

COMPEDIUM OF ABSTRACTS

ESAMI GLOBAL RESEARCH COLLOQUIUM 2025

Theme: Research Ecosystems in Africa:

Governance, Outputs and Social Impact

Venue: ESAMI Headquarters, Arusha, Tanzania

Date: 26th - 28th November 2025



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FOREWORD

The ESAMI Global Research Colloquium 2025 has been organized by the Eastern and Southern African Management Institute (ESAMI) at its Headquarters in Arusha, Tanzania. The Colloquium is convened under the theme “Research Ecosystems in Africa: Governance, Outputs and Social Impact,” with the overarching aim of providing a platform for scholarly exchange, fostering collaboration, and strengthening research ecosystems across the continent.

This Colloquium brings together researchers, scholars, practitioners, policy makers, and postgraduate students from across Africa and beyond to share knowledge, present research findings, and engage in critical dialogue on issues shaping Africa’s development trajectory. Over the three days, from 26th to 28th November 2025, the programme features plenary sessions, keynote addresses, panel discussions, public lectures, and parallel sessions covering diverse thematic areas including governance, digital transformation, climate action, and inclusive development.

We are deeply grateful to all presenters, keynote speakers, panelists, session chairs, moderators, and participants whose valuable contributions have enriched this Colloquium. Your commitment to advancing research and knowledge sharing in Africa has been instrumental to the success of this event. We also extend our sincere appreciation to the organizing team, the scientific committee, and all ESAMI staff whose dedication ensured the smooth coordination and delivery of this Colloquium.

Through this Book of Abstracts, we showcase the breadth and depth of research being undertaken across the continent and beyond. We trust that the ideas presented herein will stimulate further inquiry, inform policy and practice, and contribute meaningfully to strengthening Africa’s research ecosystems and their impact on society.

On behalf of ESAMI, I extend our warmest appreciation to all participants and partners, and I wish you continued success in your research and professional endeavors.

Prof. Peter Kiuluku, Director General
Eastern and Southern African Management Institute (ESAMI)



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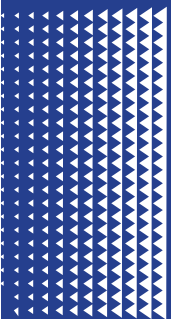
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THEME 1:

Digital Transformation & Artificial Intelligence





T1 P1: HARNESSING THE AFCFTA FOR DIGITAL TRANSFORMATION: OPPORTUNITIES AND CHALLENGES IN ESTABLISHING AN AFRICAN E-MARKETPLACE

Authors: Beru Lilako, Godwin Chinang'ombe, Abiud January Bongole, Selna Winfrey M. Begisen, Joe E. Assoua, Caiphaz Chekwoti, Evans Eghonghon Edebor, Eric Jr. Bomdzele

The establishment of an African e-marketplace under the African Continental Free Trade Area (AfCFTA) Agreement presents a transformative opportunity to enhance intra-African trade and foster economic integration across the continent. This study explores both the opportunities and challenges inherent in creating a unified digital marketplace, emphasizing the critical role of the AfCFTA Digital Trade Protocol in harmonizing regulations, promoting cross-border e-commerce, and driving socio-economic growth. The research highlights the rapid growth of e-commerce in Africa, fueled by increasing internet penetration and mobile connectivity, while also acknowledging persistent barriers such as inadequate infrastructure, regulatory disparities, and limited digital literacy, particularly in rural regions.

Using comparative case studies and a data driven framework, the paper assesses e-commerce readiness among African economies and identifies actionable strategies to bridge the urban-rural digital divide. The findings underscore the importance of collaborative efforts, targeted investment in digital infrastructure, capacity building, and robust policy frameworks to



unlock the full benefits of Africa's digital economy. Ultimately, the study argues that a well-implemented African e-marketplace can significantly contribute to sustainable development, job creation, and improved living standards across the continent.

Keywords: Digital Trade, Intra-African trade, African Continental Free Trade Area, E-commerce, Economic Integration



T1 P2: BRIDGING THE DATA GOVERNANCE GAP: ENABLING PRACTICAL AI ADOPTION IN AFRICA'S PUBLIC SECTOR

Author: Emmanuel Shivina Khisa

More and more, people see artificial intelligence (AI) as a game-changer for government, service delivery, and economic growth. Governments all around Africa are looking at how AI could help them make better decisions, automate tasks, and make the public sector more accountable. But AI's promise has generally not been kept because of a major flaw: there aren't any advanced and integrated data governance systems. Data governance, which comprises the rules, regulations, and procedures that make sure data is accurate, safe, private, and easy to get to, is an important part of making AI work. This dissertation examines the correlation between data governance maturity and artificial intelligence readiness within public sector enterprises in East Africa, specifically in Kenya, Tanzania, Uganda, and Rwanda. This study use a desk-based research methodology to integrate academic literature, governmental legislation, and reports from international organizations, examining the degree to which data governance challenges hinder AI implementation.

It provides a conceptual model that links AI adoption outcomes with data governance capabilities like policy coherence, data quality management, institutional accountability, and ethical frameworks. The analysis shows that East African governments have made a lot of progress in digital transformation and open data programs. However, AI-driven innovation is still being held



back by broken laws, weak institutions, and a lack of interoperability. The paper says that to close the gap in data governance, governments need to make cross-government data standards, invest in creating capacity, and include ethical and privacy-by-design principles in their digital governance activities. It suggests a regional approach, based on the African Union's Digital Transformation Strategy, to bring national data policies into line, build trust, and make it possible for AI to be used in the public sector in a responsible way over time.

Keywords: Data Governance, Artificial Intelligence, Public Sector, East Africa, Digital Transformation, AI Readiness, Policy, Ethics



**T1 P3: EMPOWERING COMMUNITIES:
EXPLORING THE EFFECTS OF CITIZEN ENGAGEMENT
ON PUBLIC FINANCE MANAGEMENT IN AFRICA”
EXPERIENCE FROM TANZANIA AND SOUTH AFRICA;
AN EMPIRICAL REVIEW**

Author: MacLean Charles Mwamlangala

African public finance management faces numerous challenges, including transparency, accountability, and effective resource allocation. Empowering communities through citizen engagement has emerged as a promising approach to address these challenges and promote inclusive governance processes. This research explores the effects of citizen engagement on public finance management in two African countries, Tanzania and South Africa. The study adopted qualitative research design using documentary analysis as its main method, focusing on systematically reviewing and synthesizing relevant secondary data to generate analytical insights into community engagement practices in public finance management. But also, snowballing techniques were also used to identify additional relevant literature. The study examines the legal, institutional, and policy frameworks governing community engagement in public finance management, highlighting both challenges and opportunities.

Drawing on experiences from Tanzania and South Africa, the research investigates the effectiveness of citizen engagement mechanisms, such as participatory budgeting, social accountability initiatives, and community-led



monitoring, in improving transparency, accountability, and service delivery outcomes. Key findings suggest that while both countries have made progress in promoting citizen engagement, there are persistent challenges related to the digital divide, capacity building, and political will. However, emerging trends in technological innovations, social accountability mechanisms, and civil society engagement offer opportunities to strengthen community participation in public finance management. The study concludes with recommendations for governments, policymakers, civil society organizations, and development practitioners to enhance citizen engagement processes and promote more inclusive and effective public finance management in Africa.

Keywords: Citizen Engagement, Community, Public Finance, Management



T1 P4: ICTS AND PARTICIPATION IN GLOBAL VALUE CHAINS IN SUB-SAHARAN AFRICA: A SECTORAL ANALYSIS

Authors: Ngartori Stephane

This article examines the impact of information and communication technologies (ICTs) on sectoral participation and functional positioning within global value chains (GVCs) in Sub-Saharan Africa (SSA). Using a panel dataset covering 31 SSA countries over the period 1990-2022, and combining Driscoll-Kraay estimators with System Generalized Method of Moments (S-GMM) techniques, the study investigates how ICTs diffusion shapes both upstream and downstream integration across four key sectors: agriculture, mining, manufacturing, and services. The findings indicate that ICTs diffusion exerts a positive and statistically significant effect on GVCs participation across all sectors, with systematically stronger impacts downstream. Services and manufacturing experience the largest ICTs-induced gains, reflecting their higher digital complementarities and reliance on information flows, while agriculture and mining display more modest effects, especially upstream, due to structural and infrastructural constraints.

