Green consumer behaviour among individuals in the low-income rural demographic in Zambia: A subsistence – sustainability paradox (SSP)

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ABSTRACT

This study was guided by the Subsistence-Sustainability Paradox (SSP), a framework that applies behavioural theory to situations of scarcity. The SSP shows that households in low-income rural areas often prioritise immediate survival needs over sustainability goals. This is not due to indifference but is a rational response to ongoing poverty and ecological risks. By connecting consumer behaviour to structural inequalities and cultural influences, the study adds to discussions about the limits of what is possible in times of scarcity and the need for sustainability models that consider local contexts. The research used a qualitative phenomenological design, which is effective in capturing real experiences and the meanings that participants give to their environmental practices. The target population included individuals from rural Kabwe, specifically Muwowo, Kang'omba, and Kamakuti, who faced economic difficulties and were directly impacted by climate uncertainty between 2023 and 2024. Using purposive sampling, 27 participants were selected based on their involvement in resource-dependent activities, awareness of ecological issues, and willingness to share adaptive strategies. The sample consisted of 19 individuals who were interviewed in depth and 8 participants who joined focus group discussions, ensuring that both individual and group viewpoints were included. Data collection used a multi-method approach, which involved semi-structured interviews, focus group discussions, and non-participant observations over four months. Interviews offered detailed accounts of consumption habits, traditional practices, and cultural norms. Focus groups encouraged discussions that uncovered shared values, conflicts, and community-led resilience strategies. Observations recorded real-life actions such as reusing resources, traditional farming techniques, and community coping methods, providing an objective addition to self-reported data. Data analysis followed Van Manen's hermeneutic-phenomenological method, using structured coding and thematic grouping to interpret participants' experiences. NVivo software was used to ensure clarity and reliability in identifying themes related to affordability, cultural continuity, awareness gaps, and Indigenous resilience. The findings revealed four main themes: affordability as the key driver of consumption; cultural continuity supporting traditional practices; a gap between awareness and action in which ecological knowledge does not lead to behaviour change; and adaptive creativity shown through indigenous resilience and frugal innovation. These themes demonstrate how factors such as cost, tradition, knowledge, and resilience interact with green consumer behaviour within contexts of scarcity. The study concludes that feasibility thresholds, rather than attitudes or norms, are the main factors determining sustainable actions in low-income rural households. It suggests policies that promote frugality and indigenous resilience through subsidies, microfinance, and culturally relevant education. By framing the lack of typical green practices as logical responses to survival needs, the research enhances discussions around sustainability by linking poverty reduction with ecological care and emphasising environmental justice.

Keywords: Base-of-Pyramid, Environmental Justice, Green Consumer Behaviour, Poverty and Consumption, Rural Zambia, Theory of Planned Behaviour

I. INTRODUCTION

The global sustainability discourse has intensified in recent decades, particularly following the adoption of the United Nations Sustainable Development Goals (SDGs) in 2015. Among these, SDG 12, 'Responsible Consumption and Production', emphasises the need to transform consumer behaviour as a critical pathway to environmental protection and intergenerational equity (Mustafa et al., 2022). The ecological dilemma confronting the world today is largely attributed to rapid industrialisation and irresponsible consumption patterns (Aladejare & Musa, 2024; Thøgersen, 2021; Zafar et al., 2020). Industrial success has undeniably improved material living standards; however, it has simultaneously produced severe ecological costs, including high CO_2 emissions, excessive packaging waste, and global warming (de Bandt et al., 2021; Yasmeen et al., 2018).

Much of the scholarship on green consumer behaviour has concentrated on affluent, urban populations in developed economies. Ottman's (1994) typology of "true green," "green money," "almost green," "whiners," and "basic brown" consumers reflects assumptions that individuals possess the financial and social capacity to make

environmentally responsible choices. Similarly, Thøgersen (2021) notes that urban consumers in Western contexts are more likely to adopt eco-friendly practices due to higher disposable income, greater market access, and policy-driven nudges such as eco-labels, subsidies, and carbon taxation. These studies have generated robust insights into how attitudes, norms, and perceived behavioural control shape pro-environmental behaviour in contexts of abundance (Zafar et al., 2020). Despite the growing body of literature on green consumption, most studies ignore the realities of green consumption among impoverished rural populations, especially in developing countries.

