SOCIOECONOMIC IMPACT OF THE BAN ON SINGLE-USE PLASTICS IN LAGOS STATE

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UNIVERSITY OF BENIN

BENIN CITY, EDO STATE.

NOVEMBER, 2025

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AN UNDERGRADUATE DISSERTATION SUBMITTED TO THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND TOXICOLOGY, FACULTY OF LIFE SCIENCES, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE, NIGERIA; IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR AWARD OF BACHELOR OF SCIENCE (B.Sc) DEGREE IN ENVIRONMENTAL MANAGEMENT AND TOXICOLOGY

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CERTIFICATION

This is to certify that this research titled **"SOCIOECONOMIC IMPACTS OF THE BAN ON SINGLE-USE PLASTICS IN LAGOS STATE"** was carried out by **"MOSUNMOLA COMFORT AMUSAN"** and presented to the Department of Environmental Management and Toxicology, Faculty of Life Sciences, University of Benin, Benin City; in partial fulfilment of the requirements for the award of Bachelor of Science (B.Sc) in Environmental Management and Toxicology. It was conducted under suitable conditions, was carefully supervised and subsequently approved as having met the requirements for the award of a Bachelor of Science degree in Environmental Management and Toxicology.

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DATE

DR. OSAYOMBO OSARENOTOR

(PROJECT SUPERVISOR)

_____ _____

DATE

PROF E.T. AISEN

(HEAD OF DEPARTMENT)

DECLARATION

I **"MOSUNMOLA COMFORT AMUSAN"** declare that **"SOCIOECONOMIC IMPACT OF THE BAN ON SINGLE-USE PLASTIC IN LAGOS STATE"** is my work and that all sources that I have used or quoted have been acknowledged using complete references and that this work has not been submitted before for any other degree at any other University.

_____ _____

MOSUNMOLA COMFORT AMUSAN **DATE**

DEDICATION

This report is dedicated to God, my strength and ever-present help, for his constant and unending guidance and direction throughout the course of carrying out this project. I also want to dedicate this report to my loving and supportive parents, Mr. & Mrs. Amusan, and my darling husband, Gbemileke Falade, for their prayers, love, support, encouragement, and financial assistance throughout my academic journey.

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Not to us Lord, not to us, but to your name be the glory, because of your love and faithfulness. My heartfelt gratitude goes first to God Almighty for granting me the strength, insight, and perseverance to complete this project successfully. Genuinely, the entire summary of my undergraduate journey is evidence of God's hand and grace at work.

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ABSTRACT

This study examines the socioeconomic impact of the ban on single-use plastics (SUPs) in Lagos State, Nigeria, with particular attention to households, small businesses, and informal sector workers. The research explores how the ban has affected economic activities, behavioural adaptation, and environmental conditions across the state. A mixed-methods approach was employed, combining quantitative data from questionnaires distributed to traders, households, and micro and small enterprises across selected local government areas with qualitative insights from interviews conducted with officials of the Lagos State Ministry of the Environment, LAWMA, and market leaders. Grounded in the Theory of Planned Behaviour, Just Transition Theory, and the Environmental Kuznets Curve, the study analyses the relationship between behavioural change, economic transition, and environmental sustainability. The findings are expected to reveal both environmental gains—such as improved sanitation and reduced pollution—and economic challenges for low-income groups, offering valuable guidance for a more inclusive and sustainable transition away from single-use plastics in Lagos State.

CHAPTER ONE

1.1 Background of Study

Plastic pollution, particularly from single-use plastic, has become one of the most pressing global environmental challenges of the 21st century. Globally, more than 300 million tonnes of plastic are produced annually, with a significant proportion designed for single use (UNEP, 2021). These single-use plastics (SUPs), including Styrofoam food packs, straws, cutlery, plastic bags, and sachet water packaging; have short lifespans yet persist in the environment for hundreds of years. Their affordability and convenience have contributed to their widespread use, but it doesn't remove their long-term impact in waste management, leading to floods, marine litter, and a general impact on human health (Jambeck et al., 2015).

In Nigeria, the problem of plastic waste has reached alarming proportions. Nigeria is estimated to generate over 2.5 million tonnes of plastic waste annually, with less than 10% recycled (World Bank, 2024). Poor waste management practices, coupled with over-reliance on single-use plastic packaging, have exacerbated flooding, drainage blockage, marine pollution, and urban health hazards (Adewale *et al.,* 2022). Recognising this crisis, the Federal Government of Nigeria launched the National Policy on Plastic Waste Management in 2020 (Federal Ministry of Environment, 2020)

Lagos State, which is Nigeria's most populous city and economic hub, produces about 13,000 tonnes of solid waste daily, of which plastics constitute a significant proportion (LAWMA, 2024). The overwhelming volume of plastic waste obstructs drainage infrastructure, leading to urban flooding, and poses a profound threat to the rich biodiversity of Lagos State's coastal and marine ecosystems.

Historically, Lagos has struggled with chronic deficiencies in its waste management infrastructure. Due to the small land mass in the state, along with the fact that Lagos as a state, is home to over 10% of the general population of Nigeria, challenges have included inefficient waste collection services, rudimentary sorting mechanisms, and remarkably low recycling rates, estimated to be below 15% (MOE, 2025). Within this challenging environment, single-use plastics (SUPs) became an integral, almost indispensable, component of daily life. Their inherent affordability and convenience rendered them ubiquitous, particularly within the city's vast informal sector, where they are extensively used for food packaging, retail, and general household convenience.

The pervasive nature of SUPs has led to severe environmental degradation. Uncollected plastic waste notoriously clogs street drains and canals, directly contributing to the city's recurrent flooding events during rainy seasons (Lagos State Ministry of Environment, 2023). Furthermore, this waste indiscriminately pollutes Lagos's extensive network of waterways, lagoons, and ultimately, the Atlantic Ocean, demonstrably harming marine biodiversity and diminishing the aesthetic quality of the urban landscape. While the formal ban is a recent development, environmental advocacy groups and state agencies had long engaged in discussions and initiated smaller-scale campaigns to address the escalating plastic waste problem, gradually setting the stage for more decisive government action (World Bank report**, 2024).

In response to these mounting environmental and urban challenges, the Lagos State Government enacted a significant policy shift, leveraging the legal framework of the Lagos State Environmental Management and Protection Law (2017) (Lagos State Government Gazette, 2017). This move aligns with broader national policies, such as the Extended Producer Responsibility (EPR) scheme, and Nigeria's international commitments to sustainable development, including the Agenda 2030 (Federal Ministry of Environment, 2020).

The timeline of the ban commenced with an initial public announcement in early 2024, specifically targeting styrofoam food packs, accompanied by an explicit intent to phase out other SUPs over a 12-month period (Lagos State Environmental Protection Agency, 2024a). However, this was reportedly followed by an 18-month suspension period as opposed to one-year as initially stated, apparently designed to allow stakeholders sufficient time to adapt, alongside dialogues with manufacturers and distributors (The Guardian, 2024). Crucially, the ban incorporates significant exemptions. PET bottles and water sachets are currently not prohibited as peddled by fake news outlets. This decision is largely attributed to their comparatively established recycling rates, their perceived lower immediate environmental burden when recycled, their compliance with national food safety standards, and their considerable role in supporting thousands of jobs within the developing recycling value chain (Lagos State Environmental Protection Agency, 2024b). Additionally, plastic bags exceeding 40 microns in thickness are also exempt from the current prohibition (Lagos State Ministry of Environment, 2024).

Effective July 1, 2025, the formally prohibited items include: Expanded polystyrene (EPS) food containers and cups (commonly referred to as styrofoam), Plastic straws, Disposable plastic cutlery, Single-use plastic bags, and nylon with a thickness below 40 microns (Lagos State Environmental Protection Agency, 2024a).

Enforcement mechanisms are primarily spearheaded by regulatory bodies such as the Lagos State Environmental Protection Agency (LASEPA) and the Lagos Waste Management Authority (LAWMA). Furthermore, the establishment of the Plastic Waste Management Fund signals the government's commitment to supporting robust recycling infrastructure, fostering innovation in alternative materials, facilitating widespread public education, and driving comprehensive circular economy practices within the state. The government's core rationale for the ban is multi-faceted:

a dedication to environmental protection, a proactive approach to flood mitigation, alignment with global best practices in sustainability, and a definitive strategic shift towards a more sustainable future for Lagos.

While the ban has clear environmental motivations, it also has far-reaching socioeconomic implications. Thousands of micro and small-scale enterprises (MSMEs), including food vendors, restaurants, hawkers, and distributors, depend on cheap disposable packaging for their livelihoods. Consumers will also face higher costs due to alternative packaging, while informal waste collectors and recyclers may experience shifts in income sources (ILO, 2025). On the positive side, the policy could stimulate new green jobs in recycling, biodegradable packaging production, and reusable container systems (UNEP, 2021). This study seeks to assess these dynamics in Lagos State.

1.2 Statement of Problem

Single-use plastics have long contributed to environmental degradation in Lagos, with visible impacts such as clogged drainage channels, increased urban flooding, marine litter, and the spread of vector-borne diseases (Nkwachukwu et al., 2013). To address these challenges, the Lagos State Government introduced a ban on Styrofoam and other SUPs in January 2024, with full enforcement in July 2025. However, the policy has generated debate among stakeholders.

For small businesses and food vendors, the ban threatens profit margins as alternative packaging materials are more expensive (ILO, 2025). For consumers, the shift may increase the daily costs of food purchases and reduce convenience. For the informal waste sector, the transition may alter income flows from recyclables, since Styrofoam, though less valuable, used to be widely collected (World Bank, 2024). On the other hand, environmentalists and policymakers argue that the long-

term benefits – cleaner environments, reduced flooding, and healthier living conditions – outweigh the short-term economic disruptions (UNEP, 2021).

The problem, however, is that limited empirical evidence exists on how the ban is actually impacting people's livelihoods, household welfare, and business operations in Lagos State. Without such evidence, policymaking may be reactive rather than inclusive. This research therefore, investigates the socioeconomic impacts of the ban, balancing environmental goals with human welfare.

1.3 Aim and Objectives of the Study

The aim of this study is to assess the socioeconomic impact of the ban on single-use plastics in Lagos State.

Objectives:

1. To examine the level of awareness and compliance with the ban among businesses and consumers in Lagos State.
2. To assess the economic impact of the ban on micro and small enterprises (e.g., food vendors, traders, and manufacturers).
3. To evaluate individual responses to the ban in terms of cost, adaptation strategies, and perceptions.
4. To identify challenges associated with the implementation and enforcement of the ban.
5. To provide policy recommendations for improving the effectiveness and social acceptance of the ban.

1.4 Importance of the Study

This study will contribute to the growing literature on environmental policy and socioeconomic transitions in Africa, providing empirical evidence on Lagos State. Likewise, the findings from this research will help policymakers in Lagos and beyond refine strategies for implementing environmental regulations without disproportionately harming vulnerable groups.
In the same vein, it will provide insights for businesses and households on adaptation strategies, including opportunities in alternative packaging and recycling.
Summarily, this study will strengthen the understanding of how behavioral change policies can reduce plastic pollution, urban flooding and not have great economic impacts.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of Single-Use Plastics

Single-use plastics (SUPs) are disposable plastic products, including bags, Styrofoam packs, sachet water films, straws, and cutlery that are designed for one-time use before disposal or recycling. Their widespread adoption is largely due to their affordability (low cost), durability, and convenience; however, their persistence in the environment has made them a significant contributor to urban pollution and flooding in Lagos State (UNEP, 2021; Jambeck et al., 2015). Plastic pollution, as a concept, encompasses the harmful accumulation of plastics in the environment, leading to the disruption of drainage channels, an increase in flooding, threats to biodiversity and undermining public health. Against this background, the Lagos State Government introduced a ban on Styrofoam and other single-use plastics in 2024, effective from July 2025, as a command-and-control environmental policy that is designed to reduce plastic waste at its source. (Lagos State Ministry of the Environment, 2025).

The concept of socioeconomic impact is central to this study, as the ban has implications that go beyond environmental benefits. On the economic side, businesses that rely heavily on cheap plastic packaging—such as food vendors, traders, and small and large-scale manufacturers—are likely to experience higher costs when switching to biodegradable or paper-based alternatives, while households may face increased daily expenses for food and goods. On the social side, consumers are required to adjust their habits, informal waste pickers and recyclers may lose part of their income streams, and communities may initially resist the transition due to convenience and

affordability concerns (ILO, 2025). However, the policy also has the potential to create new opportunities, particularly in recycling, compostable packaging production, and green jobs.

The concept of this study is grounded in the broader idea of sustainable development, which emphasises the need to balance environmental protection, economic viability, and social well-being (WCED, 1987). Three theories underpin this framework. First, the Environmental Kuznets Curve (EKC), named after Simon Kuznets, suggests that as the economy grows, environmental degradation initially increases but later declines as societies adopt stricter environmental policies (Grossman & Krueger, 1995). The Lagos ban represents such a turning point, where economic growth is no longer prioritised at the expense of the environment. Second, the Theory of Planned Behaviour (Ajzen, 1991) is relevant for understanding compliance and adaptation, as consumer and business behaviour will depend on attitudes, perceived norms, and the availability of alternatives. Finally, the Just Transition Framework (ILO, 2015) emphasises that environmental policies should be socially inclusive, ensuring that everyone, including vulnerable groups such as micro-enterprises and informal waste workers is not disproportionately disadvantaged by the transition.

Taken together, the framework views the ban on single-use plastics as an independent policy intervention that produces both positive and negative outcomes. On one hand, it is expected to improve environmental quality by reducing flooding, marine litter, and public health risks. On the other hand, it may disrupt livelihoods and raise costs for small businesses and households. The actual balance between these outcomes will be shaped by mediating factors such as the level of enforcement, the affordability and accessibility of alternatives, and the degree of public awareness. This conceptual understanding, therefore, provides the foundation upon which the study will assess the socioeconomic impacts of the ban in Lagos State.

2.2 Theoretical Framework

As earlier stated, three main theories are relevant to understanding the impacts of plastic bans:

2.2.1 Environmental Kuznets Curve (EKC):

The Environmental Kuznets Curve (EKC) is a widely discussed hypothesis in environmental economics that explores the relationship between economic growth and environmental quality. This theory was first propounded in the early 1990's, however, it draws its stance from Simon Kuznet's work on income inequality from the 1950's. This theory posits that environmental degradation initially increases as a country or region undergoes industrialisation and rapid economic expansion. At these early stages, production relies heavily on resource extraction, cheap energy, and weak environmental regulation, leading to a rise in pollution levels. However, once income per capita reaches a certain threshold, the relationship reverses: higher incomes, stronger institutions, and improved technology enable societies to demand and enforce environmental protection, causing pollution to decline. Graphically, this produces an inverted U-shaped curve, with environmental degradation on the vertical axis and income on the horizontal axis (Grossman & Krueger, 1995).