These results highlight the heterogeneous nature of digital integration and underscore ICTs' critical role in enabling market access, compliance, and coordination within GVCs. The study emphasizes that effective digital transformation strategies must account for sectoral specificities and



functional roles, combining infrastructure investment with complementary measures related to skills, regulation, and regional coordination under the African Continental Free Trade Area (AfCFTA). These insights contribute to ongoing debates on how digital technologies can support economic upgrading and deeper GVCs integration in developing regions.

Keywords: ICTs diffusion; global value chains; Sub-Saharan Africa; sectoral integration; functional upgrading; digital transformation.



T1 P5: ROLE OF ICT IN ENHANCING FINANCIAL PERFORMANCE AMONG PRIVATE HEALTH FACILITIES IN CENTRAL DIVISION, KAMPALA, UGANDA

Authors: Rose Muganga, Julius Warren Kule

This study aimed to examine the relationship between ICT and financial performance among private health facilities in Kampala Central Division. The study adopted a quantitative research approach. The study considered a population of 116 and a sample of 89 owners or administrators of privately owned health facilities in Central Kampala. The study employed simple random sampling and a sample of 89. The primary instrument for collecting quantitative data was a structured survey questionnaire. The statistical package for social scientists (SPSS version 30). Results revealed a positive and significant correlation between electronic health records and financial performance among private health facilities in Kampala Central; simple regression showed that electronic health records predict 11.1% of the variance in financial performance among private health facilities in Kampala Central.

A positive and significant relationship between customer relationship management and financial performance among private health facilities in Kampala Central. A positive and significant relationship between telemedicine and financial performance among private health facilities in Kampala Central. The multiple regression results show that telemedicine,



electronic health records, customer relationship management are significant predictors of financial performance among private health facilities in Kampala Central and predict 67.6% of the variance in financial performance among private health facilities in Kampala Central. From multiple regression, electronic health records was an insignificant predictor; customer relationship management, was a significant predictor and telemedicine was a significant predictor of financial performance among private health facilities in Kampala Central. The study concludes that whereas electronic health records is positively correlated with financial performance but an insignificant predictor; customer relationship management is positively correlated with financial performance and it is significant predictor of the changes in private health facilities financials in Kampala Central. ICT overall predicts 67.6% of the change in financial performance. The study recommends enhanced use of electronic health records, customer relationship management and telemedicine to boost financial performance among private health facilities in Kampala Central.

Key words: ICT and financial performance, private health facilities in Kampala Central Division.



T1 P6: FINANCIAL TECHNOLOGY AND THE PERFORMANCE OF COMMERCIAL BANKS: EVIDENCE FROM THE CEMAC ZONE

Authors: Serge Messomo Elle & Akule Ramson Akale

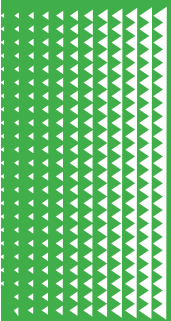
This study was carried out to examine the effects of financial technology on the performance of commercial banks in the CEMAC Zone. Three constructs of financial technology were involved in the analysis. These are mobile banking, internet banking and automated teller machines. The performance of commercial banks in the CEMAC Zone was measured using the return on assets and total deposits of the banks. The study adopted the panel research design and used secondary data collected from all commercial banks operating in the six member states of CEMAC for the period 2000 to 2021. Data were analysed using both descriptive and inferential statistics with the help of the fixed effect and the random effect estimation models. The results of the study revealed that internet banking and ATM have positive and significant effect on the financial performance of commercial banks in the CEMAC Zone while mobile banking has a negative and insignificant effect on the financial performance of commercial banks in the CEMAC Zone. Further results revealed that capital adequacy and inflation as control variables had a significant positive effect on financial performance while GDP have a significant negative effect on the financial performance of commercial banks in the CEMAC Zone. The study recommends that commercial banks should develop financial products specifically tailored to the CEMAC market, such as cross-border savings and investment products, that meet the unique needs of customers across the CEMAC zone.

Keywords: Financial technology; Performance; Commercial banks; CEMAC

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THEME 2:

**Governance, Leadership &
Organizational Performance**



T2 P1: HARNESSING ARTIFICIAL INTELLIGENCE FOR REVENUE GENERATION IN THE SOUTH AFRICAN LOCAL GOVERNMENT SPHERE

Authors: Mahlatse Sevhake & Costa Hofisi

Local governments, globally, are increasingly turning to artificial intelligence (AI) to enhance revenue generation, improve fiscal management, and foster transparent, accountable service delivery. In South Africa, municipalities face persistent challenges in revenue generation despite progressive constitutional and policy frameworks. This article seeks to fill a critical gap in research by conducting an extensive review of literature on the use of AI by local government in revenue generation and supporting strategic municipal goals.

Through a qualitative synthesis of empirical studies, government policies, and audit reports, the review critically analyses the opportunities and constraints of harnessing AI for revenue generation within South African local government. Findings reveal that fragmented digital infrastructure, limited institutional capacity, and skills shortages significantly impede effective AI integration in municipal fiscal systems. Moreover, the absence of robust ethical governance frameworks raises concerns about algorithmic bias and the risk of exacerbating socio-economic inequalities. This study illustrates the intersection of technological innovation, institutional readiness, and governance ethics required for AI to contribute meaningfully



to local government revenue enhancement. The review highlights the critical need for AI literacy development, municipally embedded innovation hubs, and the institutionalisation of algorithmic governance aligned with South Africa's constitutional values and social realities. Through mapping these challenges and enabling conditions, the study offers vital insights for policymakers and practitioners aiming to leverage AI responsibly as a catalyst for revenue collection.

Keywords: Artificial intelligence, revenue generation, local government, South African Local Government, algorithmic governance.



T2 P2: INSTITUTIONAL GOVERNANCE AND ECONOMIC GROWTH IN THE GREAT LAKES REGION: NAVIGATING SHOCKS AND POLITICAL CRISES

Authors: Félix Mudumbi Mudekereza

This study examines the link between institutional governance and economic growth in the Great Lakes Region, an area characterized by persistent instability and recurring crises. Based on panel data covering six countries (Burundi, DRC, Kenya, Rwanda, Tanzania and Uganda) over the period 1996-2023, the study employs a rigorous econometric approach, comparing Fixed Effects (FE) and Random Effects (RE) models, and utilizing the Hausman test to select the most appropriate model. The results from the static models, notably the Fixed Effects model, reveal that institutional quality and trade openness are statistically significant and positive determinants of economic growth. Specifically, a one-unit improvement in the aggregate governance index is associated with an increase of approximately 3.2% in annual GDP growth ($p\text{-value} < 0.01$), underscoring the structural importance of institutions in the region. Conversely, high inflation proves to be a negative and significant factor. Traditional capital accumulation variables, such as Foreign Direct Investment (FDI) and Gross Fixed Capital Formation (GFCF), do not show a significant impact in the chosen model. The study concludes that, despite the recurrence of shocks and crises, institutional quality and economic integration remain essential levers for resilience and growth in the region.

Keywords: Institutional governance, Economic growth, Great Lakes Region, Fixed Effects Models, Economic policies.



T2 P3: ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) DISCLOSURE IN AFRICA: CURRENT STATE OF PLAY

Author: Joseph Mumba

This study was aimed at assessing the current state of play in environmental, social, and governance (ESG) disclosure in Africa. This study adopted a desk study approach. Publicly available corporate literature and data were reviewed and analyzed in order to obtain a comparative picture of the current state of play in ESG disclosure. The results show that only South Africa has a mature and advanced ESG disclosure culture and practice in league with development countries in all regions of the world. Following behind South Africa are countries such as Nigeria, Ghana, and Kenya, which have launched ESG reporting guidelines via their national securities exchange platforms, Government regulators such as central banks, and other business associations. The general trend in ESG disclosure is a positive one in all regions of Africa. ESG reporting guidelines are being adopted, international reporting and assurance standards are being adopted and used for consistency and transparency in ESG performance communication to company stakeholders. The paper makes several recommendations in order to strengthen ESG disclosure in Africa. Recommendations range from capacity building, stakeholder collaboration, investing in reliable data, and strengthening regulatory and enforcement mechanisms for ESG compliance.

