequently used to highlight the green transition in Africa. However, local events also play a significant role in the achievement of sustainable development. Local assemblies are in charge of converting national development policies into useful services that have an impact on individuals' daily lives in Ghana, where they are the closest government entities to the communities. They are crucial players in promoting inclusive green urban development because of their duties in planning, sanitation, environmental health, infrastructure coordination, community participation, local economic growth, and public service delivery. This paper examines the role of municipal governance in supporting sustainable transitions in Ghana, using the professional context of a Director IIB at Ga West Municipal Assembly as a practical point of reference. Ga West is a growing municipality with urban and peri-urban characteristics, where issues such as population growth, waste management, land use pressure, drainage challenges, infrastructure demand, public health, youth livelihood concerns, and informal economic activities remain central to local development. These everyday urban challenges create the need for municipal leadership that is responsive, coordinated, inclusive, and sustainability oriented.

Keywords: Municipal governance, green transition, urban development, local government, social inclusion, Ghana.

Infrastructure, Mobility, and Inclusive Development: Integrated Approaches to Sustainable Construction in Ghana

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Abstract

This paper examines the role of small- and medium-scale enterprises in advancing inclusive infrastructure and mobility systems in underserved communities in Ghana. Positioned within debates on green transitions and sustainable industrialisation in Africa, this paper explores how integrated construction and transport activities contribute to improved access, economic inclusion, and community resilience. Drawing on practice-based insights from projects including residential housing, school infrastructure, CHPS compounds, borehole development, and transport-linked services, the study adopts an applied, case-oriented approach. It highlights how construction activities, supported by local logistics and mobility solutions, address critical infrastructure deficits while facilitating the movement of materials, labour, and goods across rural and hinterland areas. The paper further considers the role of diaspora-led investment in both housing and asset-based sectors, including transport, examining how these investments shape local development outcomes while raising challenges around coordination, quality assurance, and regulatory compliance. It argues that sustainable transitions in Africa require integrated approaches that link infrastructure provision with mobility systems and local enterprise development. By foregrounding the interconnected role of construction and transport actors, the paper contributes to debates on sustainable infrastructure, inclusive growth, and practical pathways for development in marginalised communities.

Keywords: Small and medium-sized enterprises, sustainable infrastructure, mobility systems, diaspora investment, community resilience, Ghana.

Educational Leadership and Human Capital Development for Sustainable Transitions in Ghana

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Abstract

This paper examines the role of educational leadership in shaping human capital for sustainable development in Ghana, situating classroom practice within broader debates on Africa's green transition and inclusive industrialisation. It addresses a key gap in existing scholarship by foregrounding educators as frontline actors in preparing young people for participation in a green and inclusive economy. Drawing on over fifteen years of experience across senior high education, community leadership, and municipal administration, the study adopts a qualitative, practice-informed approach. It analyses how teaching and mentoring in Biology and Integrated Science foster critical thinking, environmental awareness, and civic responsibility, which are competencies essential for workforce readiness in emerging green sectors. These pedagogical practices are reinforced through leadership roles in community and faith-based institutions, where values of accountability, participation, and social responsibility are actively cultivated. The paper further reflects on administrative experience within local government to illustrate how skills in governance, coordination, and institutional leadership contribute to the wider ecosystem that supports human capital development. It argues that Africa's sustainable transitions depend not only on policy reform and technological innovation, but also on sustained investment in locally grounded educational leadership that equips young people with the skills and values required for long-term development.

Keywords: Educational leadership, human capital, green transition, environmental education, workforce readiness, Ghana.

Green Transitions as Racialised Political Economy: Reframing Inclusive Industrialisation in Africa through Critical Race Theory

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Abstract

The global shift toward low-carbon development has positioned Africa as both a site of opportunity and a frontier of renewed extraction within the energy transition. While dominant policy narratives frame green transitions as universally beneficial and technologically driven, this paper argues that they are better understood as racialised political economy processes, embedded within historical and contemporary structures of inequality. Drawing on Kimberlé Crenshaw's concept of structural inequality, Derrick Bell's theory of interest convergence, and Pierre Bourdieu's multidimensional framework of capital, the paper develops an integrated analytical model linking global systems to local institutional dynamics. Using Ghana as an empirical case, the analysis demonstrates how renewable energy expansion simultaneously generates opportunities for energy access and entrepreneurship while reproducing dependency, labour exclusion, and uneven value capture. The paper introduces the concept of *green extractivism* to explain the continuity between historical resource exploitation and contemporary mineral demand driven by decarbonisation. It argues that inclusive green industrialisation requires a shift from technocratic sustainability frameworks toward a justice-oriented model grounded in structural equity, local value creation, labour inclusion, and epistemic justice.

Keywords: Green extractivism, racialised political economy, energy transition, structural inequality, climate justice, Ghana.

Gatekeeping the Urban Edge: Residents' Associations and the Reconfiguration of Everyday Governance in Peri-Urban Accra, Ghana

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Abstract

Residents' Associations (RAs) are increasingly emerging as influential actors in shaping peri-urban development across Sub-Saharan Africa. While their roles within urban neighbourhoods and gated communities are well established in the literature, comparatively little is known about the processes underpinning their emergence and modes of operation in rapidly transforming peri-urban contexts. Drawing on the conceptual lens of "gatekeeping," and informed by field visits and qualitative interviews conducted through workshop discussions with leaders of 29 RAs in peri-urban Accra, this paper examines both the evolution of these associations and the mechanisms through which they shape access to social services and everyday governance. The findings demonstrate that RAs function as critical gatekeepers, occupying intermediary positions between state institutions, customary authorities, and residents. In doing so, they actively mediate and shape access to land, water, security, and other essential social services. Beyond addressing formal governance shortfalls, their activities are shown to be instrumental in reconfiguring peri-urban governance practices, particularly through processes of negotiation, brokerage, and forms of situated citizenship participation. By conceptualising RAs as gatekeepers, the paper foregrounds the significance of intermediary actors and underscores the need for critical engagement with their roles in order to advance more equitable and sustainable forms of peri-urban development.