As already highlighted, the underrepresentation of green consumption behaviour of low-income rural households in the ongoing sustainability discourse is notable. Thøgersen (2021) observes that, although research in developing countries is beginning to emerge, it is predominantly conducted with urban middle classes in mind, making rural communities invisible. The rural household may depend heavily on traditional systems, informal resource management, and subsistence practices embedded in local cultural systems (Mvula et al., 2024). These systems may not fit the conventional understanding of pro-environmental practices, but they can still express indigenous resilience and frugal innovation that contribute to sustainability in different ways (Ibid). It is important to understand these complex dynamics because rural households' decision-making is shaped by systemic inequalities, market exclusion, and cultural identities that influence environmental engagement (Aladejare & Musa, 2024). The coexistence of traditional systems and the need for immediate survival often constrains the adoption of green technologies and practices common in urban settings (Mustafa et al., 2022).

In Sub-Saharan Africa, rural households face dual pressures of poverty and climate vulnerability, making consumption choices a balancing act between immediate survival and ecological responsibility (World Bank, 2024, 2025). Farias and Farias (2010) describe this as the "cycles of poverty and consumption," where subsistence imperatives frequently override ecological values. In view of the gap between 'subsistence' and 'sustainability', this study aims to explore green consumer behaviour among individuals in vulnerable rural households by examining the interplay of cultural, structural, and normative constraints (Moleka, 2024). In this context, this study further endeavours to build on this subsistence-sustainability paradox to develop context-specific approaches for promoting environmental stewardship in resource-disadvantaged rural settings (Mvula et al., 2024). Of course, this study contributes to the ongoing debate on green consumer behaviour among impoverished rural populations by integrating poverty alleviation, climate change, and environmental stewardship (World Bank, 2024, 2025).

1.1 Statement of the Problem

This study addresses the core gap, the nuanced interaction between subsistence imperatives and sustainability aspirations, of individuals in low-income rural households in Zambia. Green consumer behaviour has been theorised mainly in urban, affluent contexts (Thøgersen, 2021). Rural low-income households face affordability constraints, limited infrastructure, and cultural traditions that shape consumption, especially under conditions of scarcity and climatic variation (de Bandt et al., 2021). The problem is the knowledge gap: how do environmental values translate into appropriate environmental behaviour when survival imperatives dominate?

1.2 Research Objectives

i. To explore green consumer behaviour among individuals in low-income rural households in Zambia.
ii. To understand the tension between subsistence imperatives and sustainability aspirations in the Zambian rural context.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Extended Theory of Planned Behaviour (ETPB)

The Extended Theory of Planned Behaviour (ETPB) coined by Zhang et al. (2019), exists as an extension of the original Theory of Planned Behaviour (TPB), developed by Ajzen (1991). In early times, the TPB framework provided the basis for unlocking the complexities of human behaviour, based on the argument that the strength of an individual's purchase intention is based on 'attitude,' 'subjective norms,' and 'perceived behaviour control' (Eagly & Chaiken, 1993; Ajzen, 1991). 'Attitude' represents an individual's evaluation of something, which could be positive or negative; 'subjective norms' imply social pressure or influence; and 'perceived behavioural control' represents factors such as resources, constraints, opportunities, etc., which make it easy or difficult for individuals to engage in particular courses of action. Ajzen's three-component construct was designed to decode the mechanisms through which an individual's beliefs and social pressures interact to influence behavioural intentions, thus offering a holistic perspective on human behaviour across different settings (Ibid).