Key Words: ESG disclosure, state of play, ESG compliance, reporting standards and frameworks, ESG guidelines, assurance, materiality, annual report, sustainability report, integrated report.



T2 P4: ENVIRONMENTAL, SOCIAL AND GOVERNANCE IMPERATIVES FOR POST-MINING TOWNS: HYDROGEOLOGICAL PERSPECTIVES IN KHUMA AND STILFONTEIN TOWNS, SOUTH AFRICA

Author: Melvin Diedericks

Post-mining towns in South Africa face numerous challenges, including sinkholes, water insecurity, and the social vulnerability of marginalised communities. These issues are likely to persist unless governance and infrastructure effectively address subsurface legacies. This paper examines the geological, hydrological, and hydrogeological conditions, as well as the mining legacies, that impact Stilfontein Town and Khuma Township. Both areas are situated above dolomitic strata and extensive abandoned gold mines. The interaction between these factors, along with the interplay of groundwater and surface water, intensifies environmental hazards. The study employed qualitative action research to investigate this. Key findings reveal that mining legacies, catchment dynamics, and fragmented governance are the leading causes of infrastructure failure and declining water resources.

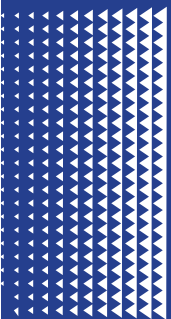
The dewatering of mines, acid mine drainage, and poor waste management expose communities to sinkholes, leading to infrastructure breakdown and contamination of surface and groundwater. Governance gaps caused by fragmentation and outdated or weakly implemented IDPs (Integrated Development Plans) enable illegal mining and increase sinkhole risks. In response, this paper proposes an ESG (Environmental, Social and



Governance) framework for post-mining settings, integrating five areas: hydrogeological risk management, water quality assurance, infrastructure resilience, human settlements regulation, and governance reform. The study proposes an integrated public administration agenda that links ESG frameworks with an SDG-oriented (Sustainable Development Goals) decision-making framework, necessitating coordinated roles and shared accountability across government spheres in addressing environmental hazards.

Keywords: ESG, acid mine drainage, dolomite/sinkholes, groundwater-surface water, community engagement, environmental hazard, public administration, SDGs 6, 11.





THEME 3:

Competitive Strategy & Business Innovation



T3 P1: RENEWABLE ENERGY, GREEN FINANCE, AND SUSTAINABLE DEVELOPMENT: THE ROLE OF INDUSTRIALIZATION AND TECHNOLOGICAL INNOVATION

***Authors:** Amechi Endurance Igharo; Mamdouh Abdulaziz Saleh Al-Faryan & Ayodele Oluwafemi*

This study explores the interconnections among renewable energy consumption, green finance, technological innovation, and sustainable development across 30 emerging and developing economies from 2000 to 2022. However, despite increasing global momentum for clean energy transitions, many emerging and developing economies continue to face weak green investment systems, uneven technological readiness, and insufficient capacity to drive sustainable development. These challenges create persistent gaps in understanding how the joint effects of renewable energy, finance, and innovation shape long-run sustainability outcomes. Using the Pooled Autoregressive Distributed Lag (PARDL) model, alongside FMOLS, DOLS, and causality tests, the analysis confirms long-run relationships among these variables. The findings reveal that renewable energy and green finance exert strong, positive effects on sustainable development, while technological innovation enhances clean energy adoption and environmental outcomes. Sustainable development shows bidirectional causality with both renewable energy and innovation, whereas green finance unidirectionally drives both factors, emphasizing its catalytic role.



The study advocates for integrated policy frameworks that align energy, finance, and innovation systems to promote low-carbon industrialization and inclusive growth. It stresses the importance of enabling institutional environments, fiscal incentives, and international cooperation to scale up investments in clean technologies. The results support the ecological modernization theory, demonstrating that economic growth and environmental protection can be pursued simultaneously through strategic innovation and financial instruments. Aligning with global climate finance trends, this research offers actionable insights for policymakers seeking to achieve the Sustainable Development Goals (SDGs). Generally, it highlights the necessity of synchronizing energy policies, financial mechanisms, and innovation systems to ensure resilient and sustainable development

Keywords: Green Finance; Renewable Energy; Sustainable Development; Technological Advancements.



T3 P2: GREASE NEEDED TO ACTUALISE TRADING UNDER THE AFCFTA? COMPETITIVENESS OF SERVICES SECTORS TO HARNESS THE AFCFTA SERVICES MARKET: CASE OF UNITED REPUBLIC OF TANZANIA

Author: Caiphaz Chekwoti

Drawing on the sluggish trading in goods under the much-anticipated AfCFTA agreement, the paper seeks to address some important questions. Does the trade in services sector provide a more promising trading trajectory relative to goods and secondly, given the facilitative role of services on goods, does the competitiveness of services sectors provide the grease greatly needed to actualise the AfCFTA agreement? To address these questions, the paper seeks to uncover the competitiveness, and regulatory frameworks that explain the performance outcomes of the trade in services trade for United Republic of Tanzania and draws implications for trading under the AfCFTA context. The study examined several indicators of competitiveness. This was complemented with an analysis of key constraints and enablers of services trade performance and their implications for Tanzania's services sectors competitiveness. The study utilised publicly available secondary databases such as the International Monetary Fund (IMF) balance of payments, World Development Indicators, Organisation for Economic Cooperation and Development (OECD), World Trade Organization (WTO) I-tip services, World Economic Forum (WEF), and the Global Competitiveness Index (GCI) database.

Key words: AfCFTA (African Continental Free Trade Area), Services competitiveness, Tanzania Trade facilitation



T3 P3: UNLOCKING MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES)' COMPETITIVENESS IN AN INTERCONNECTED GLOBAL MARKET: EXPOSITION OF STUMBLING BLOCKS ENCOUNTERED IN USING ONLINE PLATFORMS IN SOUTHERN AFRICA

Author: Chrispen Chiome

In the context of Southern Africa, with 44 million MSMEs (Master Card, 2023), it is the Micro, Small and Medium Enterprises (MSMEs), that have been playing an important part in its economic growth. This study used the mixed methods research methodology to identify empirical evidence that can help MSMEs in unlocking global market opportunities using the power of online platforms. The study used a sample of 37 conference participants who were marketing executives. These were purposively selected from three countries in Southern Africa. A google form was used as the data collection instrument where research participants were asked to share stumbling blocks encountered in unlocking opportunities for MSMEs in the global markets, while leveraging on the power of the online platforms.

The results indicated that African MSMEs encounter stumbling blocks related to obsolete infrastructures, connectivity challenges, digital literacy gaps and others that are discussed in this write-up. They also pointed that digital transformation stumbling blocks not only affect the MSMEs but also export competitiveness and their ability to generate employment. The study concludes that unlocking the MSMEs, global market reach through online platforms requires that staff be trained in the use of contemporary



technologies in online marketing capabilities. To unlock competitiveness in an interconnected global market, governments and policy makers should address the connectivity challenges that African MSMEs face, tech companies should collaborate with MSME associations to deliver affordable data packages and digital solutions tailored for small businesses and owners of MSMEs should invest in training for social media marketing, e-commerce, online customer engagement and search engine optimization (SEO).

Key words: Micro, Small and Medium Enterprises (MSMEs); Online platforms, MSMEs' competitiveness, digital transformation.