Three main effects explain the Environmental Kuznets Curve: the scale effect, where increased production and consumption raise pollution levels; the composition effect, where economies shift from heavy manufacturing towards cleaner service and knowledge-based industries; and the technique effect, where technological innovation, stricter environmental standards, and consumer preference for sustainable products reduce degradation. However, critics caution that not all pollutants follow the EKC pattern. For example, air pollutants like sulphur dioxide often decline after a threshold, but carbon emissions and plastics may not automatically decrease without strong

policy interventions. Moreover, some ecological damages, such as biodiversity loss, are irreversible.

In the context of Lagos State, the Environmental Kuznets Curve is a useful lens because the city's economic expansion has led to rising plastic pollution and flooding. The ban on single-use plastics reflects the turning point predicted by the EKC, where economic growth must be balanced with environmental sustainability.

2.2.2 Theory of Planned Behaviour:

The Theory of Planned Behaviour (TPB), developed by Icek Ajzen in 1991, is a widely applied psychological framework that explains and predicts deliberate human actions. It extends the earlier Theory of Reasoned Action by adding the concept of perceived behavioural control. The central proposition of the Theory of Planned Behaviour is that the most immediate determinant of behaviour is an individual's intention to perform it. Intention, in turn, is shaped by three key factors: attitude toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991; Conner and Armitage, 1998).

Attitude refers to the degree to which a person has a favourable or unfavourable evaluation of performing the behaviour. For example, Lagos residents who perceive reducing single-use plastics as beneficial for environmental cleanliness and flood reduction are more likely to support alternatives (Ajzen, 2002). Subjective norms represent the perceived social pressure from significant others, such as family, peers, or society, to perform or avoid a behaviour. Where communities or influential groups endorse plastic reduction, compliance is strengthened (Conner and Norman, 2005). Perceived behavioural control reflects the extent to which individuals believe they have the capacity, resources, and opportunities to carry out the behaviour. This is particularly

relevant in Lagos, where the availability and affordability of plastic alternatives influence compliance with the ban.

By integrating these three components, the Theory of Planned Behaviours provides a valuable lens for understanding how policy interventions, such as Lagos State's single-use plastic ban, can influence behavioural change. Addressing attitudes, social norms, and structural barriers enhances the likelihood of long-term sustainable practices (Ajzen, 2011).

2.2.3 Just Transition Theory (ILO, 2015):

The Just Transition Theory is a framework that emphasises fairness and equity in the shift towards environmentally sustainable economies. Originating from trade union movements in the 1980s and later expanded by climate justice advocates, the theory argues that while environmental policies such as bans, decarbonisation, and green innovations are necessary, they often carry social and economic costs that disproportionately affect vulnerable groups (Newell and Mulvaney, 2013). A just transition ensures that the benefits and burdens of environmental change are distributed equitably, protecting workers, communities, and informal sectors that may be disadvantaged in the process.

The theory rests on the principle that sustainability should not come at the expense of social justice. Key elements include inclusivity in policymaking, protection of livelihoods, reskilling and job creation in green industries, and support for affected households and communities (Heffron and McCauley, 2018). For example, when governments impose bans on single-use plastics, workers in plastic production, informal waste picking, or small-scale packaging businesses may lose income. A just transition approach would complement the ban with strategies such as providing

affordable alternatives, investing in recycling industries, and supporting informal workers to integrate into formal waste management systems.

By embedding social equity in environmental governance, the Just Transition Theory bridges the gap between ecological sustainability and human well-being. In Lagos, where plastic waste policies could affect both formal businesses and informal economies, this framework highlights the need for policies that balance environmental protection with poverty reduction and inclusive economic growth.

2.3 Global Case Studies Of Single-Use Plastic Bans

Globally, many countries have experimented with bans and levies on SUPs. These global experiences show that while bans reduce litter and promote environmental benefits, they also create short-term economic disruptions that require careful management. A few case studies have been cited as notable examples.

2.3.1 Bangladesh's Plastic Bag Ban 2002

Bangladesh was the first country worldwide to introduce a nationwide ban on plastic carrier bags in 2002. The decision was prompted by the devastating environmental and socioeconomic consequences of unchecked plastic bag use in urban centres, particularly in Dhaka. Studies revealed that plastic bags were a leading cause of drainage blockages that exacerbated catastrophic flooding in 1988 and 1998, when nearly two-thirds of the country was submerged. The floods drew attention to the poor resilience of urban infrastructure and the growing role of plastic pollution in worsening natural disasters (Hossain, 2011).

The ban prohibited the manufacture, sale, and use of thin polythene bags (that is, less than 30 microns) nationwide. The government introduced this measure under the Bangladesh Environment Conservation Act (1995), framing plastic bags as a threat to sustainable development and public safety (MoEF, 2002). Alternative packaging, including jute, paper, and cloth bags, was promoted to support local industries, especially the traditional jute sector, which had long been a cornerstone of the Bangladeshi economy.

The ban had environmental impacts that were initially significant. Dhaka and other cities reported cleaner streets, reduced drain blockages, and improvements in waste management efficiency (World Bank, 2010). The policy also elevated Bangladesh's international reputation as a pioneer in environmental regulation in the Global South. However, enforcement challenges quickly emerged. The informal economy, weak regulatory capacity, and lack of affordable alternatives allowed the re-emergence of illegal plastic bags in markets. Manufacturers continued clandestine production, and consumers, particularly in low-income areas, found it difficult to adopt costlier substitutes (Hossain, 2011).

Economically, the ban provided an opportunity to revitalise the jute industry, creating jobs and promoting an indigenous, eco-friendly alternative. Nevertheless, limited technological investment and competition from cheap illegal polythene products hindered the jute sector's full potential. Public awareness campaigns played a role in encouraging compliance, but behavioural change remained inconsistent without strict and sustained enforcement.

Bangladesh's experience underscores both the promise and pitfalls of pioneering plastic bans in developing countries. It demonstrates the importance of coupling bans with strong governance, effective monitoring, and economic support for alternative industries. For Lagos, Bangladesh

offers lessons in integrating traditional industries (such as local textile or packaging enterprises) into plastic substitution strategies, while ensuring enforcement mechanisms are strong enough to prevent policy backsliding.

2.3.2 South Africa Plastic Bag Regulation 2003:

In May 2003, the South African government implemented the Plastic Carrier Bags and Plastic Flat Bags Regulations under the Environmental Conservation Act, making South Africa one of the first African countries to introduce a national legislation regulating plastic bags. Unlike Rwanda and Kenya's outright bans, South Africa adopted a regulatory and fiscal approach, which prohibited the manufacture and distribution of very thin plastic bags (less than 30 microns thick) and introduced a compulsory levy on thicker bags (Dikgang, Leiman and Visser, 2012). The regulation aimed to reduce plastic waste, encourage reuse, and generate revenue for waste management initiatives.

The decision followed growing concern about plastic pollution in urban areas, where lightweight bags clogged drainage systems, littered landscapes, and posed threats to livestock and marine ecosystems. Public pressure, combined with the influence of environmental NGOs, pushed the government to address the issue. To enforce compliance, plastic bags were reclassified as a "controlled packaging item," making it illegal for retailers to supply them for free (RSA, 2003).

The environmental outcomes were initially promising. In the first year, plastic bag consumption dropped significantly as consumers adjusted to the new costs (Dikgang and Visser, 2010). However, studies later revealed that consumption levels gradually rebounded, with many households treating the thicker, levy-priced bags as single-use items rather than reusing them. This

"rebound effect" highlighted limitations in behavioural change when economic incentives are not accompanied by sustained awareness campaigns (Dikgang, Leiman and Visser, 2012).

Economically, the levy created revenue that was intended to support recycling initiatives through the Buyisa-e-Bag programme. However, mismanagement and weak institutional capacity limited its effectiveness, and the programme collapsed in 2011 (Plastics SA, 2014). For low-income households, the levy was viewed as a regressive measure, disproportionately impacting the poor who relied heavily on cheap plastic bags.

South Africa's case demonstrates the complexities of regulating plastics through taxation and minimum thickness standards rather than outright bans. While the policy achieved temporary reductions, long-term effectiveness was undermined by poor enforcement and inadequate public education. For Lagos, the South African experience underscores the importance of combining fiscal instruments with strong governance, public engagement, and accessible alternatives to ensure sustained behavioural change.

2.3.3 Rwanda 2008 Plastic Bag Ban:

Rwanda is widely recognised as a pioneer in Africa for implementing one of the earliest and most comprehensive bans on plastic bags. In 2008, the Rwandan government introduced legislation prohibiting the importation, manufacture, sale, and use of non-biodegradable plastic bags and packaging materials. The move was part of Rwanda's broader Vision 2020 strategy, which emphasised environmental protection, sustainable development, and positioning Kigali as one of Africa's cleanest cities (UNEP, 2009).

The ban emerged in response to growing concerns over environmental degradation caused by plastics. Before the law, Kigali and other urban areas faced challenges of clogged drainage systems, unsightly litter, and damage to agricultural productivity, as plastic waste was commonly burned or buried in soil. The government identified single-use plastics as a major contributor to flooding and land degradation (Njeru, 2006).

The environmental impacts of the ban have been remarkable. Kigali is now internationally recognised for its cleanliness, with significantly reduced plastic litter and improved waste management systems (Kabera et al., 2019). The ban has also contributed to biodiversity protection by reducing plastic-related harm to livestock and wildlife. Importantly, the policy has been sustained through rigorous enforcement at borders, markets, and checkpoints. Travellers entering Rwanda are required to surrender plastic bags at customs, underscoring the country's commitment to strict regulation.

Economically and socially, the ban presented challenges, particularly for small businesses and traders who relied on cheap plastic packaging. However, the government supported the development of alternative industries, such as local production of paper and cloth bags, creating new entrepreneurial opportunities (Njeru, 2006). Public awareness campaigns and community engagement also played a crucial role in shaping positive attitudes toward compliance. Rwanda's monthly *Umuganda* (community clean-up day) reinforced behavioural change and complemented the ban.

Rwanda's success has made it a model for other African countries considering similar measures. The case demonstrates that strong political will, clear legislation, public participation, and strict enforcement are vital to achieving long-term results. For Lagos, Rwanda's experience highlights

the importance of integrating community engagement, ensuring affordable alternatives, and maintaining consistent enforcement in order to sustain a plastic ban.

2.3.4 Kenya Plastic Bag Ban 2017:

Kenya is often cited as a leading example in Africa for implementing a strict ban on single-use plastics, particularly plastic carrier bags. In August 2017, the Kenyan government, through the National Environment Management Authority (NEMA), enforced one of the world's toughest plastic bag bans, prohibiting the manufacture, sale, and use of single-use plastic carrier bags. Violators faced heavy penalties, including fines of up to KSh 4 million (approximately USD 40,000) or prison terms of up to four years (UNEP, 2018).

The policy was motivated by the severe environmental impacts of plastic waste in Kenya, including blocked drainage systems leading to flooding in Nairobi, livestock deaths from ingesting plastic, and escalating waste management costs. Prior to the ban, Kenyans used an estimated 24 million plastic bags monthly, many of which ended up as litter in waterways and informal settlements (NEMA, 2017).

The resultant environmental impacts from the ban have been significant. Reports indicate cleaner streets and drainage systems, reduced plastic-related livestock deaths, and improved aesthetic value in urban areas (UNEP, 2018). The ban also positioned Kenya as a global leader in plastic regulation, inspiring similar initiatives across Africa, including in Tanzania, Rwanda, and later Nigeria.

However, the policy has not been without challenges. The economic and social impacts were particularly felt among small traders, informal vendors, and manufacturers who relied heavily on

plastic bag production and distribution. While alternatives such as paper, cloth, and biodegradable bags were introduced, accessibility and affordability remained barriers, especially for low-income households. The informal sector, which previously relied on cheap plastic packaging, faced adjustment difficulties (BBC, 2017). Enforcement has also been uneven, with reports of black-market plastic bags still circulating, especially in rural areas and border regions.

Despite these challenges, the Kenyan ban on plastic carrier bags demonstrates the importance of strong political will, public sensitisation campaigns, and strict enforcement mechanisms in achieving environmental policy goals. The ban reflects both the potential and the trade-offs of aggressive plastic regulation in developing economies. For Lagos, Kenya's experience provides valuable lessons: the need for affordable alternatives, inclusive policymaking that considers informal workers, and sustained enforcement to ensure long-term effectiveness.

2.3.5 The European Union Single-Use Plastics Directive 2019:

In 2019, the European Union (EU) adopted Directive (EU) 2019/904 on the reduction of the impact of certain plastic products on the environment, commonly referred to as the Single-Use Plastics (SUP) Directive. This legislation represented one of the most ambitious and comprehensive policy frameworks globally for addressing marine litter and plastic pollution. The directive targeted the ten single-use plastic items most commonly found on European beaches, such as cutlery, plates, straws, stirrers, cotton buds, and expanded polystyrene food containers (styrofoam) (European Commission, 2019).

Plastics account for over 80% of marine litter in the EU, posing risks to biodiversity, fisheries, and tourism, hence birthing the need for the policy (EEA, 2021). The Single-Use Plastic Directive combined market restrictions, consumption reduction targets, design requirements, extended

producer responsibility (EPR), and labelling obligations. For example, items such as plastic straws and cutlery were banned outright, while plastic bottles had to meet recycled content requirements (25% by 2025 and 30% by 2030). Member states were also required to ensure the collection of 90% of plastic bottles by 2029 through deposit-return schemes. Thereby making manufacturers financially responsible for post-consumer plastics (European Commission, 2019).

The environmental impacts of the directive are already evident, with many member states reporting significant reductions in the availability of banned items, shifts to paper, bamboo, and biodegradable alternatives, and increased investment in circular economy solutions (PlasticsEurope, 2020). Furthermore, the directive has contributed to harmonising plastic policies across Europe, reducing policy fragmentation among EU member states.

Economically, the directive has spurred innovation in alternative materials and recycling industries, creating new market opportunities. However, it has also faced resistance from some sectors, particularly plastics manufacturers, food and beverage industries, and small businesses concerned about the higher costs of alternatives. Civil society and NGOs have largely welcomed the directive, though debates persist over the environmental footprint of substitutes such as paper and bioplastics (EEA, 2021).

The European Union's case illustrates the importance of comprehensive, multi-pronged strategies that go beyond bans alone, integrating producer responsibility, recycling targets, and innovation incentives. For Lagos, the EU experience offers lessons in balancing strict regulation with economic adaptation, as well as the need for regional cooperation to tackle cross-border plastic waste challenges.