Ajzen's Theory of Planned Behaviour (TPB) has been widely used in psychology and other social sciences and has gained broad acceptance owing to its applicability and extensibility (Zhang *et al*., 2019; Yadav & Pathak, 2017). In affluent contexts, TPB has been widely applied to explain pro-environmental behaviour, showing that

favourable attitudes and supportive norms often translate into sustainable practices when perceived control is high (Thøgersen, 2021). However, given a 29-year hiatus during which there has been notable ecological change, the original TPB is less representative from this study's perspective, as it fails to capture the environmental dimension pertinent to this study. Against this background, the ETPB (Zhang *et al.*, 2019) was adopted in this study. By integrating 'environmental concern' and 'cognitive factors,' the ETPB offers an understanding of the complexities of green consumer behaviour in the context of Zambia's vulnerable rural demographic and beyond.

The ETPB (Zhang *et al.*, 2019) extends the original TPB (Ajzen, 1991). by suggesting the addition of 'cognitive factors' and 'environmental concern.' Environmental concern denotes an individual's care for the environment (McDonald *et al*., 2015). Environmental concern stems from an individual's ecological knowledge (Yadav & Pathak, 2017). Cognitive factors include personal knowledge and information processing capabilities (Bratu, 2017). Consumers with high environmental cognition are likely to support environmentally benign products (Tian *et al.*, 2021). The ETPB is particularly relevant for sustainability research, as it acknowledges that ecological awareness and ethical responsibility influence intentions beyond utilitarian considerations. The Extended Theory of Planned Behaviour (ETPB) thus helps to explain the awareness–action gap**;** intentions exist but fail to materialise due to feasibility thresholds. This study extends TPB by emphasising that in scarcity contexts, perceived control is not merely one determinant among others but the decisive factor that neutralises attitudes and norms.

2.1.2 Base-of-Pyramid (BoP) Theory

The Base-of-Pyramid (BoP) theory was popularised by Prahalad and Hart (2002). The BoP situates the world's poor as sitting at the base of the socioeconomic pyramid. According to the latest statistics, about 700 million people or 9.2% of the global population, live under extreme poverty. The BoP thus helps to characterise the population of interest in this study. i.e. low-income rural households (Salvia *et al*., 2019). Rather than viewing them as passive recipients of aid, BoP perspectives emphasise their role as active market participants whose consumption choices are shaped by poverty, resource constraints, and informal institutions (Prahalad & Hart, 2002). In view of the ravaging effects of climate change, the global poor remain justly vulnerable (Salvia *et al*., 2019).

The Base-of-Pyramid (BoP) theory provides important insights into why subsistence needs are prioritised over environmental concerns among impoverished rural households in Zambia. Dependence on traditional energy sources such as firewood and charcoal, communal farming methods, and informal distribution networks is not merely a careless choice; it is a reasonable, context-specific response to poverty and weak infrastructure (World Bank, 2024, 2025). These practices are deeply woven into the socio-economic realities of rural communities, offering practical solutions that support livelihoods in resource-limited settings (Yadav & Pathak, 2017). Furthermore, the BoP perspective highlights local resilience, as evidenced by repair cultures, cooperative seed-saving, and water-harvesting methods, as essential steps toward eco-friendly behaviours (Ibid). These adaptive strategies illustrate environmentally friendly actions grounded in local knowledge and creativity that balance immediate subsistence needs with long-term sustainability (Moleka, 2024).

2.1.3 Environmental Justice

The Environmental Justice theory, proposed by Bullard (1990), highlights environmental inequalities and their effects on marginalised communities. According to Oxfam International (2022), vulnerable groups face greater exposure to environmental risks and have fewer resources to address them. The theory points out that marginalised groups, such as low-income households and communities of colour, often face significant environmental risks like pollution, toxic waste, and industrial emissions. This occurs despite their minimal role in causing environmental harm. These groups typically lack the resources and power to fight environmental threats, making them more vulnerable to the harms of environmental degradation (Salvia et al., 2019). The Environmental Justice theory stresses the connection between environmental risks and social inequalities. It views environmental injustice as a type of systemic inequality that reinforces disparities in health, access, and quality of life (Bullard, 1990).

