

**University of Maiduguri (UNIMAID) Nigeria–
Universitas Negeri Semarang (UNNES) Indonesia**

**Joint Research Study: Exploring the Drivers of Circular Economy Behaviour:
Regulations or Values**

By
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And
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"The transition towards a circular economy cannot be driven by regulations alone. It must start with a transformation in societal values and a deeper sense of environmental awareness."

INTRODUCTION: A collaborative study that started in middle of 2025 by researchers from the University of Maiduguri, Nigeria, and Universitas Negeri Semarang (UNNES), Indonesia, has found that personal values and environmental awareness play a more substantial role in encouraging circular economy practices than government regulations or social pressure.

The research explored why some individuals are more willing to engage in environmentally responsible actions, such as sorting waste, recycling, and reusing products. The findings suggest that lasting behavioural change towards a circular economy requires more than policy interventions; it must also be supported by stronger environmental values and ecological consciousness among citizens.

The study was led by **Dr Edi Kurniawan, M.Pd. of Universitas Negeri Semarang** and conducted in collaboration with researchers from the **University of Maiduguri: Muhammad Bello Ibrahim, BSc, PGDE, PGDS, MPA, MSc, PhD and George Godwin Glanda, BSc, MSc, PhD, from the Department of Geography and Environmental Management.** The research involved 275 households across the two countries, including 110 households in Nigeria and 165 households in Indonesia.

Using Structural Equation Modelling (SEM) and Multi-Group Analysis, the research team examined the factors that predict circular economy behaviour and compared behavioural patterns between communities in both nations.

“We found that behavioural intention remains the strongest predictor of circular economy practices. Individuals who demonstrate a stronger intention to engage in environmentally responsible activities are more likely to translate those intentions into actual behaviour,” said Dr Ibrahim. However, several factors commonly emphasized in classical behavioural theories were not found to have a significant influence. Social pressure and perceived behavioural control, the extent to which individuals believe they can easily perform a behaviour, did not emerge as decisive factors in determining circular economy practices.

Environmental spirituality is also highlighted in the study. Among all internal and external factors examined, environmental spirituality consistently showed a strong influence on individuals’ willingness to adopt circular economy behaviours. This finding aligns with the religious and cultural contexts of both Nigeria and Indonesia, where faith and moral values continue to shape many aspects of daily life.

“An individual's spiritual beliefs can significantly influence how they perceive and fulfil their responsibilities toward the environment. The findings suggest that ecological awareness is not driven solely by rational considerations but is also shaped by spiritual and religious values,” added Dr Ibrahim, an expert in urban-rural community development.

Turning to the comparative analysis, Dr Kurniawan revealed notable differences between the two countries. In Nigeria, circular economy behaviour was influenced primarily by personal attitudes toward the environment. Individuals with more positive environmental attitudes were more likely to adopt sustainable practices.

“In contrast, respondents in Indonesia were influenced more strongly by moral norms, support from their surrounding communities, and enabling policy

environments. These differences indicate that strategies for promoting circular economy practices cannot be universally applied across countries without considering local social and cultural contexts,” stated the research leader.

The researchers noted that sustainability programmes and circular economy initiatives in developing countries require tailored approaches. In Nigeria, interventions that focus on strengthening environmental attitudes, practical awareness, and individual motivation may be more effective in encouraging sustainable behaviour. In Indonesia, community-based approaches, moral reinforcement, and institutional support appear to be more relevant drivers of behavioural change.

The study underscores the importance of integrating social, cultural, and moral dimensions into sustainability policies. While investments in waste management infrastructure and regulatory frameworks remain important, the researchers argue that long-term progress toward sustainable cities will depend equally on cultivating ecological awareness, moral responsibility, and a deeper sense of environmental stewardship among citizens.

Dr Glanda, whose field is in agriculture and rural development, emphasized that the findings contribute to the growing body of international research on circular economy transitions and provide valuable insights for policymakers, educators, and development practitioners seeking to advance sustainability goals in diverse cultural settings. As the study demonstrates, the transition to a circular economy is not merely a matter of technology or policy.

“It is fundamentally a process of transforming how people understand, value and interact with the environment around them,” shared the passionate academic tradition of co-creating knowledge for sustainable development. Details findings of the Research will soon be published in an International Journal.



Muhammad Bello Ibrahim, PhD



.Edi Kurniawan, PhD