T3 P4: CROSS-CULTURAL MARKETING COMMUNICATIONS: A LITERATURE REVIEW ON EFFECTIVE STRATEGIES FOR LEVERAGING CULTURAL INSIGHTS TO BUILD STRONGER GLOBAL BRAND CONNECTIONS

Author: Faithmercy Muthigah

As globalization reshapes the marketplace, cross-cultural marketing communications (CCMC) have become essential for businesses aiming to connect with diverse consumer segments. This study conducted a comprehensive review of scholarly literature to identify effective strategies for leveraging cultural insights to enhance global brand engagement. Data was collected through a systematic literature review and analyzed using descriptive methods. Grounded in established theoretical frameworks such as Hofstede's Cultural Dimensions, Hall's High-Context vs. Low-Context communication, and Aaker's Brand Equity Model, the analysis examined how cultural values, communication styles, and consumer behavior influence marketing strategies across varying cultural contexts.

Key strategies identified include the cultural adaptation of marketing messages, sensitivity to non-verbal communication cues, collaboration with local influencers or celebrities, and the use of ethnographic research to uncover deeper consumer insights. The study also explored the strategic balance between localization and standardization in global branding, highlighting common challenges in avoiding cultural missteps. By synthesizing existing research, this paper offers a structured framework



to guide marketers in navigating cross-cultural dynamics and fostering culturally resonant brand connections in an increasingly interconnected global market.

Keywords: Cross-Cultural Marketing; Global Brand Connections; Cultural Insights; Strategies; cultural adaptation; Non-verbal communication; local influencers; Ethnographic research



T3 P5: VALUE CHAIN ANALYSIS AND ENTERPRISE PROFITABILITY OF INFORMAL TRADERS AT GLEN VIEW 8 FURNITURE COMPLEX

Author: Godfrey Mahofa

This paper examines the value chains and enterprise profitability within the Glen View 8 Furniture Complex (GV8FC), a major hub for informal furniture manufacturing in Harare, Zimbabwe. Using a mixed-methods approach that combines survey data with qualitative insights from traders and transporters, the research maps the core actors in the value chain, including manufacturers, transporters, vendors, and middlemen, and explores the dynamics that shape their profitability. Findings reveal that while furniture manufacturers often record higher profits, a complex set of challenges that include market distortions by middlemen, inadequate infrastructure, lack of formal governance, weak linkages to formal markets, and seasonal income fluctuations, undermine the sector's potential. Gender analysis highlights the growing involvement of women as furniture producers, pointing to emerging opportunities for inclusive upgrading. The study further explores how informal traders effectively pay quasi-taxes through intermediaries affiliated with political actors, raising broader questions of governance and equity in urban informal markets. Based on these findings, the paper proposes policy interventions focused on improved governance, infrastructure development, and enhanced market access. These reforms aim to increase productivity, strengthen formal-informal sector linkages, and promote sustainable livelihoods within Zimbabwe's informal urban economy.

Keywords: Value chain analysis, Informal sector, Enterprise profitability, Urban informal markets



T3 P6: MANAGING CHALLENGES OF ACADEMIC FREEDOM IN HIGHER EDUCATION INSTITUTIONS DURING AND POST COVID 19 PANDEMICS

Authors: Innocent Nuwagaba, David Kalaba, Joseph Mumba & Leon Malisa

The study analysed the management of challenges of academic freedom in higher education institutions during and post COVID 19 pandemics. Academic freedom in Higher Education Institutions is increasingly under threat due to the rise of populist regimes, repressive governments, and heightened polarisation based on race, religion, and political divides. This study adopted a qualitative methodology using the desktop approach based on exploratory design and a theoretical approach in developing this article. To get insights on what has so far been realized as far as academic freedom, a theoretical review was embarked on to collect data. Data was therefore collected using review of literature and document analysis. Then the data was analysed using narratives and descriptions. It was concluded that the internationalization of higher education has enabled authoritarian states to effectively “trans nationalize” everyday forms of censorship and political repression to students and faculty both at home and abroad. It was therefore recommended that HEIs should establish a code of conduct on foreign donations and campuses, on protecting expatriate students and faculty, and on training and support for fieldworkers to protect academic freedom in the context of internationalization.

Keywords: Academic, Education, Freedom, Institutions, COVID 19, Challenges

THEME 4:

**Social Impact &
Inclusive Development**



T4 P1: CONTRACT FARMING AND CHILDREN'S EDUCATION: EVIDENCE AND IMPLICATIONS FOR SUSTAINABLE DEVELOPMENT

Authors: Francis E. Ndip, Abraham M. Adongo & Perez L. Kemeni Kambiet

The institution of contract farming (CF) has continued to proliferate in the small farm sector of developing countries. While its effects on smallholders across domains such as income and food security have been well documented, there are growing concerns about its broader social implications especially on children. Yet there is little empirical evidence about such social implications. In this paper, we fill this gap by studying the role of CF on children's education, a critical component of human capital and sustainable development. We employ instrumental variable methods to address potential endogeneity of CF. Our results show that CF is negatively associated with children's education by reducing expenditure on education and days of school. Our results are robust to alternative estimation methods. The results underscore the need to look beyond the economic benefits of CF and focus on their broader social benefits and the implications for sustainable development. There is also a need for better contract designs that take social aspects like education into consideration.

Keywords: Contract farming; education; children; sustainable development; Ghana.



T4 P2: INTRAHOUSEHOLD POWER DYNAMICS, AND PREFERENCE FOR NUTRIENT-ENHANCED FOODS: A GENDERED EXPERIMENTAL EVIDENCE FROM RWANDA

Authors: *Fatima Olanike Kareem, Joe E. Assoua, Eric Junior Bomdzele and Ayuk Justine Etah*

This study investigates how intrahousehold power dynamic affect spouses' willingness to allocate resources and purchase relatively expensive fortified maize flour and biofortified beans in informal settlements (slums) in Rwanda. It also assesses how intrahousehold power in relation to income influence mothers' and fathers' willingness to purchase the (bio)fortified food products for their under-five aged children. Using a left-censored Tobit model, our results shows that women with higher economic resources and who are food purchase decisionmakers exert higher bargaining power and willingness to pay for the (bio)fortified food. However, men reveal a disconnection between nutrition and masculinity as they are less willing to pay for the (bio)fortified products, even when they have higher economic resources than their spouses, or when they are sole food purchase decision makers. In contrast to women, men tend to allocate monetary resources away from their under-five aged children, which results from discriminatory gender norms that are in disconnection with improved household nutritional outcomes. We advocate for community-level interventions that incorporate men in gender and nutrition intervention programmes to help in the evolution of better societal norms that can propel better household nutrition outcomes in Rwanda and similar poor informal settlements in developing countries at large.

Keywords: Bargaining power, nutrition, gender, biofortification, fortification, willingness to pay.

ESAMI Global Research Colloquium 2025

Theme: Research Ecosystems in Africa: Governance, Outputs and Social Impact

Date: 26th - 28th November 2025 Venue: ESAMI Headquarters, Arusha, Tanzania



T4 P3: HOUSEHOLD BARGAINING POWER AND VALUATION OF (BIO) FORTIFIED FOOD: CHOICE EXPERIMENT AMONG PREGNANT AND LACTATING WOMEN IN RWANDA

Authors: Fatima Olanike Kareem, Joe E. Assoua, Eric Junior Bomdzele and Ayuk Justine Etah

The triple burden of malnutrition is a serious challenge in Rwanda, and pregnant women and lactating mothers' bargaining power can significantly contribute in addressing this problem. This study investigates how intra-household power dynamic affect the willingness to purchase fortified maize flour and biofortified beans among pregnant women and lactating mothers in Rwandan's informal settlements. Furthermore, it seeks to understand how existing gender-related violence affect their purchase of these food products, which are expensive relative to conventional maize flour and beans. Using an experimental approach, it relies on the Becker-DeGroot-Marshak (BMD) experimental auction mechanism to elicit the willingness to pay for the food. Employing a left-censored Tobit model, the results show that on average, pregnant women and lactating mothers revealed significant unwillingness to pay for the very nutritious fortified maize flour and biofortified beans products, except those who are engaged in decent work. Further results show that they maintain this status quo, even when they have higher income bargaining power relative to their spouses. Experiences of food-related violence also results into reduced willingness to pay for the nutritious food. However, our results show that



earning of decent income is the “glass ceiling breaker”, and viable avenue to increasing their household power and willingness to purchase the nutritious bio(fortified) food products. This is indicative that decent income can help increase access to nutritious food, and improve food and nutrition security. Thus, scaling-up maternal nutrition security would entail policies that accelerate long-term access to decent work, abridged with nutrition-sensitive social protection programmes in the short-run.