In rural Zambia, households increasingly experience severe effects from climate variability, resource stress, and ecological decline. These issues are made worse by a lack of institutional support. The lack of subsidies, credit, and resilient infrastructure increases their vulnerability to climate shocks and environmental harm. This limits their ability to adapt and pursue sustainable practices (Moleka, 2024). Many rural households depend on subsistence farming and natural resource extraction, making them particularly vulnerable to unpredictable weather events like droughts and floods (de Bandt et al., 2021). Without access to proper financial tools or infrastructure, marginalised groups adopt green technologies or practices that could reduce environmental damage and boost resilience. This situation deepens existing inequalities in environmental management and adaptation (Moleka, 2024).

Environmental justice places individual actions within unequal systems (Bullard, 1990). It underscores that consumer choices cannot be viewed separately from underlying structural inequalities (Ibid). This discussion leads to two main points. First, households face different risks from climate shocks and resource depletion. The most vulnerable people feel the impacts of environmental disruptions, which threaten their livelihoods and survival

(Chikweche et al., 2023). Second, limited access to financing, reliable information, and markets makes it hard for low-income rural households to make sustainable choices (de Bandt et al., 2021). For vulnerable rural residents, sustainability often feels like an unaffordable luxury. Urgent survival needs take precedence over moral responsibilities to protect the environment. Thus, Environmental Justice provides a perspective that reveals how the green consumption choices of the rural poor are influenced by discrimination and inequality.

2.2 Empirical Review

Empirical studies consistently show that perceived behavioural control is a key factor in shaping green consumer behaviour. Research by Xu et al. (2022) indicates that environmental knowledge and perceived control significantly influence people's ability to act on pro-environmental attitudes. However, in rural Zambia, affordability, access, and infrastructure problems limit households' choices, even when they have positive attitudes toward stewardship. This finding aligns with Mvula et al. (2024), who argue that poverty, distance, and limited product availability lessen perceived control and weaken the connection between environmental concern and consumer action. In contrast, wealthier areas benefit from disposable income and policy incentives that promote sustainable consumption (Salvia et al., 2019).

This evidence directly supports the first research objective: to explore green consumer behaviour among individuals in low-income rural households in Zambia. The result is a form of adaptive stewardship in which frugality becomes a green practice. Repairing, reusing, and being thrifty lowers environmental impact without relying on expensive brands (Moleka, 2024). Informal networks of trust and local entrepreneurs also shape the availability and use of sustainable options. This embeds environmental behaviour into everyday survival strategies rather than traditional market-driven consumption. These practices show that environmental stewardship exists in rural Zambia, but it is expressed through survival-oriented adaptations rather than consumerist models of sustainability.

The second objective, to understand the tension between subsistence needs and sustainability goals in the Zambian rural context, is clarified by the interaction of attitudes, norms, and perceived control. While environmental attitudes are mostly positive, affordability concerns often take priority. Community norms support stewardship but allow compromises when survival is at stake. Zhang et al. (2019) note that pressures from poverty, such as high prices and limited access, reduce perceived control, forcing households to focus on subsistence rather than sustainability. This tension shows that sustainability goals are not discarded but are redefined in light of subsistence needs. Practices like frugality and informal resilience strategies are not failures of stewardship; they are adaptive responses to systemic inequality (Moleka, 2024). Achieving environmental justice in rural Zambia requires recognising affordability-driven decision-making and survival-oriented adaptations as valid forms of environmental behaviour (Salvia et al., 2019).

III. METHODOLOGY

3.1 Research Design

This study used a qualitative phenomenological approach to capture in-depth insights into the lived experiences and perceptions of low-income rural households in Zambia. This design enabled a detailed understanding of how individuals interpret their situations, cultural norms, and environmental attitudes within their socio-economic and ecological contexts. By focusing on lived experiences, the phenomenological approach ensured that the findings reflected real voices and realities, in line with Van Manen's (1990) interpretative principles.

