International Journal of Women in Technical Education and Employment
ISSN: 2811-1567. Volume 6 – Issue 2. December 2025
https://fpiwitedjournal.federalpolyilaro.edu.ng

Linear To Circular: Assessing the Legal and Business Communication Landscape for Plastic Waste Management in Lagos, Nigeria

Mohammed Ramon S.
Department of Accountancy, The Federal Polytechnic, Ilaro, Ogun State, Nigeria, West Africa,
ramon.mohammed@federalpolyilaro.edu.ng

Abstract

Plastic waste is a large threat to Nigeria's environmental health and public wellbeing, requiring the transition from a linear economy towards a circular one. This paper examines the combination of policy environments and business innovation and communication strategies to drive this transition in Lagos, Nigeria's business hub. It investigates how technological and societal, and environmental objectives complement or contradict each other. To explore these issues, this research adopts a qualitative case study approach in investigating two leading startups within the circular economy: Wecyclers and Recycle Points. Data sources involved semi-structured discussions with founders and analysis of policy and company texts, and direct observation. Preliminary findings indicated that there is currently a huge implementation gap in Nigeria's plastic waste policy, which creates an uncertain environment for entrepreneurs. Both the growth of a flexible, tech-driven business model and the struggle to achieve financial viability and growth have so far featured within both startups. An identification of a serious communication gap between innovators and policymakers hinders supportive regulation from legislation and limits wider changes. The study indicated that technology alone cannot give rise to a successful transition to a circular economy; rather, it increases the need for combined efforts: boosting the circle of policy enforcement, strengthening effective business models, opening communication, and building partnerships. This paper provides practical suggestions on how to create a more connected environment wherein useful technology finds the necessary support from society to help inform other emerging economies.

ARTICLE HISTORY
Received: November 20, 2025
Revised: December 6, 2025
Accepted: December 13, 2025

Keywords: Circular Economy, Plastic Waste Management, Sustainable Business Models, Environmental Policy, Stakeholders Communication.

Citation
Mohammed S.R. (2025). Linear To Circular: Assessing the Legal and Business Communication Landscape For Plastic Waste Management in Lagos, Nigeria. *International Journal of Women in Technical Education and Employment,* 6(2), 53 – 60.

Introduction

One of the major concerns of environmental management in Nigeria is plastic waste management, in relation to the rate of urbanization, growing consumption patterns, and lack of proper waste management infrastructure in the country. The example that can be seen in Lagos reflects this challenge in many ways: a highly populated city with multiple levels of government and an informal economy that is active. Estimates at the municipal and industry analyses place tons of municipal solid waste generated daily by Lagos, a great deal of it plastic. According to statistics from LAWMA in 2021, the accumulation of plastic waste directly contributes to public health and livelihood through

increased flooding, blockage in drainage systems, and pollution in coastal waters.

The linear production model-extract, produce, consume, and dispose-has traditionally formed the basis of industrial systems. In contrast, CE redesigns waste as a resource in which material value is conserved through design, reuse, and repair, or remanufacturing and recycling Geissdoerfer *et al*. (2017). Supply chains, financial systems, regulatory frameworks, and consumer behaviour will all need to change in moving toward CE. Significantly, transition to CE entails sociotechnical and political changes alongside technical, since this requires reconfigurations of institutional incentives and stakeholder roles.

This research investigates how emerging circular businesses, along with the regulatory environment and their communication strategies, together facilitate or hinder the transition towards CE for plastics in Lagos. This paper summarizes lessons on how policy, business models, and communication must come together in support of scaling up CE in Nigerian cities. It is based on a detailed analysis of the experiences of two social enterprises, Wecyclers and RecyclePoints, using divergent operational strategies. This paper's central research question is: under what business, legal, and communication circumstances is it possible for Lagos to make a transition from linear to more circular plastic management?

Defining the Circular Economy

Industrial ecology, cradle-to-cradle design, and resource-efficiency frameworks are some of the disciplinary roots of the CE concept, which is currently presented as a system-level response to waste and resource depletion. Although closed-loop material flows, product life-extension, and regenerative design have been highlighted in different definitions, maintaining materials and products at their maximum value for as long as possible is the common motivator. Instead of emphasising the need for integrated strategies, which range from product design over business models and reverse logistics to enabling policy, scholars warn against narrow interpretations that reduce the CE to recycling alone. This framing places the shifts towards CE in a socio-technical context: while technology is important, scale and impact are determined by governance, finance, institutions, and culture.