2.3.6 India Plastic Ban Initiative in 2019:

In October 2019, India launched a major campaign to curb plastic pollution by announcing a nationwide phase-out of single-use plastics. The initiative was introduced in line with Prime Minister Narendra Modi's commitment to eliminate all single-use plastics in the country by 2022. The plan specifically targeted items such as plastic bags, cups, plates, straws, small bottles, and sachets, which were identified as major contributors to environmental degradation (Press Information Bureau, 2019).

The policy was motivated by India's escalating plastic crisis. The country generates an estimated 9.46 million tonnes of plastic waste annually, with about 40% remaining uncollected and ending up in landfills, drains, and waterways (CPCB, 2019). Plastic pollution was linked to urban flooding, blocked drainage systems, harm to livestock and marine life, and growing public health risks. Due to India's vast population and rapid urbanisation, the scale of the problem intensified, thereby making regulatory intervention urgent.

The implementation strategy varied across states, with some states, such as Maharashtra, Tamil Nadu, and Himachal Pradesh, adopting stricter enforcement of bans even before 2019. The central government also encouraged Extended Producer Responsibility (EPR), requiring producers to manage plastic waste and invest in recycling systems. Public awareness campaigns and clean-up drives were launched nationwide, coinciding with Gandhi's 150th birth anniversary celebrations.

While there was an immediate decline in the visible use of banned items in major cities, enforcement gaps, especially in rural areas and informal markets, hindered long-term effectiveness. Reports indicate that illegal plastic bag production and distribution continued, reflecting the challenges of regulating a vast informal economy (Down to Earth, 2020). On the

positive side, the initiative has stimulated innovation in biodegradable packaging, cloth and jute bags, and paper-based alternatives.

Economically, the ban created opportunities for small-scale enterprises producing eco-friendly substitutes, but also posed challenges for low-income vendors reliant on cheap plastics. Industry associations voiced concerns about costs and logistical challenges in shifting to alternatives. Nonetheless, India's case demonstrates the importance of combining legislation with strong enforcement, economic incentives, and public awareness.

For Lagos, India's experience underscores the need to address the informal sector, support local alternatives, and adopt phased implementation strategies that consider both environmental goals and socioeconomic realities.

2.4 Nigeria's Policy and Lagos State Context

Nigeria's National Policy on Plastic Waste Management (2020) provides a framework for reducing plastic pollution through reuse, recycling, and Extended Producer Responsibility (Federal Ministry of Environment, 2020). However, enforcement has been slow due to institutional weaknesses and limited awareness (Adewale et al., 2022).

Lagos State, as the country's commercial hub, generates about 13,000 tonnes of solid waste daily, with plastics making up a significant share (LAWMA, 2024). The state has long struggled with drainage blockage, flooding, and marine litter linked to poor plastic waste disposal. The 2024–2025 ban on Styrofoam and other SUPs reflects an attempt to directly tackle this issue (Lagos State Ministry of Environment, 2025).

However, the Lagos economy is highly dependent on micro and small-scale enterprises, especially in the food sector. These businesses rely heavily on cheap, disposable packaging. Substitutes such as biodegradable packs, paper bags, or reusable containers are often more expensive, raising concerns about affordability and compliance (World Bank, 2024).

2.5 Socioeconomic Impacts of Plastic Bans

Studies conducted globally, and particularly within Africa, highlight a range of socioeconomic dimensions associated with single-use plastic (SUP) bans. One of the most immediate impacts is felt by small businesses, including food vendors and micro, small and medium enterprises (MSMEs), which often struggle with the increased costs of switching to alternative packaging materials. In Kenya, for example, small traders initially resisted the 2017 ban due to higher prices and the limited availability of substitutes (ILO, 2015). These additional costs can affect business competitiveness and consumer affordability in the short term.

Households, particularly low-income ones, are similarly affected. Consumers may face higher expenditure as they adapt to more expensive alternatives, which undermines affordability for families who rely on cheap plastic packaging for daily food and goods. Evidence from South Africa suggests that the burden of plastic bag levies or bans tends to fall disproportionately on poor households, who are less able to absorb price increases (Dikgang et al., 2012).

The employment dimension of plastic bans is complex, as such policies can disrupt jobs in plastic manufacturing and informal plastic trading, while simultaneously creating new opportunities in emerging sectors. These include alternative packaging production, recycling industries, and other circular economy businesses. Thus, while some workers may be displaced, others can benefit from sustainable job creation if appropriate support systems are put in place (ILO, 2015).

Beyond economic adjustments, plastic bans generate significant environmental and social benefits. Evidence from Rwanda and Kenya indicates that eliminating plastic waste reduced urban litter, drainage blockages, and flooding, while also improving public health and the overall aesthetics of urban environments (Kabera et al., 2019; Njeru, 2020). These positive outcomes highlight the potential of bans to enhance quality of life, particularly in densely populated cities vulnerable to flooding.

Nevertheless, effective implementation of SUP bans is not without challenges. Policy effectiveness relies on strong enforcement mechanisms, widespread public awareness campaigns, and the availability of affordable alternatives. Furthermore, inclusive transition strategies are needed to integrate informal workers, such as waste pickers, into formal waste management and recycling systems. Without such measures, bans risk exacerbating socioeconomic inequalities while limiting their environmental effectiveness (Hossain, 2021).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study Area and Sampling Site

The study was conducted in Lagos State, Nigeria's most populous and economically vibrant state, which is located at latitude 6.5227° N and longitude 3.6218° E. Geographically, Lagos lies in the southwestern part of Nigeria, bordered by the Republic of Benin to the west, Ogun State to the north and east, and the Atlantic Ocean to the south. The state covers an area of approximately 3,577 square kilometres, of which about 22% is water, giving it a unique coastal and lagoonal landscape (Lagos Bureau of Statistics, 2020). Its strategic coastal location has historically made it a hub for trade and commerce, and it continues to host Nigeria's busiest seaports and airports.

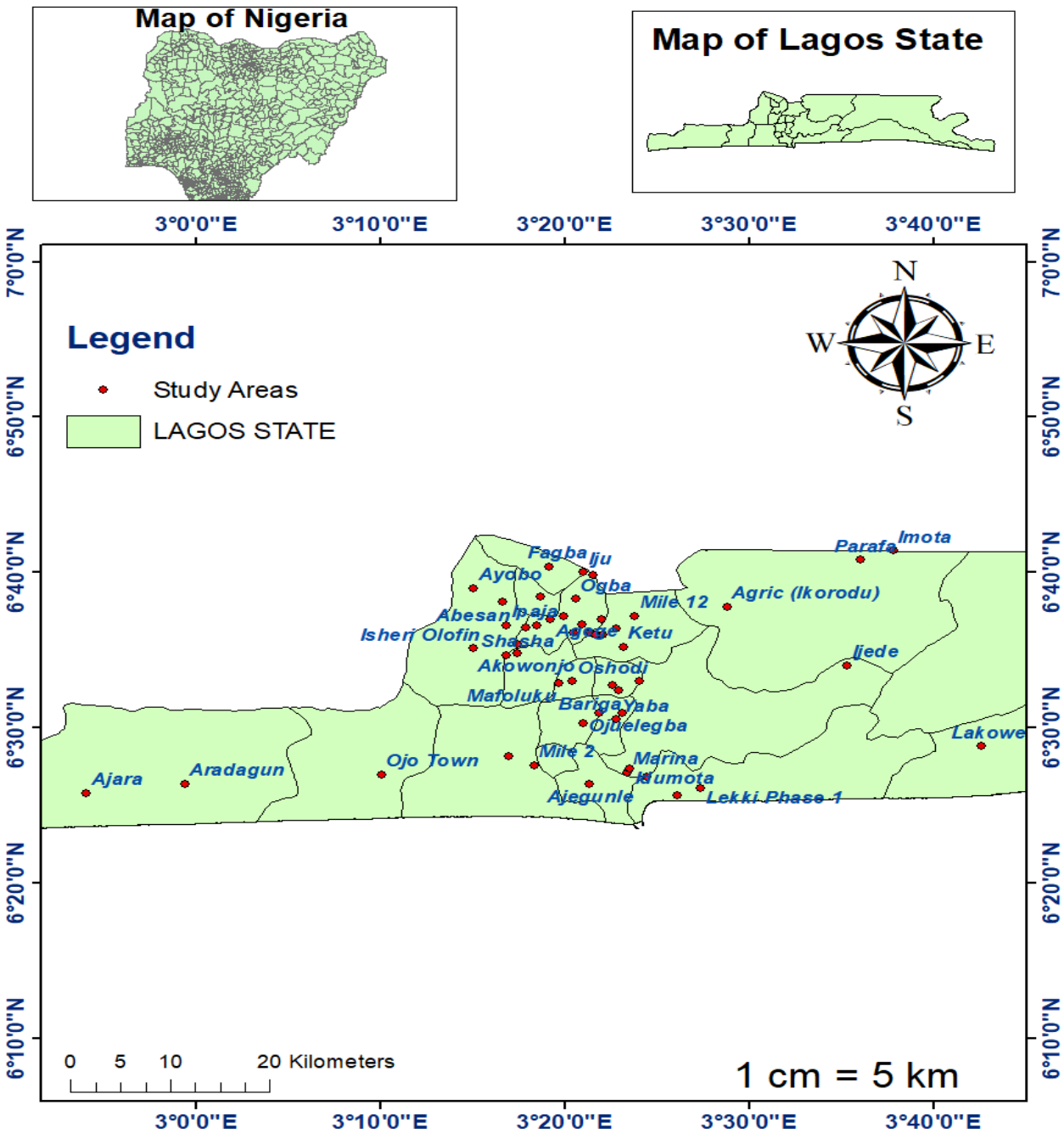

Figure 3.1: Map of Nigeria and Lagos State showing detailed areas where questionnaires were distributed..

With a population estimated at about 17.16 million in 2025, Lagos is the most densely populated state in Nigeria and one of the fastest-growing megacities in Africa (United Nations, 2025). This rapid urbanisation has placed significant pressure on infrastructure, waste management, and environmental resources. Daily solid waste generation is estimated at over 13,000 tonnes, with plastics accounting for a significant proportion of this figure (LAWMA, 2021). Single-use plastics (SUPs), particularly bags, sachet water wrappers, and expandable polystyrene food containers (styrofoam), dominate the waste stream due to their widespread use among households, small businesses, and street vendors.

Economically, Lagos contributes about 30% of Nigeria's GDP, making it a vital industrial and commercial hub (World Bank, 2020). However, the scale of economic activity also drives high consumption of plastics, with adverse environmental impacts such as drainage blockage, flooding, and pollution of water bodies. These challenges underscore Lagos State's relevance as a case study for analysing the socioeconomic implications of plastic regulation. The population density, commercial vibrancy, and acute waste management issues make Lagos a critical environment in which to evaluate the impacts of single-use plastic bans on households, businesses, and informal waste sectors.

3.2 Description of Sampling Sites

Lagos State is divided into Five administrative divisions namely Ikeja, Badagry, Epe, Ikorodu and Lagos Island. All five divisions are then sub-divided into (20) twenty local government areas namely; Agege, Ajeromi-Ifeodun, Alimosho, Amuwo-Odofin,Apapa, Badagry, Epe, Eti-Osa, Ibeju-Lekki, Ifako-Ijaiye, Ikeja, Ikorodu, Kosofe, Lagos Island, Lagos Mailand, Mushin, Ojo,

Oshodi-Isolo, Shomolu, Surulere. Questionnaires will be distributed across the 20 Local Government Areas in Lagos.

Across all the LGAs, survey was distributed to key areas, particularly markets with wholesalers in plastic items, and also food sellers. Since Lagos state has many notable tertiary institutions, the questionnaire was also distributed amongst students of University of Lagos and Yaba College of Technology. Small business owners, manufacturing companies and retail shops that use single use plastic for their packaging materials were also included.

Respondents were distributed across Ayobo, Ipaja, Iyanaipaja, Egbeda, Abesan, Agege, Yaba, Obalende, Gbagada, Sabo, Tejuosho, Ogba, Iju, Fagba, Marina, Victoria Island, Dopemu, Orile Agege, Pen Cinema, Akowonjo, Shasha, Isheri Olofin, Mile 2, Mile 12, Ketu, Ajara, Aradagun, Ajegunle, Lekki phase 1, Lakowe, Alausa, Computer Village, Opebi, Allen Avenue, Ojota, Isheri, Idumota, Adeniji Jones, Ilupeju, Festac, Ojo Town, Mafoluku, Ojuelegba, Oshodi, Bariga, Old Secretatriat, Ikeja GRA, Agric, Parafa, Ijede, Imota.

The listed areas each comprises people of different faces of life, while some areas are majorly populated by educated persons, some of these areas have individuals with little to no education, and majority are a mix of the both. All the markets and businesses visited have access to the PSP, but the majority do not practice waste sorting. Study has shown that waste sorting from the source helps to increase the rate of recycling and composting of degradable wastes.

3.3 Study Design

This study employed a cross-sectional field measurement design to assess the socioeconomic impact of the ban of single-use plastic among residents of Lagos state. A cross-sectional design was used because it allows data collection simultaneously on the demography of users as well as

their knowledge of single-use plastic and alternatives to single-use plastics at a single point in time across all 20 Local Government Areas in Lagos state. This approach is efficient for providing a snapshot of the current ban of single use plastic and is particularly suitable for investigations into the socioeconomic impact of the ban. By using this design, researchers were able to figure out the socioeconomic impact of the ban, as well as the likely future environmental impact while gathering data on impacts on households, businesses and waste management practices. This design was adopted as it aligns with the objectives of the study.

3.4 Method of Data Collection

By combining structured surveys with qualitative interviews and secondary data, this study seeks to provide a balanced and comprehensive understanding of the socioeconomic implications of the single-use plastic ban in Lagos State.

Data are collected using a structured questionnaire with closed and open-ended questions. Questionnaires are suitable for large populations, as they are cost-effective, and ensure standardised responses. The questionnaire consists of six sections covering demographics, awareness and perception of the ban, economic impacts, social impacts, environmental and behavioral chaneges, and open-ended questions.

3.5 Structured Questionnaire to assess the Socioeconomic Impact of the Ban of Single-Use Plastics in Lagos State.

A well structured questionnaire was developed to collect information on respondents' demography, awareness and perception, economic and social impacts, environmental and behavioral changes, and adaptation. The questionnaire will undergo expert review and pretesting

to ensure validity, clarity, and ease of completion. This process will help to refine the questions, minimizes ambiguity, and ensures that the tool is appropriate for the target population.

3.6 Data Collection Procedure

Fieldwork will involve administering questionnaires to selected respondents with the assistance of trained research assistants.