3.2 Study Area

The research took place in three locations: Muwowo, Kang'omba, and Kamakuti in rural Kabwe. These areas were chosen to provide rich insights into households directly affected by climate uncertainty between 2023 and 2024. The study area was relevant to subsistence livelihoods, cultural continuity, and exposure to environmental challenges, making it suitable for exploring green consumer behaviour in vulnerable rural communities.

3.3 Target Population

The target population included individuals living in low-income rural households in Kabwe, Zambia, with incomes below the World Bank's $3.65 per day threshold (2024). Selection criteria included households classified as 'economically disadvantaged' (de Bandt et al., 2021), those with 'low income, little or no savings, minimal investment, and low productivity' (O'Hare, 1991), households lacking basic necessities and living in poor conditions (Zhao et al., 2016), and those typically based in rural areas (Zhang et al., 2019). Participants also needed to have experienced climate uncertainty during 2023 to 2024, ensuring the study focused on those directly affected by recent environmental problems.

3.4 Sampling and Sample Size

Purposive sampling was used to intentionally select participants with characteristics relevant to the research goals (Cooper & Schindler, 2011). Criteria focused on individuals engaged in subsistence livelihoods and directly affected by climate variability. Nineteen participants were selected and interviewed in-depth using semi-structured interviews. The sample size was guided by the principle of saturation (Saunders et al., 2019), ensuring data collection continued until no new themes emerged. While the relatively small sample emphasised depth over breadth, it provided insights specific to Kabwe's rural households. Generalisation beyond this scope requires caution.

3.5 Data Collection

A multi-method approach was used to improve validity and reliability through triangulation. In-depth interviews gathered rich, detailed, and context-specific information about participants' experiences with climate challenges and resource limitations. A focus group discussion with eight community members added depth by highlighting shared insights and social factors influencing ecological practices. Non-participant observations were systematically recorded in the researcher's journal, providing real-time behavioural data that complemented self-reported accounts. Together, these methods offered a comprehensive understanding of green consumer behaviour, strengthening the credibility of the findings.

3.6 Data Analysis

Data were analysed using an Interpretative Phenomenological Approach (IPA) as outlined by Van Manen (1990). The researcher engaged in careful reading of transcripts, systematically coding and clustering themes related to affordance, resilience, cultural continuity, and gaps between awareness and action. NVivo software supported coding and organisation, increasing transparency and reliability. This iterative process ensured authenticity by keeping findings aligned with participants' voices while interpreting their practices in relation to sustainability, resourcefulness, and survival within socio-economic constraints.

3.7 Ethical Concerns

Given its qualitative and phenomenological nature, this study was value-bound (Saunders et al., 2019). This characteristic comes from the interpretivist framework adopted in this study. It recognises that the researcher's views, beliefs, and values influence the data collection, interpretation, and analysis process. The value-bound aspect of this study was especially relevant given the delicate, culturally rich subject matter, which involved exploring local sustainability practices, traditional environmental beliefs, and participants' attitudes towards eco-friendly behaviours. These topics are closely tied to participants' cultural identities and social norms, requiring a respectful, reflective approach that acknowledges the researcher's role and potential impact on the research.

Moreover, since the study used non-participant observation as its primary data collection method, ethical issues related to participant consent and autonomy were crucial. As Cozby and Bates (2012) point out, any research that observes people's behaviours and interactions requires clear, informed consent to ensure that participation is voluntary, especially when participants may not realise they are being observed. To maintain ethical standards, the researcher carefully obtained informed consent from all participants in observational activities. This included clearly explaining the research purpose, the nature of the observations, and guarantees of confidentiality. Participation was completely voluntary, and participants could withdraw at any time without facing consequences, thereby avoiding pressure or undue influence.