Keywords: Bargaining power, pregnant and lactating women, willingness to pay, nutrition, decent income, choice experiment



T4 P4: WOMEN FOOD RETAILING AND GENDERED HOUSEHOLD NUTRITION OUTCOMES IN KIGALI, RWANDA

Authors: Justine E. Ayuk, Fatima Olanike Kareem, Joe E. Assoua, Eric Junior Bomdzele

Women constitute majority of food retailers in open markets in Africa and play a crucial role in ensuring access to diverse food varieties for medium- and low-income households. However, little is known about how food retailing influences nutrition patterns within women's own households. In this study, fifty women food retailers and thirty men whose wives are food retailers in Kigali, Rwanda, were interviewed to explore how women's roles in food retailing intersect with intra-household gender dynamics to shape nutritional outcomes. Results show that women's agency in food retailing serves both as a source of income and a means of accessing diversified diets for their households. However, gendered control of household decision-making and perception of men's higher dietary needs influence intra-household food allocation. Our study suggests that engaging women food retailers in urban nutrition strategies and addressing gendered perceptions and household decision-making is crucial to improving household nutrition diversity in Rwanda.

Keywords: Gender roles, food retailing, dietary diversity, qualitative methods, intra-household decision-making, Rwanda.



T4 P5: THE EFFECT OF STORAGE PROCEDURES ON THE MAGNITUDE OF POST-HARVEST LOSSES IN SILO COMPLEXES. EVIDENCE FROM THE TANZANIA NATIONAL FOOD RESERVE AGENCY

Authors: Efraimu January Qawo & Mwaitete Cairo

This study investigated the effect of storage procedures on post-harvest losses in silo complexes managed by the National Food Reserve Agency (NFRA) in Tanzania. Guided by Systems Theory and the Theory of Constraints, which emphasize the interconnectedness of operational processes in enhancing organizational efficiency, the research hypothesized that H_0 : storage procedures have no significant effect on post-harvest losses in NFRA silo complexes, against the alternative H_a : storage procedures significantly reduce post-harvest losses. A quantitative descriptive research design was employed. Data were gathered from NFRA silo staff via structured questionnaires. Analysis with IBM SPSS Statistics Software Version 25 included both descriptive and inferential statistics, such as Pearson correlation and multiple linear regression analyses.

Findings revealed a significant negative correlation ($r = -0.319$, $p = 0.003$) between adherence to storage procedures and post-harvest losses, indicating that improved procedural compliance results in fewer losses. Regression results further confirmed this relationship ($\beta = -0.364$, $R^2 = 0.102$), leading to rejection of the null hypothesis. The derived regression model, $PHL = 2.82 - 0.36 \times STORAGE_MEAN$, indicates that a one-unit



increase in effective storage procedures predicts a 0.36-unit reduction in the magnitude of post-harvest loss.

The study concludes that standardized storage practices, exceptionally consistent aeration, fumigation, temperature, and humidity control, play a pivotal role in minimizing grain deterioration in NFRA facilities.

It recommends institutionalizing operational standardization, regular staff training, and digital monitoring systems that are aligned with Tanzania's National Post-Harvest Management Strategy (2021–2031) and SDG 12.3, which aims to reduce food loss and waste.

Keywords: storage procedures, post-harvest losses, operational efficiency.

THEME 5:

**Trade, Finance &
Regional Integration**



T5 P1: NAVIGATING THE WTO AGREEMENT ON FISHERIES SUBSIDIES: ISSUES, CHALLENGES AND OPPORTUNITIES FOR THE AFRICAN CONTINENTAL FREE TRADE AREA

Author: Dennis Gallus Luwungo, Evans Eghonghon Edebor, Martha Murunga, Kato Denis, Joe E. Assoua, Jill Juma, Caiphas Chekwoti, Eric Jr. Bomdzele

Illegal, unreported, and unregulated (IUU) fishing significantly threatens marine ecosystems, fisheries value chains, and food and nutrition security in Africa. This study critically evaluates the World Trade Organization (WTO) Agreement on Fisheries Subsidies (AFS) adopted in 2022, focusing on its economic, legal, and institutional impacts on Africa, particularly in relation to the African Continental Free Trade Area (AfCFTA). The AFS represents a milestone by prohibiting harmful subsidies that contribute to overfishing, promoting sustainable fisheries aligned with SDG 14.6. The research analyzes the regulatory frameworks of Africa's Regional Economic Communities (RECs) and explores the intersection, complementarities, and challenges between the WTO disciplines and AfCFTA policies. Key challenges include legal compatibility issues, enforcement capacity gaps, and dispute settlement mechanisms. The study underscores the importance of harmonized policies, robust monitoring, regional cooperation, and capacity-building to leverage the global fisheries subsidy agreements effectively. By aligning AfCFTA fisheries regulations with WTO requirements and strengthening institutional frameworks, African countries can advance sustainable use of marine resources, improve intra-African fisheries trade, and enhance food security and economic resilience.

Keywords: AfCFTA, Aquaculture Value Chains, Fisheries Governance, Fisheries Subsidies, IUU Fishing, Marine Ecosystems, Sustainable Development, and WTO Agreement

ESAMI Global Research Colloquium 2025

Theme: Research Ecosystems in Africa: Governance, Outputs and Social Impact

Date: 26th - 28th November 2025 Venue: ESAMI Headquarters, Arusha, Tanzania



T5 P2: EXPORT DIVERSIFICATION, REGIONAL INTEGRATION AND STABLE ECONOMIC GROWTH IN SUB-SAHARAN AFRICA

Authors: Galadima Traoré Firdaws & Agurigoh Youssifou

This paper analyzes the effect of export diversification in an integration process on the stability of economic growth in sub-Saharan African countries over the period from 1995 to 2022. Estimation using the Generalized Method of Moments (GMM) indicates that export diversification - measured by the number of exported products - has a positive influence on growth stability. In addition, the interaction between export diversification and trade integration promotes the stability of economic growth. These results suggest two major directions. On the one hand, the need to further diversify the export basket of the countries of the region in order to reduce their vulnerability to external shocks and strengthen the resilience of their economies. On the other hand, the importance of accelerating regional integration dynamics, particularly in terms of trade, in order to take full advantage of economic synergies, stimulate intra-regional trade and consolidate more stable and inclusive growth.

Keywords: Export diversification, regional integration, economic growth stability.



T5 P3: PRODUCTIVE CAPACITIES AND INTEGRATION OF SUB-SAHARAN AFRICA INTO GLOBAL VALUE CHAINS: THE ROLE OF TRADE IN INFORMATION AND COMMUNICATION TECHNOLOGIES

Author: Moubarak Koriko

This study examines the interplay between digital trade and productive capacities in fostering global value chain (GVC) integration in Sub-Saharan Africa (SSA), a region that remains marginally integrated into GVCs and constrained by low levels of productive capacity despite notable progress in the trade of information and communication technologies (ICT). To this end, it draws on secondary data on SSA countries from various international sources covering the period 2000-2018. Using a dynamic panel model estimated by the GMM-system method, the analysis highlights the effective contribution of productive capacities to improving local value creation and reducing dependence on foreign inputs, although their effect on overall participation in GVCs remains limited.

However, the intensification of trade in information and communication technology (ICT) goods has the effect of strengthening productive capacities, which in turn has positive repercussions on forward and Backward integration and positioning in value chains. These findings highlight the crucial importance of coordinated industrial policies focused on technological development, human capital improvement, and regulated trade openness. By linking productive and technological dynamics, the



study contributes to a deeper understanding of the varied GVC integration pathways among SSA countries and offers guidance for promoting inclusive and sustainable economic transformation.