Keywords: Residents' associations, gatekeeping, peri-urban governance, service access, citizen participation, Accra.

Early Entrepreneurial Imprints and Sociopreneurship: Implications for Green Transitions and Inclusive Industrialisation in Africa

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Abstract

This study examines how the timing of entrepreneurship education and training shapes sociopreneurship in emerging economies and considers the implications for Africa's green transition and inclusive industrialisation. Drawing on dynamic imprinting theory, it argues that entrepreneurial learning received early in life creates more durable prosocial and opportunity-oriented orientations than training received at later stages. The analysis uses data from the Global Entrepreneurship Monitor Adult Population Survey and National Expert Survey covering 26 emerging economies between 2002 and 2022. It distinguishes between entrepreneurship education delivered at the basic-school level and post-school entrepreneurship education and training. The study also examines whether commercial and professional infrastructure and country-level cultural norms condition these relationships. The findings show that basic-school entrepreneurship education is positively associated with sociopreneurship. Post-school education has a weak average effect but becomes more influential in supportive institutional environments characterised by stronger commercial and professional infrastructure and enabling cultural norms. These results demonstrate that educational timing and entrepreneurial-ecosystem quality jointly shape socially oriented entrepreneurial activity. The study contributes to entrepreneurship education and imprinting research by highlighting the enduring effects of early learning. It also suggests that embedding entrepreneurship, sustainability, and social-purpose competencies within basic education can strengthen youth capabilities and support socially inclusive, environmentally responsive industrial transformation.

Keywords: Entrepreneurship education, sociopreneurship, dynamic imprinting, green transition, inclusive industrialisation, emerging economies.

Reflections on Planning, Monitoring and Development Coordination for Green Transitions and Inclusive Industrialization in Ghana

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Abstract

Reflective practice is an important component of development planning because it enables practitioners to evaluate decisions, learn from implementation experience, and improve future interventions. Drawing on professional experience in municipal development planning, this paper reflects on how planning, monitoring, and institutional coordination can support Ghana's green transition and inclusive industrialisation. It considers how development planners can evaluate whether interventions distribute benefits equitably, generate unintended environmental consequences, and remain aligned with national development priorities and the Sustainable Development Goals. The paper argues that reflection strengthens environmental responsibility by encouraging planners to integrate renewable energy, waste reduction, efficient resource use, and climate resilience into local programmes. It also supports inclusive industrialisation by directing attention towards community participation and the needs of groups frequently excluded from development opportunities, including women, young people, informal workers, and small-business owners. Effective monitoring provides evidence for assessing whether programmes achieve their intended economic, social, and environmental outcomes, while development coordination helps align the activities of municipal departments, communities, businesses, and national institutions. The paper concludes that reflective practice, evidence-based monitoring, and effective institutional coordination can improve accountability, adaptability, and policy implementation. Embedding these practices within municipal planning can help translate national sustainability commitments into inclusive, environmentally responsible, and resilient development outcomes at the local level.

Keywords: Development planning, reflective practice, monitoring, institutional coordination, green transition, Ghana.

Revenue Accountability, Load Enforcement and Sustainable Freight Governance and Inclusive Industrialization in Ghana

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Abstract

Debates on green industrialisation in Africa frequently prioritise renewable energy, climate finance, clean technologies, and industrial upgrading. Although these areas are important, they can obscure the role of everyday institutional practices in protecting existing infrastructure, improving logistics, reducing resource waste, and maintaining public accountability. This conceptual paper examines axle-load enforcement as a component of sustainable freight and infrastructure governance in Ghana. It argues that controlling overloaded freight vehicles should not be treated solely as a technical or regulatory-compliance exercise. Effective enforcement can reduce premature road deterioration, improve transport safety, lower vehicle operating costs, support reliable supply chains, and protect the public investments on which industrial development depends. The paper also highlights revenue accountability as an essential element of enforcement. Transparent assessment, collection, reporting, and use of fees and penalties can reduce opportunities for corruption, strengthen public trust, and support road maintenance. Drawing on a public-value governance perspective, the paper develops a framework linking regulatory capability, revenue accountability, road-asset preservation, freight efficiency, and inclusive industrial development. It further argues that inconsistent enforcement and weak institutional coordination can disadvantage compliant operators and small enterprises while increasing logistics costs across the economy. Strengthening digital monitoring, inter-agency coordination, transparent revenue systems, and operator engagement can reposition axle-load control as a strategic instrument for sustainable freight governance and inclusive industrialisation in Ghana.

Keywords: Axle-load enforcement, revenue accountability, freight governance, road infrastructure, public value, Ghana.

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Special Acknowledgements

We wish to acknowledge the enormous commitment of our partners and everyone whose contributions helped make iCAD 2026 possible. The Society sincerely appreciates the efforts, guidance and valuable insights received throughout this journey, which have enabled us to reach this significant milestone.



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