Additionally, the study focused on protecting participants' privacy and confidentiality throughout the research. Personal identifiers were removed during data transcription and reporting to safeguard participants' identities. Pseudonyms and combined data were used to prevent any possible identification, honouring their right to privacy. The researcher strictly followed ethical guidelines for qualitative research, ensuring that all data handling, storage, and reporting were objective and honest. This commitment to clear and fair reporting aimed to accurately represent participants' genuine voices and experiences, avoiding any misrepresentation. Overall, the ethical framework of this study reinforced its integrity, emphasising respect, fairness, and sensitivity towards participants and their social and cultural contexts, in line with established research ethics standards.

IV. FINDINGS & DISCUSSION

4.1 Findings

The analysis revealed four connected themes that illustrate the Subsistence-Sustainability Paradox (SSP). These themes show how independent variables, affordability, cultural continuity, awareness, and indigenous resilience, interact with the dependent variable, green consumer behaviour, in rural Zambia. Together, they highlight the tension between survival needs and sustainability goals.

4.1.1 Affordability First: Survival Overrides Ecology

Through interviews and focus group discussions, affordability emerged as the most important independent variable in influencing participants' consumption choices (dependent variable). Even though they were aware of environmental risks, participants said their decisions were mostly driven by urgent survival needs. One participant from Kamakuti stated, *"Charcoal is what I use every day. At least it is cheap. But I know that using charcoal is not good for the environment" (23rd October, 2024).* Another from Muwowo mentioned, *"I lack financial resources. I just buy things to ensure survival. Environmental issues come later" (27th September, 2024).* Observational notes confirmed that households often reused plastic containers mainly to save money, not for environmental reasons. This theme shows how perceived control, mainly cost and access, overshadowed positive environmental attitudes. When practical constraints were too high, their intentions to be environmentally friendly diminished. Even when households felt a sense of responsibility, financial realities limited their ability to adopt sustainable practices.

Affordability also interacts with cash flow and perceived risk, adding complexity to investing in cleaner fuels or efficient appliances, which often require high upfront costs. In rural areas, where savings and access to credit are limited, households prioritise immediate needs over long-term environmental benefits. Because of these financial limitations, sustainable choices, even if preferred, often remain out of reach in the short term. Economic hardship shapes consumption behaviour, prioritising survival needs over environmental concerns. This situation illustrates the intricate relationship between economic challenges and environmental awareness. In low-income rural households, affordability and immediate needs consistently take priority over environmental sustainability.

4.1.2 Cultural Continuity: Tradition Sustains Practices

Cultural continuity was another independent variable that influenced behaviour (the dependent variable). Long-standing cultural practices greatly influenced both consumption and production patterns among participants. They described their use of traditional cooking methods, farming techniques, and the sharing of resources as key parts of their identity. For instance, a participant from Kang'omba remarked, *"Our fathers used these methods, and we continue. It is our way" (8th October, 2024).* Observations supported this view, showing continued reliance on traditional stoves and farming methods. While these practices strengthened social bonds and provided a sense of continuity, they also often led to the use of unsustainable fuels and harmful agricultural methods.

Cultural continuity offered stability in uncertain circumstances but also supported practices resistant to change. Communal farming allowed for sharing risks, yet it often involved methods such as slash-and-burn that degraded the soil over time. This dual role of cultural continuity acts as both a stabiliser and a constraint. It preserves social ties and a sense of identity while embedding unsustainable practices. Changing these practices requires careful understanding of the social meanings and authority structures within communities (Mvula et al., 2024).

4.1.3 Awareness-Action Gap: Knowledge Without Feasibility

Awareness of environmental risks (independent variable), was common, yet feasibility was limited. Participants showed awareness of environmental degradation and related health risks. They recognised the impacts of climate change and the need for eco-friendly practices. A participant from Kamakuti noted, *"We hear about climate change on the radio, but what can we do? We must eat first" (27th October, 2024).* This highlights their understanding of environmental problems but also shows their difficulty in taking action due to financial struggles. Although community education campaigns raised awareness, actual adoption of sustainable practices (dependent variable), like renewable energy or eco-friendly cooking methods, remained low. This indicates a gap between knowledge and action.