Keywords: Global value chains, Sub-Saharan Africa, productive capacities, ICT trade, economic integration, industrialization, dynamic GMM, local value-added



T5 P4: CAN INSTITUTIONAL QUALITY MITIGATE THE GEOGRAPHY PENALTY ON EXPORT SOPHISTICATION? EVIDENCE FROM LANDLOCKED AFRICAN COUNTRIES

Author: Mortongar Ngartori Stephene

This paper investigates how institutional quality influences the relationship between geography and export sophistication in landlocked African economies. It assesses the extent to which strong governance can offset the structural disadvantages associated with spatial isolation. Using a balanced panel of landlocked countries from 1996 to 2021, the study applies Driscoll Kraay and IV-2SLS estimators to account for heteroskedasticity, spatial dependence, and endogeneity. The results show that greater distance from seaports and major markets significantly reduces export sophistication, confirming the persistent “geography penalty” that undermines trade competitiveness in landlocked economies. However, improvements in institutional quality captured through indicators of government effectiveness, regulatory quality, anti-corruption efforts, rule of law, political stability, and voice and accountability can offset the marginal effect of this geographical penalty by 3.5% and 4%. These findings demonstrate that Africa’s structural transformation remains achievable. Even under adverse geographic conditions, export upgrading is possible when institutional reforms are effectively aligned with regional integration strategies that enhance policy coherence, connectivity, and governance efficiency.

Keywords: Institutional quality, Geography, Export sophistication, Landlocked countries in Africa.



T5 P5: RESILIENCE OF THE AfCFTA POTENTIAL TO SECURITY, FOOD AND ENVIRONMENTAL SHOCKS: A CASE STUDY OF ECOWAS COUNTRIES

Authors: *Youssifou Aguirigoh, GUIDIME Detondji Camille & GALADIMA Traoré Firdaws*

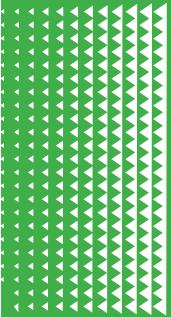
This paper assesses the resilience of the trade potential (TP) of ECOWAS countries within the the AfCFTA to climatic, political, and food insecurity shocks. To achieve this objective, we employ the multiple high-dimensional fixed effects ordinary least squares estimator (REGHDFE) and the Poisson pseudo-maximum likelihood estimator with multiple fixed effects (PPMLHDFE) on a sample covering 15 ECOWAS countries and all their AfCFTA signatory partners over the period 2000-2022. For robustness, we use additional estimators, including Tobit (which accounts for the limited nature of the dependent variable), the zero-inflated negative binomial (ZINB) and zero-inflated Poisson (ZIP) models (which handle excessive zeros), and the negative binomial model (NEGBIN), which captures structural and stochastic zeros.

The results reveal that ECOWAS countries exhibit an untapped trade potential of about 11%. Climate change, food insecurity, and political instability jointly reduce this potential by 7% overall, and individually by between 15% and 78% across countries. Country-level analyses show that economies with more diversified exports are more resilient to these shocks. Based on these findings, the paper recommends that policymakers:



(i) validate and operationalize the AfCFTA's prerequisites to fully realize its benefits; (ii) implement an industrialization and mechanization support plan similar to WAEMU's restructuring and upgrading program to promote diversification and enhance shock resilience; (iii) establish incentives for employment and entrepreneurship to mitigate youth involvement in violence and extremism; and (iv) adopt climate adaptation measures, including the use of climate-resilient seed varieties, to safeguard agricultural production and food availability.

Keywords: AfCFTA; Trade potential; ECOWAS; Trade resilience; Gravity Model



THEME 6:

I Sustainable Development & Climate Action



T6.1 P1: MAKING PUBLIC PRIVATE PARTNERSHIPS WORK FOR CLIMATE ACTION: THE CASE OF LOCAL AUTHORITIES IN ZAMBIA

Author: Howard S Chitengi

The study examines the issues stifling the application of Public Private Partnerships (PPPs) as a tool for managing climate change by local authorities in Zambia. The key problem is the existing gap in knowledge pertaining to compounding factors accountable for the PPP deficiencies as a policy response to climate change. The generation of the knowledge on the best practice and policy improvements involves analysis of the works, perceptions and views of subject matter scholars and researchers, regarding the requisite elements and approaches for making PPPs work for climate action. To form, actualise and sustain PPPs, the literature highlights participation, balanced power relations, networking, robust legal and regulatory mechanisms and awareness and understanding of climate change and its potential impacts. To test these literature derived issues, principles, approaches and influencing factors, that builds and strengthens collaborative relations in climate action, the study recommends further analysis using an empirical study. This is essentially needed to strengthen the model's generic applicability in Zambia generally and replication to other sub-Saharan African countries in particular, because the study's context likely addresses this common problem.

Keywords: Public-Private Partnerships; Climate Action; Climate Finance; Climate Governance; Zambia.



T6.1 P2: SHADOWS AND LIGHTS OF THE ENERGY TRANSITION: CHILD EXPLOITATION AND DEFORESTATION IN THE ARTISANAL MINES OF HAUT-KATANGA AND LUALABA IN THE DEMOCRATIC REPUBLIC OF CONGO

Author: Isidore Murhi Mihigo

The energy transition, often presented as a lever for a more sustainable future, reveals troubling aspects when examined in its impact on resource-rich regions, such as Haut-Katanga and Lualaba in the Democratic Republic of the Congo (DRC). These areas, renowned for their reserves of cobalt and other strategic minerals, are at the heart of socio-economic and environmental challenges associated with resource extraction. Artisanal mining, while providing jobs and income to many families, is marked by dangerous practices, notably the use of child labour and deforestation. Thousands of children are engaged in precarious working conditions, exposed to health hazards and violence, while being deprived of their right to education.

It is also important to highlight that this exploitation involves tree cutting and the use of hazardous chemicals. These phenomena underscore the dark sides of the energy transition, where the growing demand for metals for batteries and renewable technologies fuels the irresponsible exploitation of resources and vulnerable populations. The situation in Haut-Katanga and Lualaba calls for a critical reflection on the true sustainability of the



energy transition. It is crucial to regulate the supply chain of cobalt and other minerals, ensuring that human rights and the environment are respected and that ethical mining practices are implemented. We adopted a mixed-methods approach to investigate the issue under study. In addition to employing a bivariate probit model, we conducted a content analysis of interview data, which enriched the interpretation of the findings. The results indicate that household income, adult employment, school availability, and the father's level of education significantly reduce the likelihood of child labour.

Conversely, larger household size, cultural acceptance of child work, and mining activities in forested areas increase its prevalence.

Furthermore, access to social services appears to exacerbate the use of wood resources, despite the presence of local regulations aimed at restricting such practices. By shedding light on these abuses, the international community must act to protect children and promote fair solutions that support sustainable and inclusive development for all.

Keywords: Artisanal mining; Child labour; Energy transition; Environmental degradation.



T6.1 P3: ADVANCING SUSTAINABLE TRANSPORT SYSTEMS IN AFRICA: STRATEGIES FOR CLIMATE ACTION AND URBAN RESILIENCE

Authors: Mutabazi Sam Stewart

Climate change, economic expansion, and fast urbanization are putting increasing strain on Africa's transportation networks. In addition to being extremely susceptible to climate-related disruptions like heat waves and floods, reliance on fossil fuel-based transportation increases greenhouse gas emissions, air pollution, and social injustices. This study examines how Africa's transportation systems are currently doing, suggests ways to include climate change into urban transportation design, and showcases creative approaches from top cities. It identifies key issues like financial constraints, institutional fragmentation, and infrastructure deficiencies using a systematic literature review and case study synthesis. It also looks at transformative tactics like inclusive urban planning, low-emission technologies, and climate-responsive infrastructure. Case studies from Yaoundé, Nairobi, and Dakar show useful innovations and replication-friendly learning. Recommendations for policy prioritize sustainable finance, integrated planning. Policy recommendations emphasize integrated planning, sustainable financing, and multi-stakeholder governance to support Africa's transition toward resilient and low-carbon urban mobility, aligned with SDGs 9 and 11.