Following approval from the Lagos State Ministry of the Environment, permission was sought from selected enterprises. Questionnaires will be administered face-to-face and electronically. Trained research assistants ensured ethical conduct and accuracy during administration. This approach enhances response rates and data quality.

3.7 Data Type and Sources

This study made use of primary data in order to get a comprehensive picture of the socioeconomic impacts of the single-use plastic (SUP) ban in Lagos State. Primary data here would refer to first-hand information collected directly from respondents

The primary data for this research were obtained through structured questionnaires administered to consumers, recyclers, manufacturers, market associations and business operators, particularly traders and food vendors who are directly affected by the ban. In addition, qualitative information will be sourced through key informant interviews with government officials. These results will provide in-depth insights into the socioeconomic impacts of the policy. These sources of primary data are critical, as they provide context-specific evidence from stakeholders who experience the effects of the ban in their daily lives.

By using primary data, the study is designed to capture both the lived experiences of stakeholders in Lagos and the broader structural and policy context, thereby ensuring a balanced and well-grounded analysis.

3.8 Target Population of the Study

The target population comprises manufacturers, business owners, and traders, particularly those in markets where plastics are widely used. Households and consumers, who are directly affected by the shift to alternative materials, will also be included in the survey. Worthy of note would be Government agencies' recyclers that are involved in waste management and environmental regulation.

3.9 Sample Size Determination

The sample size was determined using Yamane's formula (1967), which provides a simplified method for calculating sample sizes based on known populations. As of 2025 (United Nations), the Lagos state population was estimated to be around 17,160,000

The formula was as follows:

$$n = \frac{N}{1 + N \times e^2}$$

where:

- n is the calculated sample size,
- N is the population size (here, 17,160,000, the estimated Lagos State population),
- e^2 is the margin of error (here, 0.05, or 5%).

This formula assumes a 95% confidence level and a 50% response distribution.

$$n = \frac{17{,}160{,}000}{1 + 17{,}160{,}000 \times 0.05^2}$$

$$n = 400$$

Thus, the minimum sample is 400 respondents.

3.10 Sampling Technique and Allocation

A multi-stage stratified random sampling method is adopted. At the first stage, Lagos State is stratified into its 20 Local Government Areas, which are selected proportionally, followed by stratification into enterprise sectors (traders, manufacturers, consumers, recyclers, and regulators). Within each sector, simple random sampling is used to select respondents. Stratified sampling reduces bias and improves representativeness (Lohr, 2010).

3.11 Data Analysis

Quantitative data will be analysed using descriptive statistics (frequencies, percentages, means) and inferential statistics (Chi-square tests and regression analysis) with SPSS.

Quantitative data will be analysed using SPSS. Descriptive statistics (frequencies, means, percentages) will summarise respondent characteristics and impacts. Inferential statistics will include chi-square tests for associations and regression analysis for predictors of socio-economic impact. Qualitative data from open responses will be thematically analysed to provide context.

3.12 Ethical Considerations

This research adhered to ethical research standards. Informed consent was obtained from participants, and participation was voluntary. Anonymity and confidentiality of respondents were maintained throughout. Consent was obtained from the Ministry of Environment before data collection.

CHAPTER FOUR

RESULT

In Table 1, the majority of respondents (43.8%) were aged between 18 and 25 years, followed by those aged 26–35 (30.1%). A smaller proportion were under 18 (2.1%), while 12.6% were aged 36–45, and 11.4% were 46 years and above. In terms of gender, more females (63.2%) participated in the study compared to males (36.8%). Most respondents had attained tertiary education (68.1%), with 27.7% having postgraduate qualifications. Only a small number completed secondary (3.7%) or primary school (0.5%).

Regarding occupation, students made up the largest group (39.2%), followed by business owners (15.9%) and civil servants (13.1%). Others included artisans (1.9%), transport workers (0.5%), traders (0.7%), and manufacturers (0.2%), while 28.7% reported having other occupations. In terms of income, 19.6% preferred not to disclose their earnings. Among those who did, the largest group (16.8%) earned between ₦100,000–₦149,999 monthly, followed by 15.6% who earned ₦200,000 and above. Other income brackets included ₦50,000–₦99,999 (14.9%), ₦30,000–₦49,999 (12.4%), and ₦150,000–₦199,999 (7.2%).

Geographically, respondents were spread across various local government areas, with the highest proportion from Alimosho (30.8%), followed by Agege (6.1%), Ikeja (5.6%), and Ifako-Ijaiye (4.9%). Other LGAs had lower representations, including Ajeromi-Ifelodun (2.6%), Apapa (3.5%), Badagry (2.6%), and Eti-Osa (3.3%), among others. A few areas like Bariga, Ifelodun, Ifo, and Orile Agege had only 0.2% representation each.

Table 1a: Socio-Demographic of respondents

Variables	Frequency (%)
Age (years)	
Under 18	9 (2.1)
18-25	188 (43.8)
26-35	129 (30.1)
36-45	54 (12.6)
46 and above	49 (11.4)
Gender	
Male	158 (36.8)
Female	271 (63.2)
Education Level	
Primary School	2 (0.5)
Secondary School	16 (3.7)
Tertiary Education	292 (68.1)
Postgraduate	119 (27.7)
Occupation	
Student	162 (39.2)
Trader	3 (0.7)
Manufacturer	1 (0,2)
Civil Servant	56 (13.1)
Artisan	8 (1.9)
Transport Worker	2 (0.5)
Business Owner	68 (15.9)
Other	123 (28.7)

Table 1b: Socio-Demographic of respondents

Average Monthly Income	
Less than #30,000	
#30,000-#49,999	53 (12.4)
#50,000-#99,999	64 (14.9)
#100,000-#149,999	72 (16.8)
#150,000-#199,999	31 (7.2)
#200,000 and above	67 (15.6)
Prefer not to say	84 (19.6)
Local Government Area	
Agege	26 (6.1)
Ajeromi-Ifelodun	11 (2.6)
Alimosho	132 (30.8)
Amuwo-Odofin	12 (2.8)
Apapa	15 (3.5)
Badagry	11 (2.6)
Bariga	1 (0.2)
Epe	14 (3.3)
Eti-Osa	14 (3.3)
Ibeju-Lekki	6 (1.4)
Ifako-Ijaiye	21 (4.9)
Ifelodun	1 (0.2)
Ifo	1 (0.2)
Ikeja	24 (5.6)
Ikorodu	18 (4.2)
Kosofe	20 (4.7)
Lagos Island	10 (2.3)
Lagos Mainland	15 (3.5)
Mushin	12 (2.8)
Ojo	20 (4.7)
Orile Agege	1 (0.2)
Oshodi-Isolo	18 (4.2)
Shomolu/Somolu	19 (4.4)
Surulere	7 (1.6)

In Table 2, the results show that awareness of the Lagos State Government's ban on single-use plastics was generally high, with 72.3% of respondents reporting awareness, though 22.8% were not aware and 4.9% were unsure. The main sources of awareness were social media (58.7%) and television/radio (17.2%), while community meetings (1.4%), government signage (4.0%), and word of mouth (21.4%) played smaller roles. Despite these efforts, 11% indicated no awareness or other unspecified sources. In terms of support, a majority expressed favorable views, with 23.8% strongly supporting and 28.4% supporting the ban, while 38.7% remained neutral and only a small fraction opposed it (6.3% oppose, 2.8% strongly oppose). Before the ban, single-use plastics were widely used, with 40.8% using them daily, 30.8% several times a week, and only 0.5% reporting they never used them. Following the ban, most respondents indicated behavioral change: 45.2% reduced usage a little, and 19.1% reduced it significantly, though 29.4% reported no reduction and 6.3% felt it was not applicable. Regarding enforcement, perceptions were mixed: 34.5% rated enforcement as moderately effective, while 27.7% found it not effective and 28.5% observed no enforcement at all. Only 9.3% considered enforcement very effective, suggesting significant challenges in consistent policy implementation.

Table 2a: Level of Awareness and Compliance

Variables	Frequency (%)
Awareness of Lagos State Government Ban on Single-Use Plastics	
Maybe	21 (4.9)
No	98 (22.8)
Yes	310 (72.3)
Awareness via Television/Radio	
No	355 (82.8)
Yes	74 (17.2)
Awareness via Social Media	
No	177 (41.3)
Yes	252 (58.7)
Awareness via Community Meetings	
No	423 (98.6)
Yes	6 (1.4)
Awareness via Government Notice/Signage	
No	412 (96.0)
Yes	17 (4.0)
Awareness via Word of Mouth	
No	337 (78.6)
Yes	92 (21.4)
Awareness via Other/Not Aware	
No	382 (89.0)
Yes	47 (11.0)

Table 2b: Level of Awareness and Compliance

Support for Ban on Single-Use Plastics	
Strongly support	102 (23.8)
Support	122 (28.4)
Neutral	166 (38.7)
Oppose	27 (6.3)
Strongly oppose	12 (2.8)
Frequency of Single-Use Plastic Use Before Ban	
Never	2 (0.5)
Rarely	17 (4.0)
Occasionally	91 (21.2)
Once a week	12 (2.8)
Several times a week	132 (30.8)
Daily	175 (40.8)
Reduction in Single-Use Plastic Use	
No	126 (29.4)
Not applicable	27 (6.3)
Yes, a little	194 (45.2)
Yes, significantly	82 (19.1)
Effectiveness of Enforcement	
Very effective	40 (9.3)
Moderately effective	148 (34.5)
Not effective	119 (27.7)
No enforcement observed	122 (28.5)

In table 3, findings show that community response to the single-use plastics ban was largely favorable, with 24.2% expressing strong support and 27.5% moderate support, while 21.6% were indifferent. However, 14.9% opposed the ban and 11.8% reported not being aware of it. Regarding changes in social norms due to the ban, responses were more mixed: 29.8% observed slight changes, 20.7% reported significant changes, and 30.1% saw no change, while 19.4% were unsure. This suggests that although overall community support is relatively strong, the perceived impact on everyday social practices remains inconsistent.

Table 3: Assessment of the Economic Impact

Variables	**Frequency (%)**
Community Response to Ban	
Strong support	104 (24.2)
Moderate support	118 (27.5)
Indifferent	93 (21.6)
Opposed	64 (14.9)
Not aware	50 (11.8)
Effect on Income	
Social Norms change (bringing reusable bags, rejecting plastic) due to Ban	89 (20.7)
Slightly	128 (29.8)
No change	129 (30.1)
Not sure	83 (19.4)

In Table 4, the results indicate that the media (35.4%) and government campaigns (26.1%) were the main sources of education or awareness about the single-use plastics ban, followed by NGOs/community groups (20.0%), while 18.5% reported no exposure to awareness efforts. In terms of effectiveness, behavioral change from awareness campaigns was limited, with only 15.6% rating them very effective and 27.5% somewhat effective, while a larger share found them not effective (33.1%) or reported that no campaigns were observed (23.8%). Regarding enforcement, perceptions were also mixed: 34.5% considered enforcement moderately effective, but nearly the same proportion viewed it as not effective (27.7%) or felt no enforcement was observed (28.5%), while only 9.3% found enforcement very effective.

Table 4: Individual Responses to Ban and Perception

Variables	**Frequency (%)**
Form of Education or awareness about the ban	
Govt campaigns	112 (26.1)
NGOs/community groups	86 (20.0)
Media	152 (35.4)
None	79 (18.5)
Behavioural Change due to Awareness	
Very effective	67 (15.6)
Somewhat effective	118 (27.5)
Not effective	142 (33.1)
No campaigns observed	102 (23.8)
Effectiveness of Enforcement	
Very effective	40 (9.3)
Moderately effective	148 (34.5)
Not effective	119 (27.7)
No enforcement observed	122 (28.5)

The findings from Table 5 show that nearly half of respondents (49%) expressed positive perceptions and support for the ban on single-use plastics, though 21% raised concerns about the cost and availability of alternatives. Others emphasized the need for greater awareness and enforcement (12%), while smaller proportions highlighted economic or business impacts (6%), remained neutral or indifferent (7%), or opposed the ban outright (6%).

When asked about challenges, the high cost of alternatives (30%) and their unavailability or scarcity (21%) were the most common issues, followed by economic/business impacts (12%), and adaptation difficulties (9%). Notably, 23% reported no major challenges, while a minority mentioned awareness/enforcement gaps (3%) or other rare concerns like flooding, pollution, and health effects (1%).

In terms of suggestions for government and stakeholders, respondents prioritized the provision of affordable and accessible alternatives (33%) and increased awareness and sensitization campaigns (28%). Other key recommendations included gradual implementation with alternatives provided first (14%), support for businesses and financial aid (11%), stronger enforcement and monitoring (6%), and promoting recycling and waste management (5%). Only a small share called for policy flexibility or attention to other priorities (2%), while 2% had no specific suggestions.

Table 5: Respondents Challenges associated with Implementation and Recommendations

Variables	Frequency (%)
General thoughts about the ban	
Positive perception / Support	210 (49.0)
Concerns about cost/alternatives	90 (21.0)
Need for awareness & enforcement	50 (12.0)
Economic/Business impact	25 (6.0)
Neutral / Indifferent / Unaware	30 (7.0)
Negative perception / Opposition	24 (6.0)
Challenges faced	
High cost of alternatives	130 (30.0)
Unavailability / scarcity	90 (21.0)
Economic & business impact	50 (12.0)
Inconvenience / adaptation issues	40 (9.0)
No challenge / Neutral	100 (23.0)
Awareness / enforcement gaps	15 (3.0)
Other (flood, pollution, health)	4 (1.0)
Suggestions for government/stakeholders	
Affordable & accessible alternatives	140 (33.0)
Awareness & sensitization campaigns	120 (28.0)
Gradual implementation & provision first	60 (14.0)
Support for businesses & financial aid	45 (11.0)
Enforcement & monitoring	25 (6.0)
Recycling & waste management	20 (5.0)
Policy flexibility / other priorities	10 (2.0)
No suggestion / Neutral	9 (2.0)

Table 6 shows a statistically significant association between age and awareness of the Lagos State ban on single-use plastics. Awareness is highest among respondents aged 46 and above (87.8%) and lowest among those under 18 (44.4%). Respondents aged 18–25 display moderate awareness (64.9%) but also the highest proportion of uncertainty (5.9%). The chi-square value ($\chi^2 = 22.186$, df = 8, $p = 0.005$) confirms that awareness increases with age, suggesting that younger individuals may have less exposure to policy information or media coverage.