Adoption of CE poses unique opportunities and challenges in low- and middle-income nations. On the other hand, with a large informal economy, a high rate of reusing, and entrepreneurial creativity, community-level circular economy practices are feasible. However, for a higher degree of transformation, a lack of institutional capabilities, low compliance with environmental policies, and underdeveloped capital markets are known to pose a barrier in the transition. In conditions of a lack of resources, "frugal innovation becomes a key approach to finding ways for developing an affordable solution" (Adewoye, 2020) in limited conditions. However, researchers also highlight that for frugal innovations to transition from a prototype to a scaling model, "policy certainty, like EPR policies, budget certainty, and a platform for stakeholder debate" are necessary.

EPR, deposit refund, landfill bans, and product design are some of the tools being used to support a circular economy for plastics around the world. In most developing nations, legislation on the management of plastic pollution and other environmental issues has been established but lacks effective practical implementation due to a lack of funds. On a similar note, it appears that regulatory structures in Nigeria are comprised of the "NESREA Act and various waste-related regulations, a relatively good foundation for governance." However, in reality, regulatory institutions struggle with "staff and budget allocation issues, among other issues of coordination between institutions." Therefore, according to the literature, resources and coordination are key in bridging this policy gap.

These CE-related business models differ in value chain, from gathering to aggregation, then recovering, product-as-a-service, through to incentives for consumers. Inclusive models are those of Wecyclers, which use households and recycling through incentive points, while RecyclePoints simply demonstrate a corporate engagement model that directs in a very explicit manner how it uses brand-supported gathering and reward programs. A number of studies identify that a small amount of revenue from gathered, recovered, and used materials does not even cover costs, requiring grant financing, CSR, impact capital, and services in a hybrid form. Instead, a rather small amount of literature suggests that patient capital, blended finance, and de-risking tools are specialized finance vehicles that would lead to a scale of circular ventures in emerging markets.

Communication can play a role in mobilizing community engagement, articulating business value to corporate partners, and influencing an interpretation of operating conditions by policymakers. Storytelling plays a fundamental role in promoting CE adoption, as shown by the Ellen MacArthur Foundation. This aligned communication ensures that policy and market stakeholders are working in a non-siloed manner. To communicate, for instance, for Lagos, community-level engagement in behavior changes approaches for microrides occurred through WeCyclers' text messaging and rewards, but policy-level engagement remains a macro-level challenge. There needs to be a platform for developing policy tools aligned with realities, as shown in the literature related to this topic.

Materials and Methods

This study will use a methodology involving a qualitative approach for analyzing the policy, business model, and communication dynamics that represent a distinctive feature of this circular economic field in Lagos. From this research methodology, a multiple case study has been employed for this analysis for different scenarios related to a range of transition dimensions that are being challenged and/or facilitating PLWWM-related transition. The cases in this research are determined in a manner that follows a principle of purposeful sampling, and for this project, a total of two cases are being examined. These cases are determined in relevance to PDOs that make for a challenging and interesting set of paradigms for applying a circular economy in Lagos. These cases are for WeCyclers, who are focused on a technological paradigm for collecting domestic garbage, as well as for Recycle Points who are company-centric with EPR programs.

To increase our knowledge base, data has been gathered from different sources, with a special emphasis on triangulation of methodology. A semi-structured interview has been employed as a key direct data gathering instrument for knowledge acquisition from the founders/top management of our case study companies. Other interviews were also conducted with representatives of both of our regulatory bodies as well as different industry associations. This has ensured that our knowledge acquisition takes place from a wide perspective.

These findings from interviews are complemented by an analysis of official documents, which involved reviewing policy documents, legislative laws, and corporate sustainability reports. We review in our study, for instance, “National Policy for Plastic Waste Management in Nigeria,” regulatory/procedural legislative laws established by “Lagos State Environmental Protection Agency,” as well as corporate sustainability reports of both of our case companies. In addition, we look into media coverage as well as public communications from these companies.