Keywords: Sustainable transport, climate action, urban resilience, Africa, e-mobility.



T6.1 P4: IMPACT OF GREEN TECHNOLOGY AND RENEWABLE ENERGY ON GREEN ECONOMIC GROWTH IN SUB SAHARAN AFRICA: IMPLICATIONS FOR ENVIRONMENTAL SUSTAINABILITY

Authors: Adeleke, K. O., Odeniyi, K. A., Ajala, A. K., Irelewuyi, M. D. Oladipo, T. O., Idowu, O. O., Dlamini, S. G., Dlamini, D. V., and Binuomote, S. O.

One of the major challenges facing global economies is environmental degradation, which results from conventional processes that drive traditional economic growth. A key concern for stakeholders in sustainable development goals is to find alternative ways to boost economic growth without harming environmental sustainability. This study, therefore, examined the impact of green technology and renewable energy on green economic growth in Sub-Saharan Africa, using relevant data from the World Development Indicators for the period from 2000 to 2023. The stationarity of the variables was tested using the second-generation Im-Pesaran Shin unit-root test and Fisher-type stationarity tests. Multicollinearity was assessed with the Variance Inflation Factor test.

Westerlund's cointegration test (2007), Kao residual cointegration test (1999), and Pedroni residual cointegration test (2004) were used to analyze cointegration among the variables, while the Pesaran and Yamagata (2008) slope homogeneity test checked for heterogeneity in the data series. Due to the presence of cross-sectional dependence and slope heterogeneity, this study employed the Prais-Winsten regression model with panel-corrected



standard errors (PCSE) and feasible generalized least squares (FGLS), which control for heteroscedasticity, cross-sectional dependence, and serial correlation. This approach was used to understand how green technology and renewable energy impact green growth in Sub-Saharan Africa. The study's findings reveal that green technology, renewable energy, and foreign direct investment are significant drivers of green economic growth in the region. To promote green economic growth, SSA countries must adopt and implement policies that encourage renewable energy and green technology.

More importantly, foreign direct investment, especially those that promote and support the green economy, must be attracted to SSA countries.

Keywords: Green economic growth, environmental sustainability, renewable energy, green technology, fossil fuel, degradation.

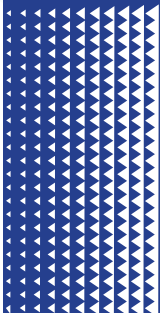


T6.1 P5: CLIMATE CHANGE AND LAND DEGRADATION IN AFRICA: REGIONAL ANALYSIS AND EMPIRICAL INSIGHT INTO AfCFTA IMPLEMENTATION

Authors: Solomon O. Okunade, Joe E. Assoua, Samuel O. Binuomote, Eric Jr. Bomdzele, Evans Osabuohien, Sarah Enwa, Olanrewaju Omosehin

Climate change and land degradation pose critical threats to sustainable development in Africa, with significant regional disparities in their impacts. Rising temperatures, shifting precipitation patterns, and increasing sea levels affect land degradation processes, including soil erosion, desertification, and deforestation. This study empirically examines the nexus between climate change and land degradation across African sub-regions, with a focus on its implications for the implementation of the African Continental Free Trade Area (AfCFTA). Using panel data from 46 African countries spanning 1990–2022, the analysis employs Panel-Corrected Standard Errors (PCSE) and Feasible Generalized Least Squares (FGLS) to ensure robustness. Findings reveal that climate change, measured through carbon emissions intensity, rainfall variability, and natural resource depletion, significantly accelerates land degradation, deforestation, and habitat loss while reducing agricultural land area. These environmental challenges threaten the long-term viability of AfCFTA by undermining agricultural productivity and economic resilience. To foster sustainable trade integration, African nations must prioritize climate-resilient infrastructure, invest in green technologies, and adopt sustainable land management practices. The study provides valuable insights for policymakers, emphasizing the urgent need for coordinated climate action to ensure the success of AfCFTA and advance Africa's sustainable development agenda.

Keywords: Climate change; Land degradation; Sustainable Development Goals; AfCFTA; Panel-corrected standard errors; Africa.



THEME 6:

II Sustainable Development & Climate Action



T6.2 P1: CLIMATE CHANGE AND AGRICULTURAL VALUE ADDED: ESTIMATING TECHNOLOGICAL INNOVATION THRESHOLD FOR SUSTAINABLE ADAPTATION IN AFRICA

Authors: Ekene ThankGod Emeka & Simplice A. Asongu & Evans S. Osabuohien

This study examines the relevance of technological innovation in shaping the effect of climate change on Africa's agricultural value added. The analysis is based on a sample of 45 African countries (2010-2023). The adopted empirical strategy comprises the interactive Pooled Ordinary Least Squares (POLS), the Prais-Winsten regression with Panel Corrected Standard Errors (PCSE), the dynamic System Generalized Method of Moments (SGMM), and the Lewbel Instrumental Variable Two-Stage Least Squares (2SLS) Estimation. These complementary techniques are employed to assess how technological innovation moderates the impact of climate change on agricultural value added in Africa. The results reveal that the effect of climate change on agricultural value added is significantly conditioned by technological innovation. Specifically, the findings identify a threshold value ranging between 0.18% and 0.34% of technological innovation, beyond which technological progress mitigates the adverse effect of climate change on agricultural value added. These findings hold important policy implications, underscoring the need for an integrated approach that links climate adaptation, mitigation, and technological innovation to enhance agricultural resilience. Additional findings and policy implications are discussed within the framework of the African Union's Agenda 2063 and the Sustainable Development Goals (SDGs) of the United Nations.

Keywords: Agricultural Value Added; Climate Change; Technological Innovations; Africa.



T6.2 P2: THE GROUND BENEATH: HOW CLIMATE JUSTICE MEDIATES LAND-USE SUSTAINABILITY IN RAPIDLY URBANISING SUB-SAHARAN AFRICA

Authors: Okunade, S.O, Assoua, J.E, Alimi A.S, Bomdzele, E.J, AbdulKareem H.K.K, Aquilas N.A, Ode Omenka, L.C., Osabuohien, E.

Rapid urbanisation across Sub-Saharan Africa (SSA) collides with climate injustice and stressed land systems. This study tests whether climate justice, operationalised via governance readiness, rule of law, regulatory quality, press freedom and access to justice, mediates the link between urbanisation and sustainable land use (SLU). Using a panel of 28 SSA countries (2000–2023), we construct Principal Component Analysis-based indices for climate justice and SLU, and estimate Panel-Corrected Standard Errors, Driscoll–Kraay with fixed-effects errors, panel quantile regressions, and Kernel-based Regularised Least Squares (a robust machine learning tool). Three results are decisive.

First, urbanisation imposes a large, robust penalty on SLU. Second, climate justice systematically offsets, and at higher SLU quantiles can reverse this penalty; interaction effects show stronger institutions redirect urban growth toward conservation rather than sprawl. Third, justice pillars are asymmetric since regulatory quality, rule of law and press freedom are unambiguously beneficial, while voice and access-to-justice exhibit short-run “enforcement frictions.” Conditional on institutions, GDP per capita is weakly related to SLU, challenging “grow-first, fix-later” assumptions; electrification and income attract urban concentration, while climate stressors accelerate urban



migration. We argue for justice-centred urban policy by embedding justice metrics in planning, prioritising mid-urbanising countries for reforms, and professionalising municipal land governance. By integrating advanced econometrics with flexible ML, the paper provides the first cross-country quantification of climate-justice mediation in SSA's urban land nexus.