Table 6: Association between Age and Awareness of Lagos State Ban on Single-use Plastics

Awareness of Ban	18–25 (n=188)	26–35 (n=129)	36–45 (n=54)	46+ (n=49)	Under 18 (n=9)	χ^2 (df, p)
Yes	122 (64.9%)	96 (74.4%)	45 (83.3%)	43 (87.8%)	4 (44.4%)	22.186 (8, 0.005)
No	55 (29.3%)	27 (20.9%)	7 (13.0%)	6 (12.2%)	3 (33.3%)	
Maybe	11 (5.9%)	6 (4.7%)	2 (3.7%)	0 (0.0%)	2 (22.2%)	

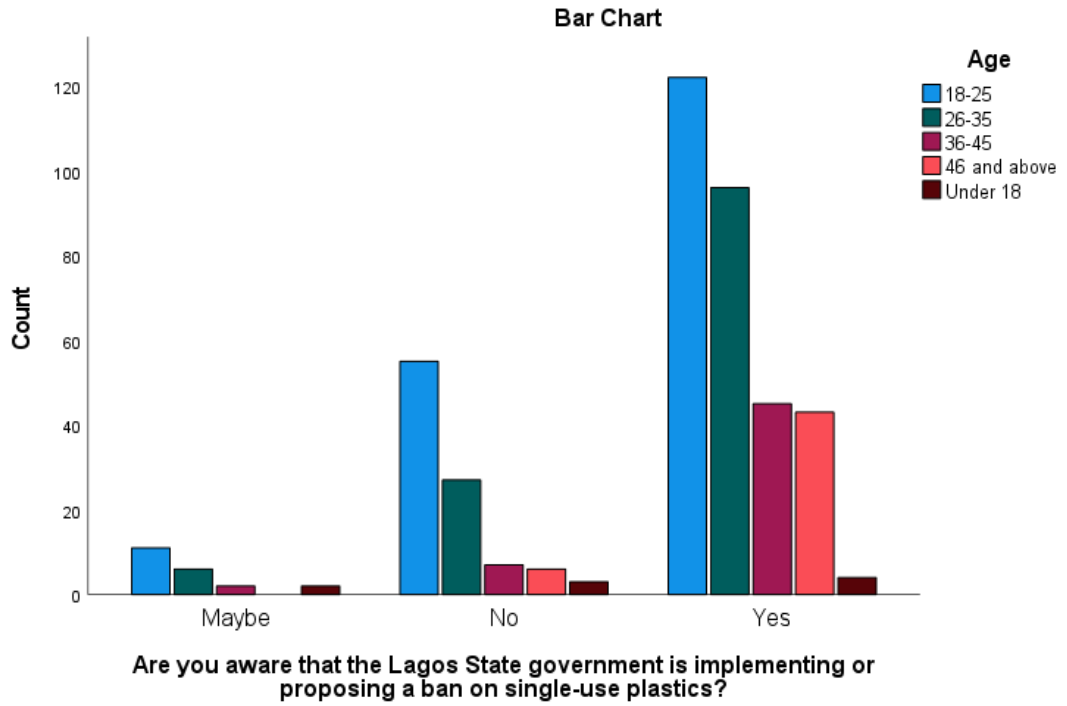

Figure 4.1: Chart showing Association between Age and Awareness of Lagos State Ban on Single-use Plastics

Table 7 indicates no significant association between gender and awareness of the ban. Both males and females report nearly identical awareness levels (approximately 72%). The chi-square statistic ($\chi^2 = 0.147$, df = 2, p = 0.929) confirms that awareness is evenly distributed across genders, suggesting that communication regarding the policy has reached both groups equally.

Table 7: Association between Gender and Awareness of Lagos State Ban on Single-use Plastics

Awareness of Ban	Female (n=271)	Male (n=158)	χ^2 (df, p)
Yes	196 (72.3%)	114 (72.2%)	0.147 (2, 0.929)
No	61 (22.5%)	37 (23.4%)	
Maybe	14 (5.2%)	7 (4.4%)	

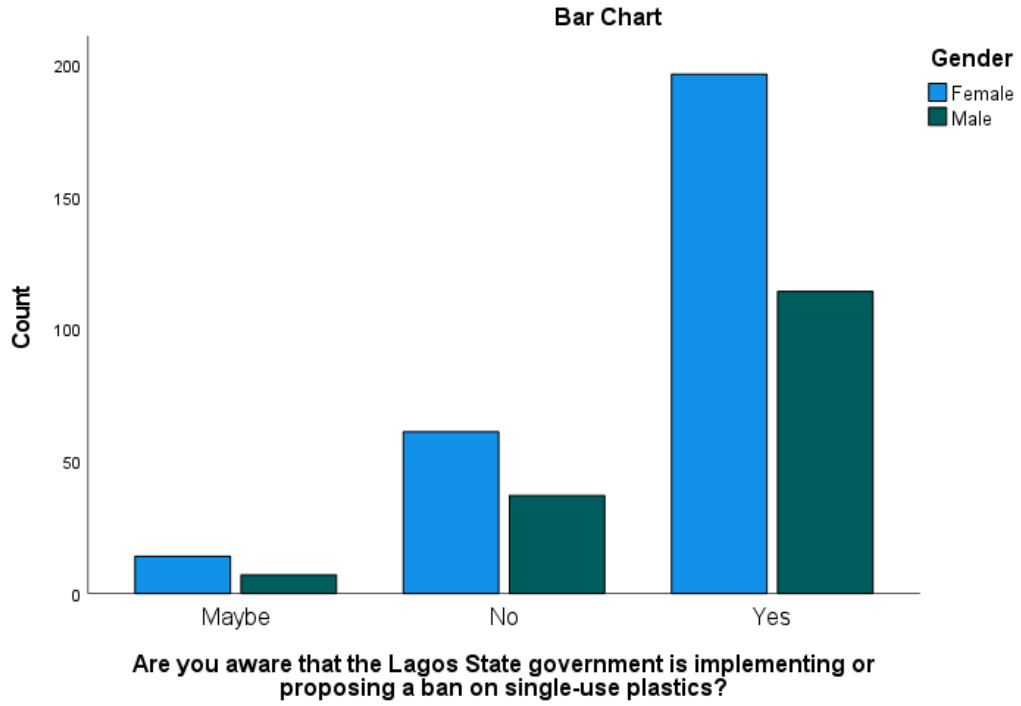

Figure 4.2: Chart showing Association between Gender and Awareness of Lagos State Ban on Single-use Plastics

Table 8 shows a significant association between educational level and awareness of the ban. Awareness is highest among respondents with postgraduate education (79.8%) and lowest among those with secondary education (50.0%). Respondents with lower education levels also display relatively higher uncertainty. The chi-square test ($\chi^2 = 18.041$, df = 6, p = 0.006) confirms that higher educational attainment is linked to increased awareness.

Table 8: Association between Educational Level and Awareness of Lagos State Ban on Single-use Plastics

Awareness of Ban	Postgraduate (n=119)	Primary School (n=2)	Secondary School (n=16)	Tertiary Education (n=292)	χ^2 (df, p)
Yes	95 (79.8%)	2 (100.0%)	8 (50.0%)	205 (70.2%)	18.041 (6, 0.006)
No	16 (13.4%)	0 (0.0%)	5 (31.3%)	77 (26.4%)	
Maybe	8 (6.7%)	0 (0.0%)	3 (18.8%)	10 (3.4%)	

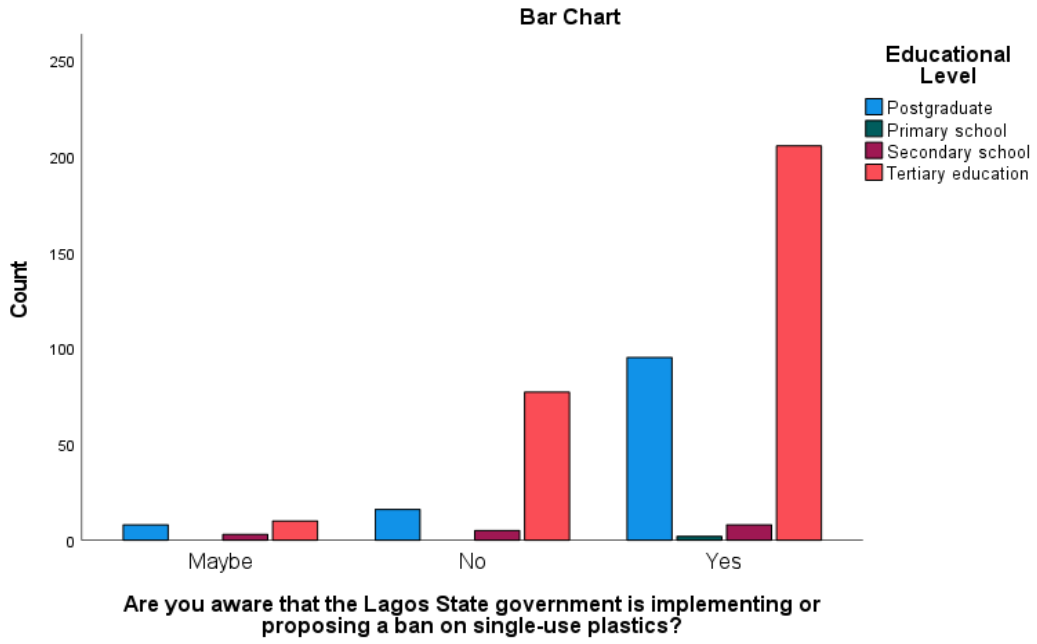

Figure 4.3: Chart showing Association between Educational Level and Awareness of Lagos State Ban on Single-use Plastics

Table 9 indicates no significant association between respondents' roles and awareness of the ban. Awareness levels remain high across most categories, particularly among policy makers (100%) and researchers (88.9%). However, individuals identifying as "Other" show lower awareness (50.0%) and slightly higher uncertainty. The chi-square statistic ($\chi^2 = 8.691$, df = 12, p = 0.729) suggests that awareness is widespread regardless of role, possibly due to general media coverage rather than occupation-specific campaigns.

Table 9: Association between Role in Relation to Single-use Plastics and Awareness of the Ban

s	Consumer/User (n=374)	Manufacturer (n=5)	Other (n=12)	Policy Maker (n=6)	Researcher (n=9)	Retailer (n=13)	Waste Collector (n=10)	χ^2 (df, p)
Yes	269 (71.9%)	4 (80.0%)	6 (50.0%)	6 (100.0%)	8 (88.9%)	9 (69.2%)	8 (80.0%)	8.691 (12, 0.729)
No	85 (22.7%)	1 (20.0%)	5 (41.7%)	0 (0.0%)	1 (11.1%)	4 (30.8%)	2 (20.0%)	
Maybe	20 (5.3%)	0 (0.0%)	1 (8.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	

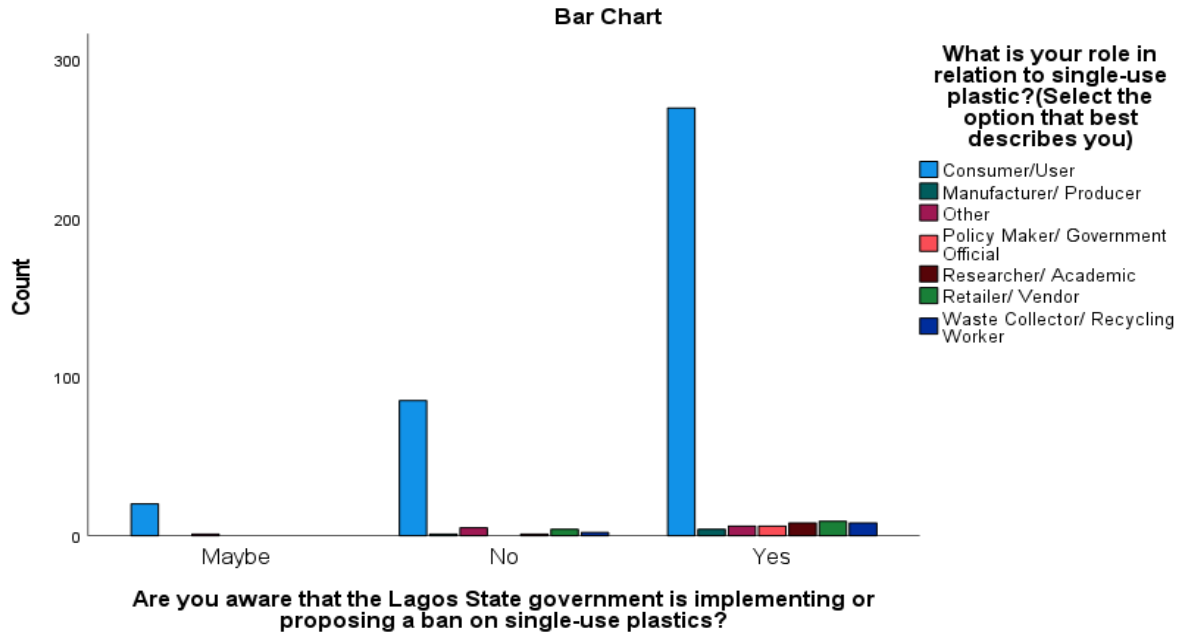

Figure 4.4: Chart showing Association between Role in Relation to Single-use Plastics and Awareness of the Ban

Table 10 shows no significant association between income level and awareness of the ban. Awareness remains relatively high across income brackets, ranging from 62.3% among the lowest earners to 87.1% among those earning ₦150,000–₦199,999. The chi-square statistic (χ^2 = 16.099, df = 16, p = 0.446) confirms that income does not strongly influence awareness levels. This suggests that messaging about the ban may have circulated through mass media channels accessible to diverse income groups.