This gap reflects the obstacles individuals face in low-income areas, where economic challenges, limited access to affordable green options, and infrastructure issues make it hard to change behaviour despite awareness and good intentions. Consequently, awareness campaigns have increased knowledge but have not led to sustainable practices because they have not addressed issues of affordability and accessibility. This disconnect challenges traditional behavioural theories, such as the Theory of Planned Behaviour, which suggest that intentions lead to action, while ignoring the practical limits that often hinder behaviour in resource-scarce situations (Zhang et al., 2019).

4.1.4 Adaptive Ingenuity: Indigenous Resilience

Despite facing many challenges, households showed impressive creativity (independent variable) i.e. resilience through indigenous ingenuity. in their adaptation practices (dependent variable). Communities repurposed materials, worked together to achieve common goals, and developed low-cost sustainability strategies suited to their environments. For example, one focus group participant said, *"We repair our tools many times; buying new ones is impossible" (18th December, 2024),* showing their resourcefulness and commitment to maintaining essential tools without outside help. Observations during fieldwork highlighted innovative water-harvesting methods and seed-saving efforts driven by community collaboration. These adaptive behaviours align with Moleka (2024).) and Oxfam International (2022), who emphasise practical innovation at the grassroots level. In this case, green consumer

behaviour (dependent variable), was expressed through survival-oriented adaptations, showing that resilience can balance subsistence with sustainability

4.2 Discussion

The findings show that in rural Zambia, perceived behavioural control, mainly influenced by affordability and access, is the key factor shaping consumer behaviour. Participants held positive views on environmental stewardship and recognised community norms of responsibility, but these did not lead to action when costs were high or infrastructure was lacking. This challenges the typical use of the Theory of Planned Behaviour (TPB), which assumes that attitudes, norms, and perceived control together predict behaviour. However, in areas of scarcity, perceived control weakens under poverty pressures, effectively nullifying the impact of attitudes and norms. While the Extended Theory of Planned Behaviour (ETPB) includes environmental concern and cognitive factors, it still needs adjustments to account for critical feasibility thresholds that influence actionable behaviour in constrained settings.

This study argues that in low-income rural areas, perceived control is more than a single factor; it is the crucial determinant of whether intentions translate into actions. Behavioural intention only materialises when affordability, accessibility, and cultural legitimacy work together. This perspective expands the TPB by stressing that feasibility thresholds, such as economic means and infrastructure support, are essential for predicting behaviour during times of scarcity. It makes clear that without these vital supports, even environmentally conscious households cannot act on their positive attitudes or social norms, highlighting the need for context-sensitive models to understand green consumer behaviour.

The findings also align closely with the principles of Base-of-Pyramid (BoP) theory (Prahalad & Hart, 2002), which views rural household practices as rational responses to systemic poverty and fragile infrastructure. These communities are not irrational or indifferent to sustainability; rather, they showcase frugal innovation and Indigenous resilience through practices like repairing items, saving seeds together, and harvesting water. These actions are practical responses that lessen environmental impacts within their limited resources, illustrating that sustainability in these areas relies on affordability, reliability, and cultural fit. This understanding redefines green consumer behaviour as adaptive ingenuity aligned with BoP perspectives, stressing that interventions should bolster local resilience rather than impose standard solutions.

Additionally, the study emphasises that environmental awareness does not always lead to action, reflecting broader systemic inequalities highlighted by environmental justice perspectives. Households recognise environmental threats such as deforestation and climate change, but lack the resources—like subsidies, credit, or accessible infrastructure—to take substantial action. This gap between awareness and action stems from systemic inequities, as reported by Oxfam International (2022) and the World Bank (2024, 2025), which indicate that vulnerable populations face greater ecological risks with little institutional support. By situating individual behaviour within these structural injustices, the research shows that household decisions are part of a broader landscape of systemic constraints that limit agency, underscoring that consumer choices are influenced by systemic factors as much as by individual preferences.