Keywords: Climate Justice; Urbanisation; Sustainable Land Use; Land Governance



T6.2 P3: WORKSHOP: PHD, DBA THESES WRITING INSTITUTIONAL SYSTEMS, PROCESSES, AND COMMERCIALIZATION OF UNIVERSITY RESEARCH INNOVATIONS: A CASE OF MAKERERE UNIVERSITY TECHNOLOGY AND INNOVATION CENTER (MUTIC)

Author: Alfdaniels Mabingo

As the world undergoes the Fourth Industrial Revolution (4IR), universities are increasingly incubating innovations to drive socioeconomic transformation. Makerere University is realigning its strategic vision to a research-led and innovation-driven institution. The university aims to leverage technological innovations to address societal challenges, such as climate change, food insecurity, youth unemployment, and disease, among others. This paper critically examines how Makerere University Technology and Innovation Center (MUTIC) have developed and implemented institutional systems to commercialize university innovations.

The paper emerges from a qualitative case study research, whose data were gathered through interviews, storytelling, and documentary examination, and analysis framed by the third-stream theory (Molas-Gallart et al. 2002) and triple helix theory (Etzkowitz and Klofsten 2005). The paper reveals that the university research and innovation policy, intellectual property management policy, and the 2025 2030 research agenda provide systemic frameworks and benchmarks to support staff and students in researching, protecting, scaling, and commercializing innovative ideas. The discussion further covers how the university has built systems around innovation



exhibitions and competitions, strategic networks and partnerships, and the establishment of 10 makerspaces at MUTIC to source, support, incubate, and commercialize innovations. Amidst some policy misalignments and loopholes, the systems leverage the university's intellectual base, producing scalable and commercially viable innovations to power industries.

The paper presents perspectives on the complexities entangled in developing and implementing systems to transform an African university into an innovation-driven institution, powering the Fourth Industrial Revolution (4IR).

Keywords: University Innovation; Commercialization; Institutional Systems; Technology Transfer



T6.2 P4: BRIDGING THE GENDER LEADERSHIP GAP: ADVANCING DIVERSITY, EQUITY, AND INCLUSION IN KENYAN HIGHER EDUCATION

Author: Anne Kariuki

Women continue to break barriers in Kenyan Higher Education Institutions, yet senior leadership remains overwhelmingly male-dominated, revealing persistent gaps in diversity, equity, and inclusion. This study examines the challenges confronting women academics, including gender bias, socio-cultural expectations, and structural barriers, and explores strategies to promote gender equity through mentorship programs, leadership development initiatives, and gender-responsive institutional policies. Using intersectionality as a conceptual lens, the research investigates how overlapping identities, including gender, age, ethnicity, and socio-cultural factors, shape access to leadership positions. Grounded in Glass Ceiling Theory and Social Role Theory, the study situates the gender leadership gap within SDG 5 on gender equality, emphasizing systemic and cultural barriers. The study adopts a qualitative approach, combining in-depth interviews with faculty and early-career academics across multiple Kenyan HEIs alongside a review of institutional policies on leadership, promotions, and gender equity. Data will be analyzed using NVivo 15 to identify key themes and practical interventions. Findings provide actionable insights for policymakers, universities, and stakeholders to foster inclusive, equitable, and high-performing academic leadership and advance diversity, equity, and inclusion across Kenyan higher education.

Keywords: Gender equity, diversity, inclusion, women in leadership, intersectionality, higher education, Kenya.

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T6.2 P5: DIGITAL READINESS AND INSTITUTIONAL CONTRIBUTIONS TO INNOVATIVE TECHNOLOGY ADOPTION: INFERENTIAL IMPLICATIONS FOR 3D PRINTING ADOPTION IN WESTERN AFRICA

Authors: Grace I. Okedele, Evans S. Osabuohien, Obindah Gershon & Rehema J. Monko

Digital manufacturing technological transformation is explained to depend not only on innovation ambition but on the strength of the systems that can sustain it. To assess this, this study investigates how digital infrastructure and institutional quality jointly influence technological readiness as a macro-level indicator of 3D-printing adoption potential, across West African economies. Using panel data and Generalised Least Squares estimation, the analysis reveals that ICT readiness significantly enhances technological readiness. Also, while government effectiveness and regulatory quality show no direct effects, rule of law exhibits a direct negative but significant impact. However, through its interaction with ICT readiness, its indirect impact is marginally positive, suggesting that governance quality amplifies the returns to infrastructure investment. Skills, R&D expenditure, industrial activity, and access to finance emerge as critical complementary factors. The findings, therefore, emphasise that advanced manufacturing adoption in West Africa is driven by the combined strength of infrastructure, capabilities, and institutions, underscoring the need for integrated digital, policy, and capacity building strategies to accelerate 3D-printing diffusion.

Keywords: 3D printing adoption, Digital Readiness, Institutions, Innovative technology, West Africa.



T6.2 P6: DIGITAL FINANCIAL INCLUSION, WOMEN'S EMPOWERMENT, AND POVERTY REDUCTION IN NIGERIA: AN SDG PERSPECTIVE

Authors: Oluwasegun A. Adekoya, Oluwasogo S. Adediran PhD, David O. Olukanni PhD & Rehema J. Monko PhD

Digital financial inclusion is increasingly recognized as a key tool for achieving SDG 1 (No Poverty) and promoting SDG 5 (Gender Equality). Despite global progress, gender disparities persist, with women less likely than men to access financial services, particularly in low- and middle-income countries, including Nigeria. This study examines the short- and long-run effects of digital financial inclusion and women's empowerment on poverty reduction in Nigeria from 2005 to 2023, using GDP per capita growth rate as a proxy for poverty reduction. Employing the Autoregressive Distributed Lag (ARDL) model, the findings reveal that mobile subscriptions support long-run growth, while female account ownership alone is insufficient without productive utilization. Female wages and salaries boost growth in the short run but is constrained in the long run by labour market rigidities, and rapid urbanization without adequate infrastructure negatively impacts growth. The study recommends integrated policies promoting financial literacy, gender responsive finance, quality employment, and inclusive urban planning to accelerate progress toward SDG 1 and SDG 5.

Keywords: Digital Financial Inclusion, Gender-Response Finance, Poverty Reduction, Urbanization.



T6.2 P7: THE CHALLENGES FACED BY SMALL-SCALE GOLD MINERS IN OPERATIONAL AND VALUE ADDITION PERFORMANCE: A CASE STUDY OF GEITA REGION, TANZANIA

Author: Theresia A. Mtewe

This study investigates the challenges hindering value chain and operational performance among small-scale gold miners (SSM) in Geita Region, Tanzania, where SSM contributes significantly to livelihoods and national gold output but remains constrained by limited technology, finance, and formal market access. The study's main objective was to examine technical, financial, social, environmental, and regulatory factors affecting miners' capacity for value addition and to propose strategies for sustainable improvement. Using a descriptive research design, data were collected from 356 small-scale miners and 10 community members through structured questionnaires, key informant interviews, and focus group discussions, selected via purposive and stratified random sampling to ensure representation of gender, age, and mining experience. Findings reveal that outdated tools, lack of refining equipment, and unsafe methods lower productivity and recovery rates.

Financially, 78% of miners face barriers to affordable credit, forcing reliance on exploitative middlemen. Social and environmental issues include land disputes, child labor, health risks, deforestation, and water pollution. Complex licensing procedures and multiple levies further discourage formalization, while regulatory officials cited gaps in monitoring and



enforcement. The study concludes that overcoming these obstacles demands integrated interventions: provision of modern processing technologies, establishment of affordable financing mechanisms such as cooperative credit schemes, simplification of licensing and tax procedures, and enforcement of environmental and labor safeguards. It recommends targeted government and private-sector partnerships to enhance technical training, strengthen miner–community relations, and create supportive market structures.

Implementing these measures can transform small-scale gold mining from subsistence activities into sustainable, value-adding enterprises that meaningfully contribute to Tanzania’s economic growth and local development. The manual synthesizes existing literature, outlines the study’s conceptual framework, discusses methodological choices, and presents the findings within broader scholarly and policy debates. It concludes with a set of policy implications and recommendations intended to guide future research, regulatory reforms, and sustainable development initiatives. In doing so, this manual serves as an authoritative academic resource that captures the complexities of small-scale gold mining and the pressing need for structural transformation in Tanzania’s mining sector.

Keywords: Small-Scale Gold Mining; Value Addition; Operational Performance; Mining Value Chain.



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