Table 10: Association between Average Monthly Income and Awareness of the Ban

Awareness of Ban	**< ₦30,000 (n=53)**	**₦30,000–₦49,999 (n=64)**	**₦50,000–₦99,999 (n=72)**	**₦100,000–₦149,999 (n=58)**	**₦150,000–₦199,999 (n=29+1+1 merged=31)**	**₦200,000+ (n=67)**	**Prefer not to say (n=84)**	**χ^2 (df, p)**
Yes	33 (62.3%)	51 (79.7%)	46 (63.9%)	46 (79.3%)	27 (87.1%)	51 (76.1%)	56 (66.7%)	16.099 (16, 0.446)
No	16 (30.2%)	10 (15.6%)	21 (29.2%)	10 (17.2%)	4 (12.9%)	15 (22.4%)	22 (26.2%)	
Maybe	4 (7.5%)	3 (4.7%)	5 (6.9%)	2 (3.4%)	0 (0.0%)	1 (1.5%)	6 (7.1%)	

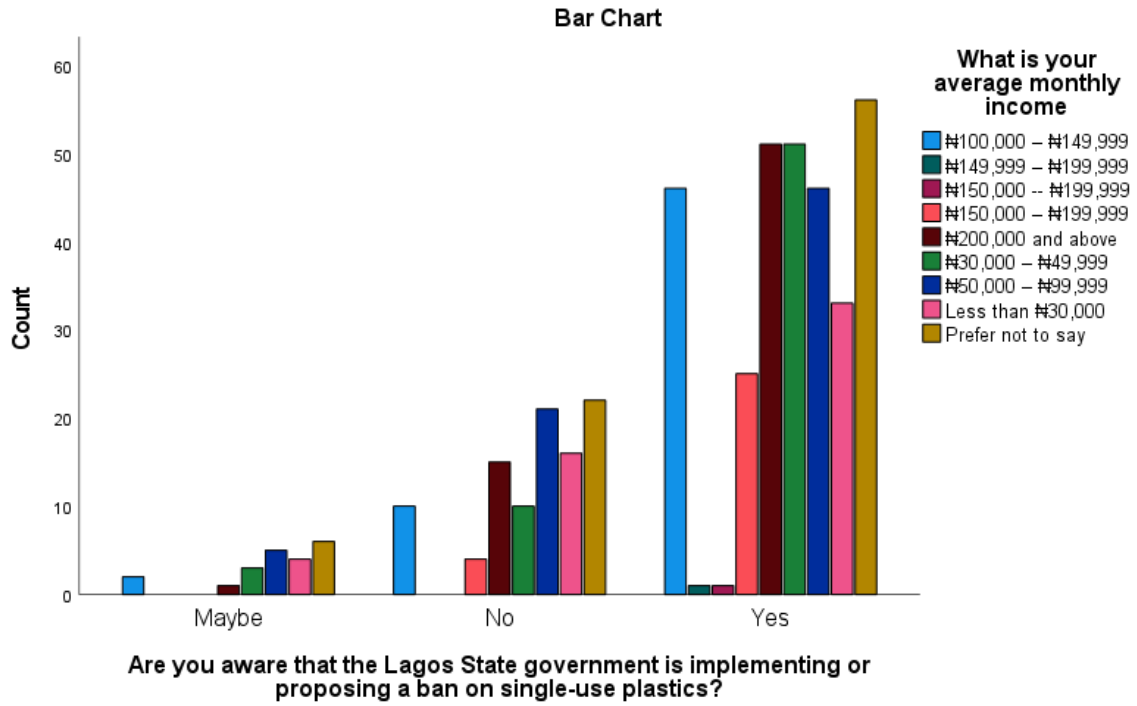

Figure 4.5: Chart showing Association between Average Monthly Income and Awareness of the Ban

Table 11 reveals a statistically significant association between age and support for the ban (χ^2 = 44.217, df = 16, p = 0.000). Younger respondents (18–25) show the highest neutrality (46.8%), while strong support is most pronounced among those aged 46 and above (53.1%). Opposition (including strong opposition) is relatively low across all age groups but slightly more visible among respondents aged 26–35. Overall, support for the ban increases with age, with older respondents being more decisive in endorsing the policy.

Table 11: Association between Age and Support for the Lagos State Ban on Single-use Plastics

Age Group	Neutral	Oppose	Strongly Oppose	Support	Strongly Support	Total	χ^2 (df, p)
18–25	88	13	4	53	30	188	
26–35	51	6	6	39	27	129	
36–45	14	4	1	18	17	54	**44.217 (16, 0.000)**
46 and above	9	4	0	10	26	49	
Under 18	4	0	1	2	2	9	
Total	166	27	12	122	102	429	

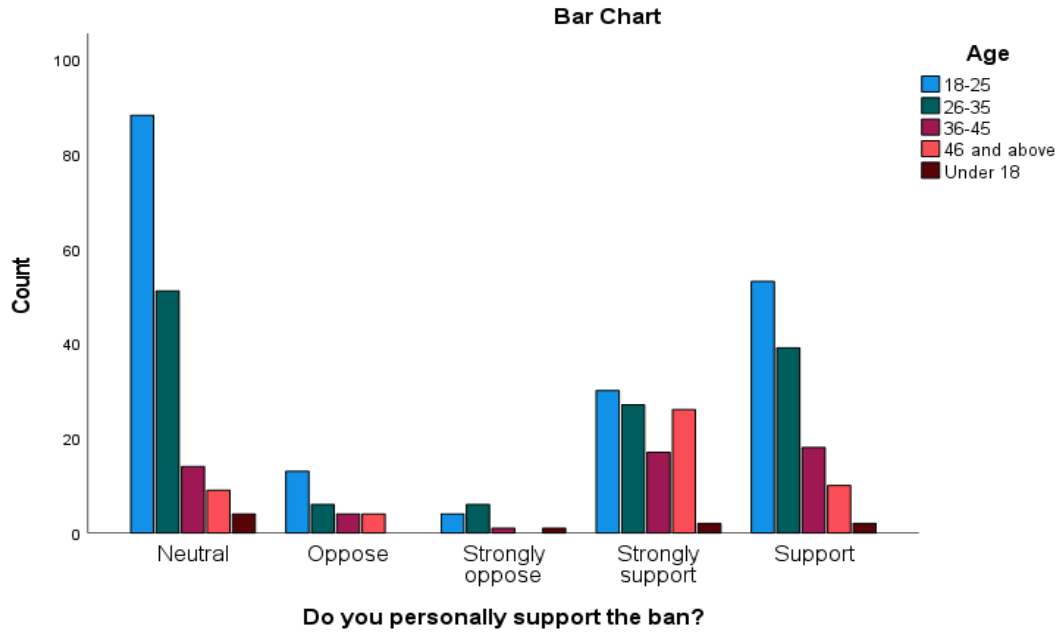

Figure 4.6: Chart showing Association between Age and Support for the Lagos State Ban on Single-use Plastics

Table 12 indicates a statistically significant association between gender and support for the ban (χ^2 = 12.791, df = 4, p = 0.012). Female respondents display slightly higher overall support (50.2%, combining "Support" and "Strongly support") compared to males (56.3%). However, strong opposition is notably more prevalent among males (5.7%) than females (1.1%). These results

suggest that although both genders are generally supportive, females tend to express more moderate support, while males show slightly more polarized views.

Table 12: Association between Gender and Support for the Lagos State Ban on Single-use Plastics

Gender	Neutral	Oppose	Strongly Oppose	Support	Strongly Support	Total	χ^2 (df, p)
Female	117	16	3	76	59	271	
Male	49	11	9	46	43	158	**12.791 (4, 0.012)**
Total	166	27	12	122	102	429	

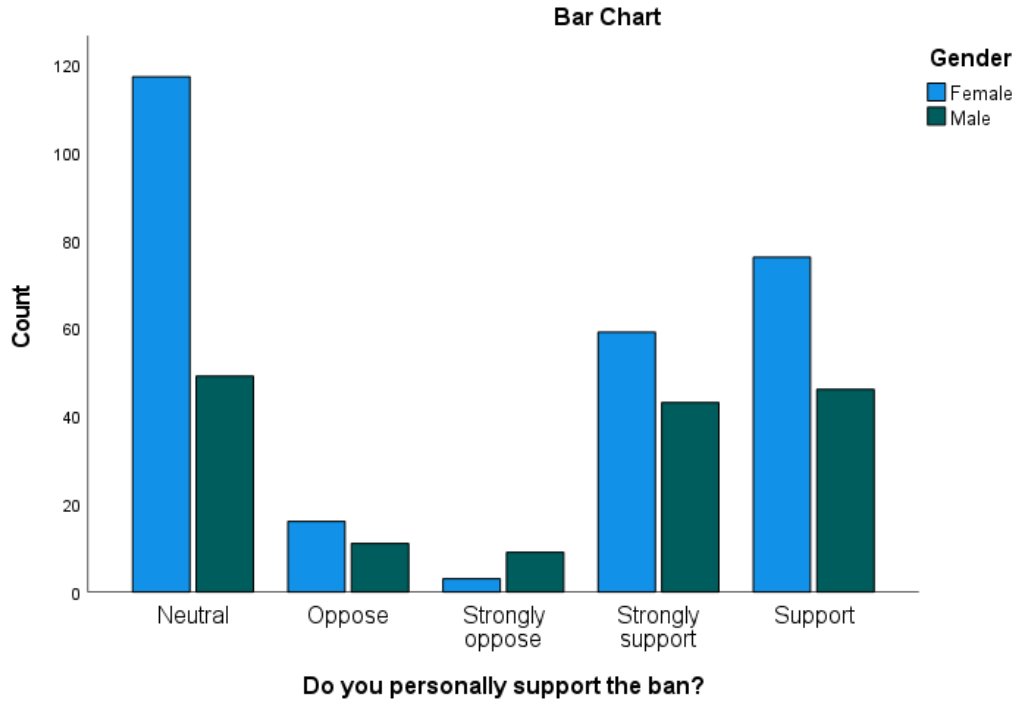

Figure 4.7: Chart showing Association between Gender and Support for the Lagos State Ban on Single-use Plastics

Table 13 shows a statistically significant association between educational level and support for the ban ($\chi^2 = 21.218$, df = 12, p = 0.047). Support (including strong support) increases with higher education, reaching 56.6% among postgraduates and 51.1% among tertiary-educated respondents. Neutrality is notably high among tertiary-level respondents (41.1%), while strong opposition is marginal across all groups. These results indicate that while education enhances support, higher-educated individuals may still remain cautious or expect more policy clarity before fully endorsing implementation.

Table 13: Association between Educational Level and Support for the Lagos State Ban on Single-use Plastics

Educational Level	Neutral	Oppose	Strongly Oppose	Support	Strongly Support	Total	χ^2 (df, p)
Postgraduate	39	10	3	24	43	119	
Primary school	1	0	0	1	0	2	
Secondary school	6	2	1	3	4	16	**21.218 (12, 0.047)**
Tertiary education	120	15	8	94	55	292	
Total	166	27	12	122	102	429	

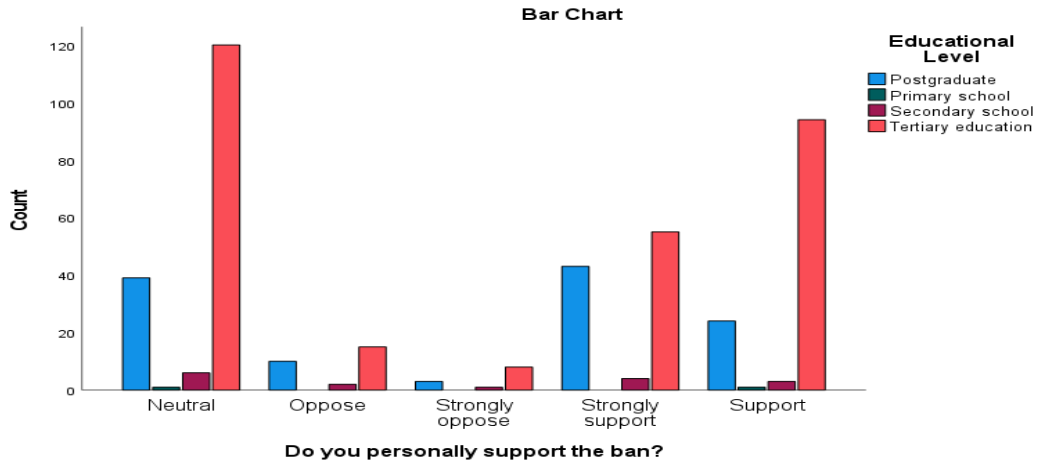

Figure 4.8: Chart showing Association between Educational Level and Support for the Lagos State Ban on Single-use Plastics

Table 14 indicates no statistically significant association between respondents' roles in the plastic value chain and their support for the ban ($\chi^2 = 34.794$, df = 24, p = 0.072). Neutral responses dominate across most roles, particularly among consumers at 40.4%. Strong support is highest among policymakers (100%) and researchers (33.3%), although sample sizes are small. Despite differing levels of involvement with plastics, support for the ban appears consistent across stakeholder categories, suggesting widespread acceptance of the policy irrespective of occupational roles.

Table 14: Association between Role in Relation to Single-use Plastics and Support for the Lagos State Ban

Role	Neutral	Oppose	Strongly Oppose	Support	Strongly Support	Total	χ^2 (df, p)
Consumer/User	151	24	10	106	83	374	
Manufacturer/Producer	1	1	0	2	1	5	
Other	4	1	0	5	2	12	
Policy Maker/Govt Official	0	0	0	0	6	6	**34.794 (24, 0.072)**
Researcher/Academic	3	0	0	3	3	9	
Retailer/Vendor	3	1	2	3	4	13	
Waste Collector/Recycling Worker	4	0	0	3	3	10	
Total	166	27	12	122	102	429	

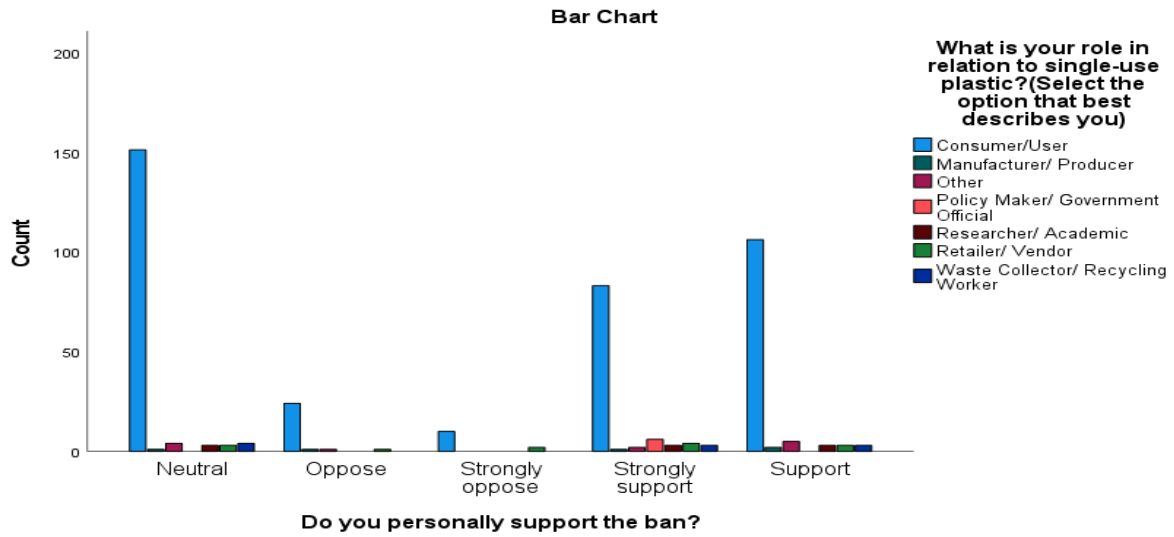

Table 4.9: Association between Role in Relation to Single-use Plastics and Support for the Lagos State Ban

Table 15 shows no statistically significant association between income and support for the ban ($\chi^2 = 25.115$, df = 32, p = 0.801). Across all income groups, neutrality remains relatively high, ranging from 31% to 43%. Support (including strong support) is consistent across income levels, typically falling between 40% and 55%. This suggests that attitudes toward the ban are not determined by financial status, indicating broad-based acceptance across socioeconomic categories.