These field observations are significant in gathering data with regard to context, especially in terms of operational knowledge. These observations of different site visits in various collection centers and processing plants were significant in allowing data from findings in interviews and documents to correspond with realities. Field observations, in fact, can reveal challenges in implementation that are not

accessed using other approaches for methodology in gathering data.

A framework of thematic analysis enabled carrying out a method of analysis, which consisted of a deductive, as well as an inductive, approach to coding. The initial coding of themes was structured around research questions of policy implementation gaps, business model innovation, and communications. Iterative review of the data identified emerging themes, supported by convergence-divergence patterns across different data sources.

The research has taken ethical considerations into account; all interviewees gave informed consent and were granted confidentiality when this was requested. The plurality of views has been attempted to be presented in a balanced manner without compromising the requirements of academic rigor and critical distance.

This approach, therefore, allows an investigation into how the translation of circular economy principles into practice occurs from a number of valuable perspectives in Lagos's complex urban environment. The combined data sources and analytical perspectives capture both the structural constraints and innovative adaptations in Nigeria's emergent plastics circular economy.

Data analysis and methodological references

Thematic analysis was applied to qualitative data from interviews, documents, and field observations in accordance with Braun & Clarke's (2006) six-phase process: familiarisation with the data, initial code generation, theme search, theme review, theme naming, and final report production. These suggestions by Yin (2014) are useful in emphasizing the use of multiple sources of evidence as a means of establishing construct validity. This multiple-case study design also aligns with Creswell's recommendation to ensure that the credibility and reliability of qualitative research are maintained through triangulation based on interviews, document review, and field observation. These methodological decisions are part of an analytic process that is systematic and rigorous in nature; it ensures the results will not be anecdotal but based on systematically interpreted evidence.

Results

Gaps in Policy and Implementation

These findings reveal a deep disconnect between the policy texts and field enforcement. Legal instruments, such as the NESREA Act, its regulations, and other laws of Nigeria, place broad mandates on waste management and the protection of the environment. Yet, agency informants consistently complained of chronic underfunding, inadequate staffing, and weak inter-agency coordination. Logistical support limits regular monitoring that can be carried out by enforcement officers; jurisdictional overlaps between local government councils, state environmental agencies, and federal bodies create bureaucratic ambiguity.

EPR is a cornerstone mechanism for internalizing the costs of plastic waste; however, it remains incomplete as a policy domain. Although multinationals have shown interest in EPR models, there was said to be no uniform set of guidelines, no clarity over compliance metrics, and no credible system for monitoring packaging flows. All these combine to make the regulatory environment one where obligations are aspirational, not operational, thereby disincentivizing long-term private investment in recycling infrastructure.

This also comes out in inconsistent municipal collection: collection schedules, operations of landfills, and diversion targets vary across Lagos's local government areas. Spatial heterogeneity at this level is a fact for operational planning by circular businesses dependent on predictable collection flows and cooperation with municipalities. That is, policy existence is not matched by policy capacity, which may be considered structural for impeding scale.

Business Model Innovation and Financial Fragility

Although innovative, both Wecyclers and RecyclePoints demonstrate adaptable business models sensitive to the socio-economic realities of Lagos, yet suffer from similar vulnerabilities. Wecyclers has come up with an astute low-cost strategy that mobilizes households and unofficial collectors for source-separated collection through the use of SMS communication with a points-based incentive system. This reduces customer acquisition costs and clearly links community benefits and incentives for reliable waste collection. Revenue streams cannot pay for scaling costs: selling recovered plastic and minor service fees are the company's revenue streams. Interviewees provided examples of a number of ongoing challenges that include high transportation costs, contamination of the materials collected, and fluctuating commodity prices.

RecyclePoints has focused on consumer-facing reward programs, recycling kiosks, and corporate partnerships. In return, RecyclePoints benefits from access to a new income stream and meets corporate sustainability commitments - CSR budgets, supply-chain reporting. Scaling partnership-based models requires stable corporate demand and clear EPR signals that institutionalize corporate responsibility. Both businesses employ various financing methods, such as donor support, CSR money, and pilot grants. This is often short-term and cannot provide the long lead times required for infrastructure investments. The businesses, therefore, constantly experience false starts at the growth threshold and a limited-scale impact. The findings indeed support the literature that supports the commitment of patient and impact-driven capital to circular ventures (Adenle & Sulaiman, 2021).