Most sustainability research has focused on wealthy urban consumers, where disposable income, standardised markets, and policy incentives encourage pro-environmental choices. In those situations, elements of the TPB show strong explanatory power, and measures such as eco-labels, subsidies, and carbon taxes are effective. In contrast, this study shows that in rural, low-income areas, these assumptions do not hold. Affordability and cultural continuity take precedence over awareness, and Indigenous resilience offers different routes to sustainability. The Subsistence-Sustainability Paradox (SSP) is a significant concept that challenges the universal application of traditional behavioural theories and underscores the need for context-sensitive frameworks that account for systemic barriers and local realities.

4.2.1 The Subsistence–Sustainability Paradox as a Conceptual Lens

The paradox redefines “non-green” behaviour not as a sign of indifference but as a sensible choice within limited opportunities. It shows that households value ecological care but often prioritise survival. Their actions reflect practical trade-offs instead of moral shortcomings. When faced with constraints, perceived control—not attitudes or social norms—drives behaviour. This control shapes decisions more strongly than ethical concerns. Cultural influences also shape how sustainability practices are adopted. Social meaning helps ensure that these practices fit with local traditions and respected voices, making them more acceptable in the community. Additionally, households often calculate risks, typically choosing to secure immediate resources over long-term savings or environmental gains.

The Subsistence-Sustainability Paradox (SSP) offers a new perspective on sustainability research. It extends behavioural theory to situations of scarcity by incorporating structural conditions, cultural effects, and fairness issues. This framework shows that sustainable behaviours, such as reusing resources or conserving energy, are influenced by complex, specific factors. It reinterprets these actions as rational decisions rather than failures of moral duty.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusion

This study contributes to sustainability research by introducing the Subsistence-Sustainability Paradox as a conceptual framework. It extends the Theory of Planned Behaviour (TPB) to consider scarcity situations in which perceived behavioural control, shaped by affordability and access, is crucial. Although attitudes and norms influence behaviour, they often weaken in poverty unless certain practical thresholds are met. This frames rural consumer actions as logical adjustments within limited opportunities. By incorporating BoP theory, the research highlights frugality and local resilience as valid paths to sustainability. It places these behaviours within broader systemic inequalities through the lens of environmental justice.

These insights expand behavioural models to reflect the realities of scarcity. They reframe the failure to adopt green practices as a rational response rather than a moral shortcoming. The research examines structural, cultural, and justice aspects of consumer behaviour. Therefore, effective strategies should combine poverty relief with sustainability objectives. Traditional methods like eco-labels and subsidies, which rely on the idea of discretionary choice, do not work in rural Zambia. Instead, policies should aim to improve affordability, access, and cultural acceptance to encourage practical, relevant, sustainable behaviours.

5.2 Recommendations

The study highlights the need for tailored strategies that focus on community involvement and cultural relevance to promote sustainability. Key recommendations include offering subsidies and microfinance to reduce upfront costs, ensuring last-mile distribution to ensure affordable access in remote areas, and creating education programs led by local leaders, cooperatives, and women's groups to connect sustainability efforts with traditional practices. Supporting indigenous resilience involves enhancing existing frugal practices through training and small-scale financing, recognising these as important pathways to sustainability. Since premium eco-labelled products are unlikely to thrive in settings with limited funds, interventions should focus on bundling products and services, using cooperatives to share risks, and working with local stakeholders to ensure cultural relevance. The Subsistence-Sustainability Paradox (SSP) opens opportunities for comparative research across Africa. This research can explore feasibility thresholds, gender-specific adoption patterns, and the role of digital platforms and mobile finance in closing affordability gaps and promoting sustainable practices.

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