Table 15: Association between Average Monthly Income and Support for the Lagos State Ban on Single-use Plastics

Income Category	Neutral	Oppose	Strongly Oppose	Support	Strongly Support	Total	χ^2 (df, p)
₦100,000 – ₦149,999	19	3	2	17	17	58	
₦150,000 – ₦199,999	12	1	0	7	9	29	
₦200,000 and above	20	2	2	22	21	67	
₦30,000 – ₦49,999	25	6	3	22	8	64	**25.115 (32, 0.801)**

Income Category	Neutral	Oppose	Strongly Oppose	Support	Strongly Support	Total	χ^2 (df, p)
₦50,000 – ₦99,999	33	6	1	17	15	72	
Less than ₦30,000	24	4	2	14	9	53	
Prefer not to say	33	5	2	22	22	84	
Total	166	27	12	122	102	429	

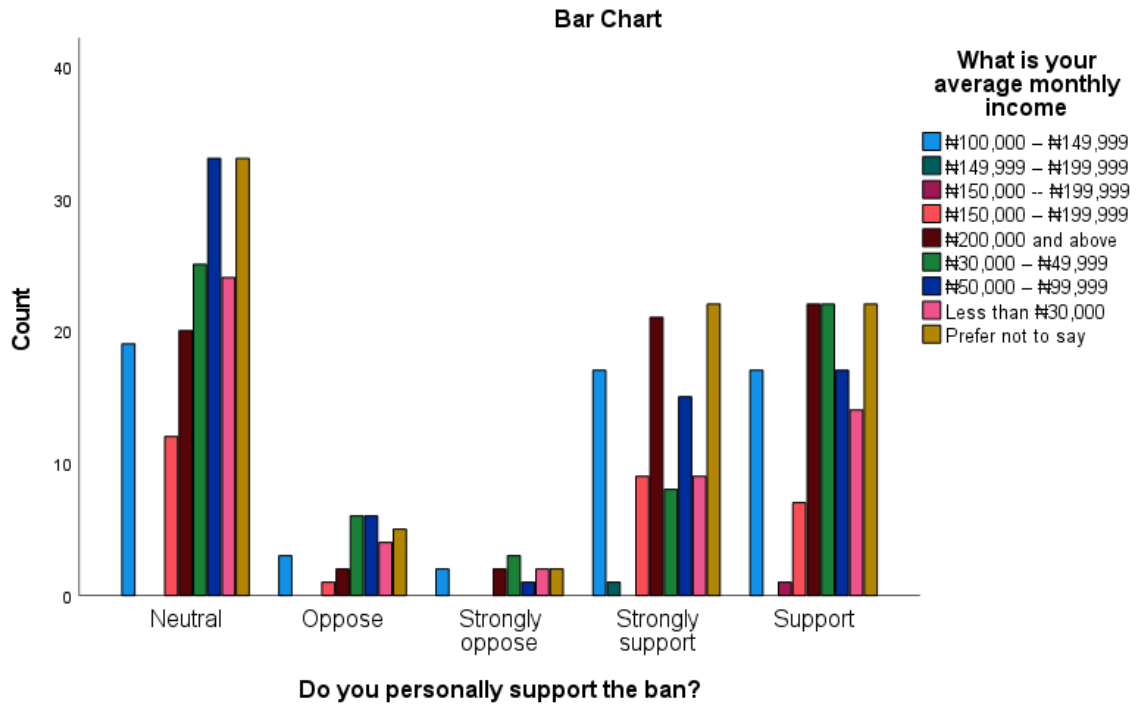

Figure 4.10: Chart showing Association between Average Monthly Income and Support for the Lagos State Ban on Single-use Plastics

Table 16 indicates no statistically significant association between age and pre-ban usage of single-use plastics ($\chi^2 = 13.540$, df = 20, p = 0.853). High usage levels (Daily or Several times a week) are consistent across all age groups, particularly among those aged 18–35. Even older respondents (46+) reported frequent use, suggesting that prior dependence on single-use plastics was widespread and not age-dependent.

Table 16: Association between Age and Frequency of Single-use Plastic Use Before the Ban

Age Group	Daily	Never	Occasionally	Once a Week	Rarely	Several Times a Week	Total	χ^2 (df, p)
18–25	83	2	40	7	6	50	188	
26–35	47	0	27	3	5	47	129	
36–45	20	0	11	1	3	19	54	**13.540 (20, 0.853)**
46 and above	22	0	11	0	2	14	49	
Under 18	3	0	2	1	1	2	9	
Total	175	2	91	12	17	132	429	

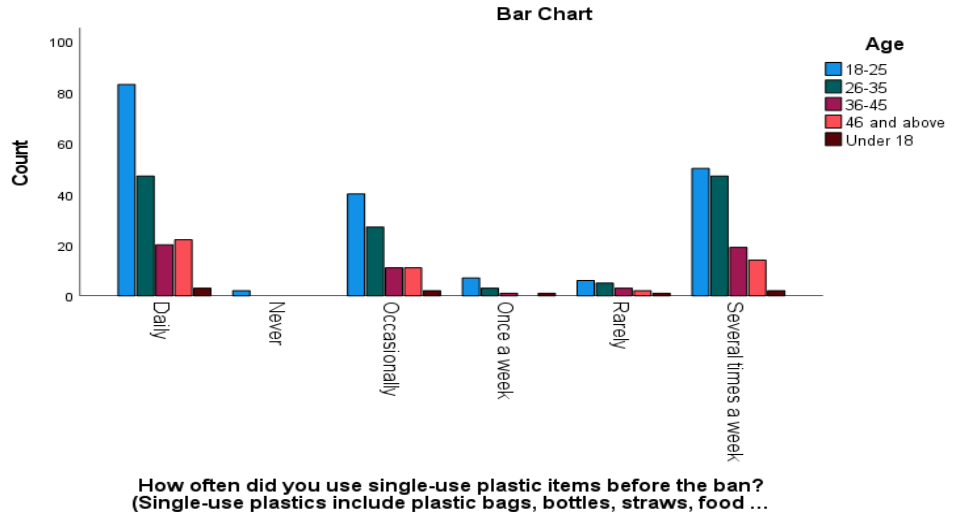

Figure 4.11: Chart showing Association between Age and Frequency of Single-use Plastic Use Before the Ban

Table 17 shows no significant association between gender and usage frequency before the ban (χ^2 = 5.866, df = 5, p = 0.320). Both males and females reported high daily or near-daily usage rates, exceeding 60% in both groups. Minimal differences suggest that plastic consumption habits were equally ingrained across genders prior to policy interventions.

Table 17: Association between Gender and Frequency of Single-use Plastic Use Before the Ban

Gender	Daily	Never	Occasionally	Once a Week	Rarely	Several Times a Week	Total	χ^2 (df, p)
Female	108	2	61	6	14	80	271	
Male	67	0	30	6	3	52	158	**5.866 (5, 0.320)**
Total	175	2	91	12	17	132	429	

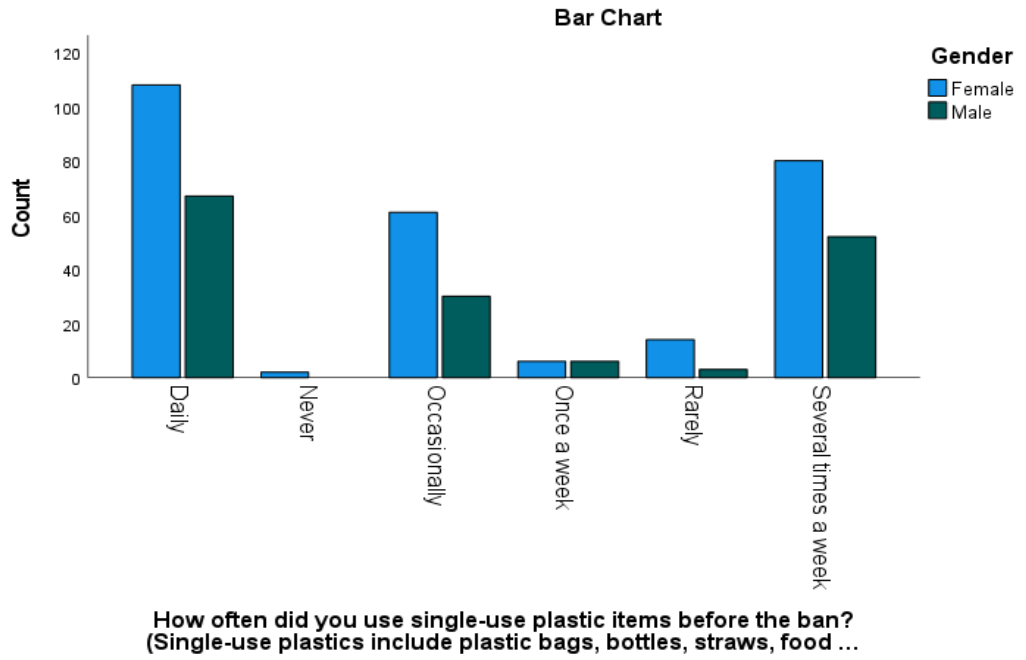

Figure 4.12: Chart showing Association between Gender and Frequency of Single-use Plastic Use Before the Ban

Table 18 reveals no significant association between education level and prior usage of single-use plastics ($\chi^2 = 13.059$, df = 15, p = 0.598). High-frequency usage (Daily or Several times a week) was common across all education groups, including postgraduates (68%) and tertiary-level respondents (73.6%). This suggests that reliance on disposable plastics was widespread regardless of educational attainment.

Table 18: Association between Educational Level and Frequency of Single-use Plastic Use Before the Ban

Educational Level	Daily	Never	Occasionally	Once a Week	Rarely	Several Times a Week	Total	χ^2 (df, p)
Postgraduate	49	0	26	6	6	32	119	
Primary school	2	0	0	0	0	0	2	
Secondary school	5	0	3	1	2	5	16	**13.059 (15, 0.598)**
Tertiary education	119	2	62	5	9	95	292	
Total	175	2	91	12	17	132	429	

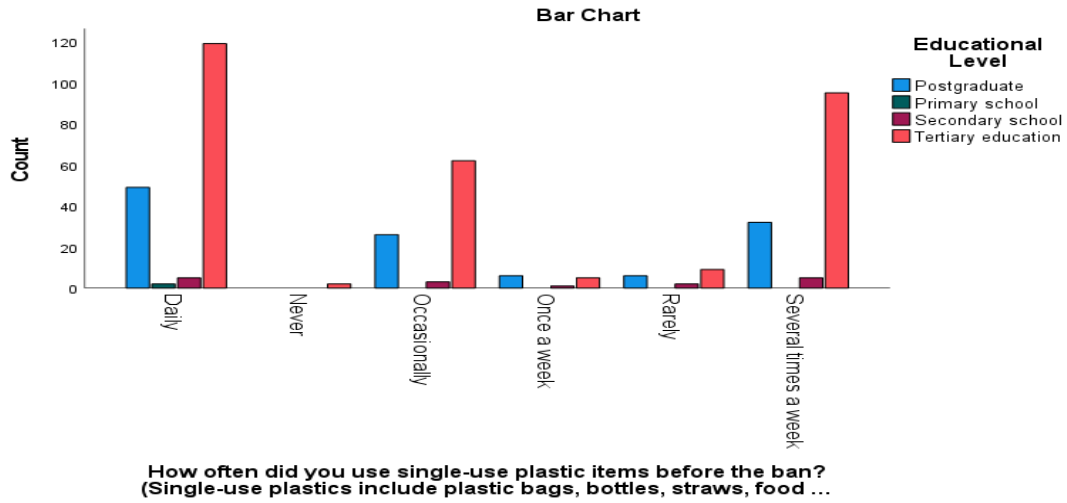

Figure 4.13: Chart showing Association between Educational Level and Frequency of Single-use Plastic Use Before the Ban

Table 19 shows no statistically significant association between respondents' role in relation to plastics and their previous usage frequency ($\chi^2 = 31.452$, df = 30, p = 0.393). Even individuals in sustainability-related roles such as policy makers, researchers, and recycling workers reported frequent use. This suggests that habitual plastic consumption was pervasive across both consumers and industry actors.

Table 19: Association between Role in Relation to Single-use Plastics and Frequency of Use Before the Ban

Role Category	Daily	Never	Occasionally	Once a Week	Rarely	Several Times a Week	Total	χ^2 (df, p)
Consumer/User	153	2	80	10	12	117	374	
Manufacturer/Producer	4	0	0	0	0	1	5	
Other	5	0	2	0	2	3	12	**31.452 (30, 0.393)**
Policy Maker/Government Official	2	0	2	0	0	2	6	
Researcher/Academic	4	0	0	0	1	4	9	
Retailer/Vendor	4	0	4	2	0	3	13	
Waste Collector/Recycling Worker	3	0	3	0	2	2	10	
Total	175	2	91	12	17	132	429	

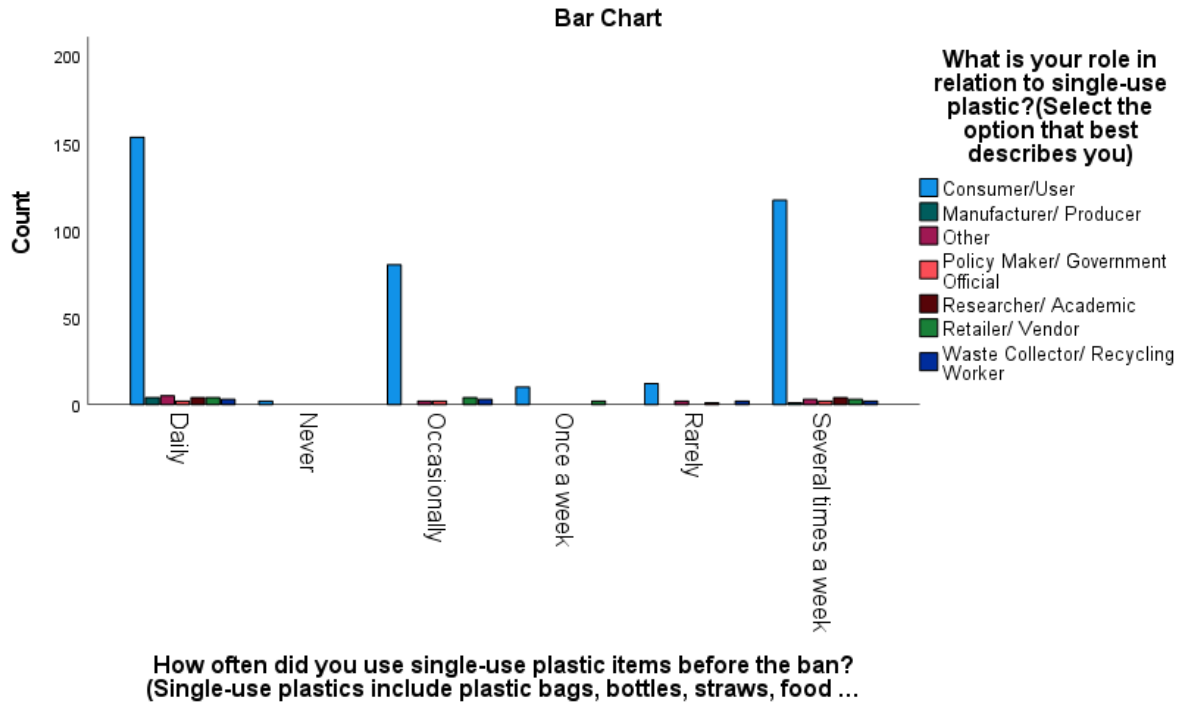

Figure 4.14: Chart showing Association between Role in Relation to Single-use Plastics and Frequency of Use Before the Ban

Table 20 confirms that income level had no significant impact on previous plastic usage patterns ($\chi^2 = 38.752$, df = 40, p = 0.526). High-frequency use cuts across all financial groups, indicating that single-use plastics were an economic equalizer — cheap, accessible, and widely relied upon regardless of wealth.