Communication Practices and the Policy–Business Gap

It seemed that communication was both a systemic weakness and a strategic asset. Localised messaging from Wecyclers about point-of-use convenience, modest rewards, and cleaner neighborhoods has resulted in extremely high participation rates at the community level. In a potent illustration of demand-side framing, these messages distribute environmental benefits into immediate household incentives. RecyclePoints' corporate messaging positions recycling as a reputational and regulatory compliance tool for international partners by utilising sustainability reporting and brand value. Although this form of B2B communication effectively mobilises corporate resources, it doesn't necessarily build grassroots support or inform policy creation.

Importantly, business owners indicated that there was limited avenue through which operational realities could be communicated to legislators. For example, a policy brief would be most appropriate for regulatory bodies that lack information concerning costs, contaminations, as well as justifications for data collection. This misalignment arises owing to a lack of involvement in decision-making owing to a lack of participation platforms. This lack of communication affects policies, especially concerning the application of strategies for compliance, for example, in a circular economy business model as proposed by Ellen MacArthur Foundation in 2015.

Discussion

The findings indicate that to promote a circular economy in Lagos, there has to be a proper synergy in relation to policy, finance, and communication. Although community engagement and technology development are insufficient, which are merely a necessity, a facilitating institution would help in this transition, which would be useful in mitigating business risks, encouraging investment, and coordinating communication for co-creation. This where the conceptual gap has a role in institution-building, which would comprise tasks in developing policies for EPR with distinct objectives, data infrastructure improvement in relation to waste, and jurisdiction boundaries defined with crystal-clear definitions. Most importantly, it has to shift from a top-down policy announcement in a community-inclusive development with a policy that

encompasses business insight in costing, logistics, and behavior-based development.

First, Lagos's circular businesses suffer market failures. In addition to low market prices for the outputs of recycling, there is a need for better monetisation of recycling's positive externalities, like lower pollution and the concomitant health benefits. It can, however, make such an investment less risky by employing blended finance techniques such as outcome-based contracts, guarantees, and concessional capital. Development partners through first-loss capital, technical support, and aggregation financing that reduce unit costs for recyclers can stimulate such investments.

The third risk emanates from governance. "There is no institutionalized communication between regulators and entrepreneurs." Multi-stakeholder platforms could establish feedback loops, where policy informed by operational constraints enables the making of investments by way of clear policy. Multi-tiered communication strategies are needed, including policy briefs to inform regulators, corporate narratives to mobilise private sector resources, and community-level messaging to keep participation. Succinctly put, Lagos's CE transition is a challenge of systems change, as with most transitions-require action harmonized across domains that are many. But detailed examples of Wecyclers and RecyclePoints, besides showcasing the potential of context-adapted innovation, also illustrate what becomes the vulnerability of advancement in the absence of systemic support.

Limitations & Future Research

Also, this study has a limitation in that it concentrates on only two case companies in Lagos, which reduces the potential of capturing the dynamism of circular practices in other Nigerian towns. Also, with a small sample size, there can be issues of self-reporting bias.

Future Studies

Future studies ought to:

- Ascertain lifecycle benefits as well as Cost-Benefit Ratios of circular practices in Lagos.
- Assess pilot EPR projects that would identify scalable compliance strategies.
- Discuss how the Informal Sectors contribute to Formalisation as well as Circular Value Chains that support livelihood.

Conclusion

The complexities involved in adopting a CE for plastics in Lagos, Nigeria, are shown in this paper. This paper shows that innovation from social entrepreneurship brings value to proof-of-concept, but change needs to be brought along systematically. There are gaps in policy delivery, finance, and communication that complement each other in determining how deep and quickly a transition in a circular economy needs to move. There needs to be a comprehensive effort that combines institutional strengths, policy, customized finance, and a platform for communication in order to bridge a transition from proof-of-concepts from a limited project to a city-wide transformation. Business cases for Wecyclers and RecyclePoints proved that business models can, in fact, be effective agents for change in a regional setting—but this needs de-risked finance. The transition in a circular economy, in essence, remains a political and governance issue, as it has to leverage technological potential with the economic systems that govern society.

Recommendation

Here are some takeaways for policymakers, investors, and entrepreneurs:

Institutional and Policy Responses

Formulate a staged approach to EPR policy: A coordinated effort between governments in Nigeria should formulate EPR policies. This will help highlight penalties for non-compliance, as well as the duties of producers. Pilot to scale represents a model of how it can be rolled out.

Enhance capacities of agencies: In order to enhance compliance and enforceability, government bodies, including NESREA, as well as environmental bodies

in Lagos, would benefit from enhanced support in terms of finances, training, and infrastructure.

Align mandates: To eliminate territorial conflicts that hamper the delivery of services, regulatory mandates of various government agencies would also be clearly aligned.

Finance & Investment Instruments
Facilities for blended finance should be set up: To minimize investment risk for recyclers and processors, development partners should set up funds that provide patient capital, concessional loans, and guarantees.

Provide performance-based contracts: To reduce costs of finance, governments and companies can offer offtake agreements, also known as throughput agreements, which provide assured income for the recycler.

Encourage the use of a global brand-contribution model to a pre-screened fund supporting infrastructure for collection and recycling, with a link to quantifiable KPIs to mobilize corporate EPR funds.

Operational Business Measures
Invest in upgrading the quality of material: To minimize contamination and upgrade the value of recovered material, invest in support for intermediaries and provide training in source separation.

Aggregated economies: Look into how aggregated logistics solutions can help cut transport costs and enhance routes of aggregate collection.

Communication & Multi-stakeholder Platforms
Circular Economy Forum Creation: A platform that will help in connecting investors, governments, entrepreneurs, and other stakeholders in a way that will help in sharing knowledge.

Developing a multi-tiered communication strategy: The funders and businesses will work together to develop a corporate policy, and community-level messaging strategy that aligns community interests with federal policy agendas.

Public transparency: To encourage confidence and help inform investment decisions, make data related to waste flow, project outcomes, and EPR performance available.

References

Adeniran, A. E., Nubi, A. T., & Adelopo, A. O. (2017). Solid waste generation and characterization in the University of Lagos for a sustainable waste management system. Waste Management, 67, 3-10.

Adenle, A. A., & Sulaiman, R. (2021). Challenges of transitioning to a circular economy in developing countries: The case of Nigeria. Sustainable Production and Consumption, 27, 74–88.

Adewoye, A. (2020). Social innovation and waste management in Nigeria: A case study of Wecyclers. African Journal of Environmental Management, 8(1), 45-59.

Bocken, N. M. P., de Pauw, I., Bakker, C., & van der Grinten, B. (2016). Product design and business model strategies for a circular economy. Journal of Industrial and Production Engineering, 33(5), 308-320.

Ellen MacArthur Foundation. (2015). Towards a Circular Economy: A Report by Ellen MacArthur Foundation. Ellen MacArthur Foundation.

Federal Government of Nigeria. (2007). National Environmental Standards and Regulations Enforcement Agency (NESREA) Act. Government Press.

Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The circular economy: A new sustainability paradigm? Journal of Cleaner Production, 143

Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. Resources, Conservation and Recycling, 127,

Lagos State Government. "Lagos State Environmental Management and Protection Law (Revised Edition)." Ministry of the Environment and Water Resources, 2020.

LAWMA. (2021). Lagos State Waste Management Authority Annual Report. Lagos State Government.

NESREA. (2013). National Environmental (Sanitation and Waste Control) Regulations. National Environmental Standards and Regulations Enforcement Agency.

OECD. (2020). Circular Economy in Cities and Regions: Synthesis Report. OECD Publishing.

Ogu, V. I. (2000). Private sector participation and municipal waste management in Benin City, Nigeria. Environment and Urbanization, 12(2), 103–117.

RecyclePoints. (2019). Impact & Sustainability Report. Recycle Points Nigeria Ltd

UNEP. (2018). Single-use plastics: A roadmap for sustainability. United Nations Environment Programme.

Wecyclers. "Annual Impact Report." Wecyclers Nigeria Ltd.