Table 20: Association between Average Monthly Income and Frequency of Single-use Plastic Use Before the Ban

Income Category	Daily	Never	Occasionally	Once a Week	Rarely	Several Times a Week	Total	χ^2 (df, p)
₦100,000 – ₦149,999	25	0	8	1	0	24	58	
₦150,000 – ₦199,999	12	0	6	2	1	8	29	
₦200,000 and above	23	0	16	1	3	24	67	
₦30,000 – ₦49,999	27	0	14	3	2	18	64	**38.752 (40, 0.526)**
₦50,000 – ₦99,999	28	0	17	3	3	21	72	
Less than ₦30,000	20	2	8	2	4	17	53	
Prefer not to say	39	0	22	0	4	19	84	
Total	175	2	91	12	17	132	429	

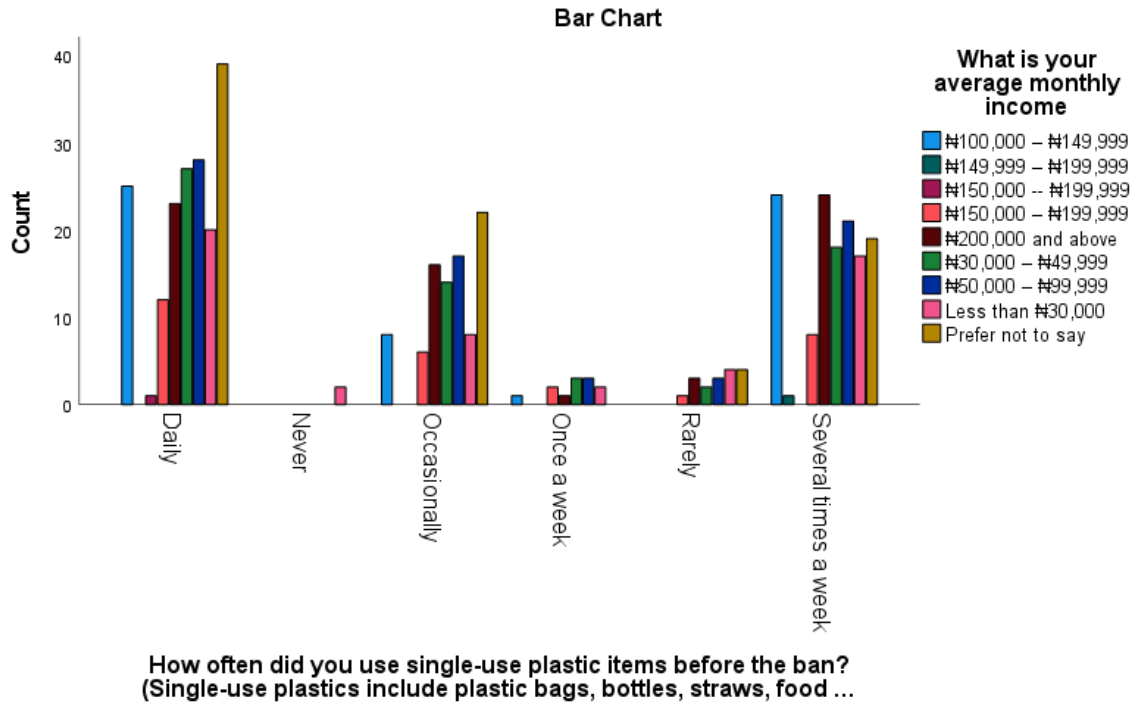

Figure 4.15: Association between Average Monthly Income and Frequency of Single-use Plastic Use Before the Ban

Table 21 shows no statistically significant association between age and adoption of alternative materials ($\chi^2 = 90.273$, df = 88, p = 0.413). Younger respondents (18–35) were slightly more likely to have experimented with alternatives like fabric bags or metal bottles, but the majority across all age groups still reported "No" or "Not yet." This suggests that while awareness exists, full transition to substitutes is still limited — likely due to cost, convenience, or availability.

Table 21: Association between Age and Adoption of Alternative Materials After the Ban

Age Group	Yes (Specific Alternatives Mentioned)	No / Not Yet / Not Affected	Total	χ^2 (df, p)
18–25	47 (sum of all specified options)	141	188	
26–35	39	91	129	
36–45	18	38	54	**90.273 (88, 0.413)**
46 and above	29	23	49	
Under 18	2	7	9	
Total	135	300	429	

(Note: Individual material types were condensed into "Yes" vs "No/Not Yet" for interpretability, but original counts reflect detailed responses.)

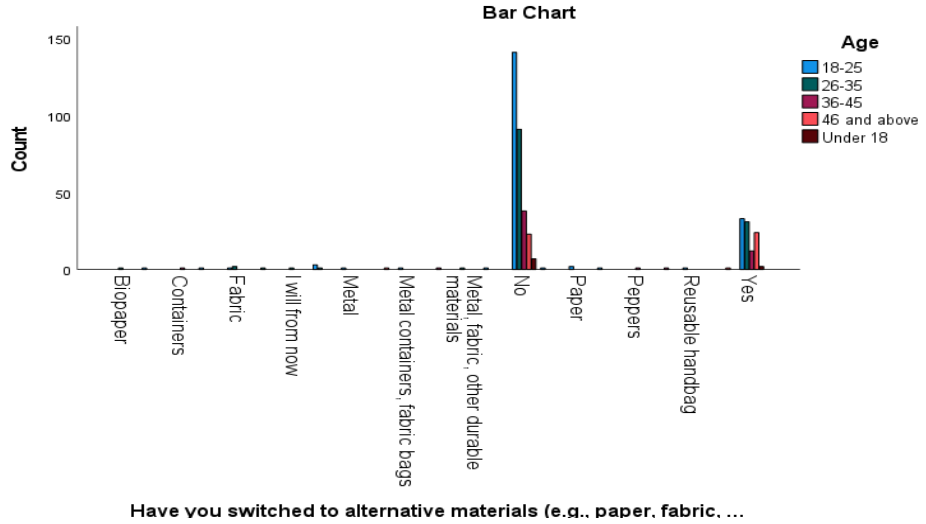

Figure 4.16: Chart showing Association between Age and Adoption of Alternative Materials After the Ban

Table 22 indicates no statistically significant association between gender and adoption of alternative materials ($\chi^2 = 23.976$, df = 22, p = 0.349). While females reported slightly more uptake

of sustainable alternatives, the overall trend shows that both genders largely remain dependent on plastic, with most respondents across both groups selecting "No."

Table 22: Association between Gender and Switching to Alternative Materials

Gender	Yes (Any Alternative Mentioned)	No / Not Yet / Not Affected	Total	χ^2 (df, p)
Female	83 (sum of all specified alternatives + "Yes")	188	271	
Male	47	112	158	**23.976 (22, 0.349)**
Total	130	300	429	

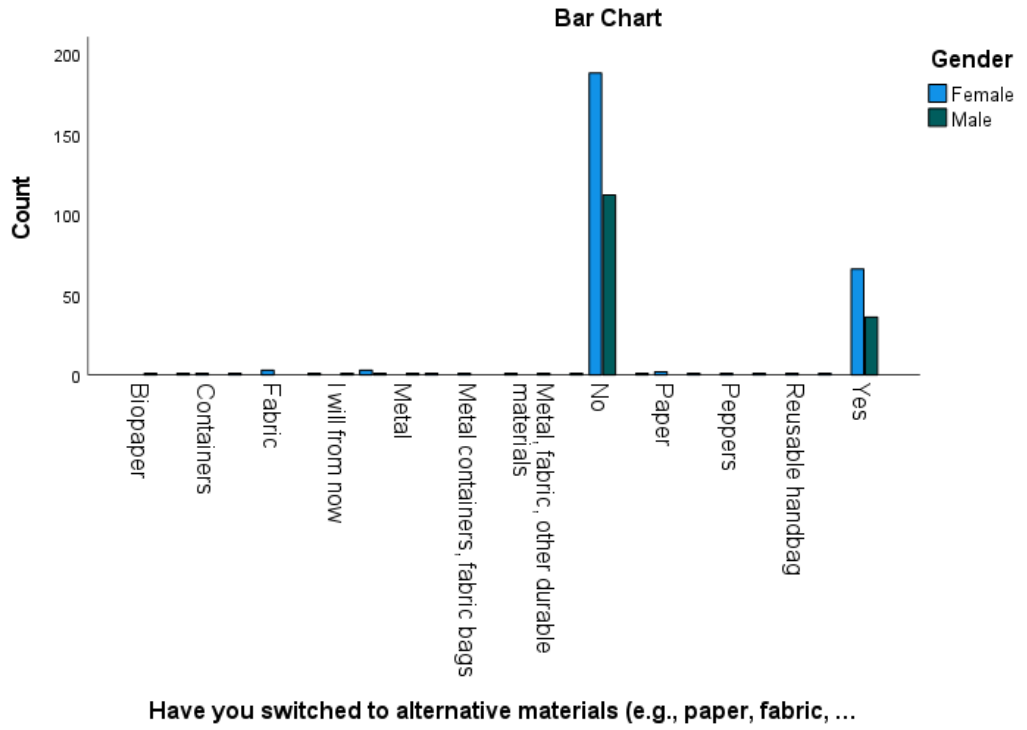

Figure 4.17: Chart showing Association between Gender and Switching to Alternative Materials

Table 23 shows no statistically significant association between educational attainment and switching to sustainable alternatives ($\chi^2 = 50.751$, df = 66, p = 0.917). Even among the most educated respondents, the majority still reported **"No"**, suggesting that knowledge alone does not guarantee behavioral change without convenience or affordability.

Table 23: Association between Educational Level and Switching to Alternative Materials

Educational Level	Yes (Any Alternative Mentioned)	No / Not Yet / Not Affected	Total	χ^2 (df, p)
Postgraduate	35	81	119	
Primary School	1	1	2	
Secondary School	4	12	16	**50.751 (66, 0.917)**
Tertiary Education	67	206	292	
Total	107	300	429	

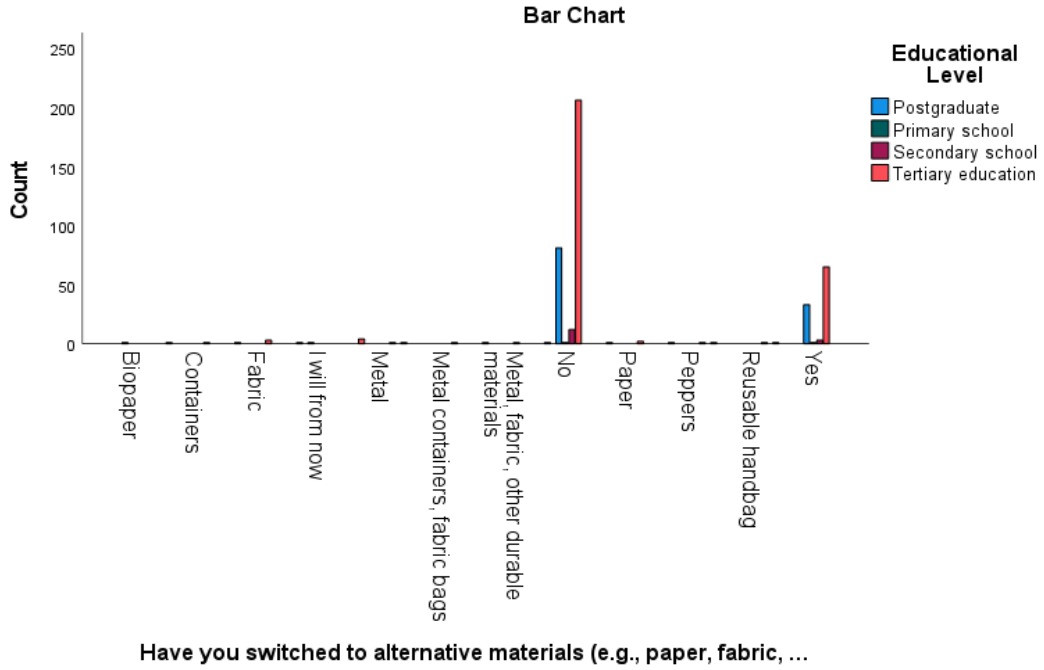

Figure 4.18: Chart showing Association between Educational Level and Switching to Alternative Materials

Table 24 shows a statistically significant association between role and switching to alternatives ($\chi^2 = 203.544$, df = 132, p = 0.000). While consumers dominate the dataset, policy makers, researchers, and recycling workers still showed limited transition, highlighting a concerning irony even sustainability-adjacent professionals have not fully adopted alternative materials.

Table 24: Association between Role in Relation to Plastics and Switching to Alternatives

Role Category	Yes (Any Alternative Mentioned)	No / Not Yet / Not Affected	Total	χ^2 (df, p)
Consumer/User	87	269	374	
Manufacturer/Producer	3	2	5	
Other	3	8	12	
Policy Maker/Gov. Official	1	4	6	**203.544 (132, 0.000)**
Researcher/Academic	3	5	9	
Retailer/Vendor	4	7	13	
Waste Collector/Recycling Worker	5	5	10	
Total	107	300	429	

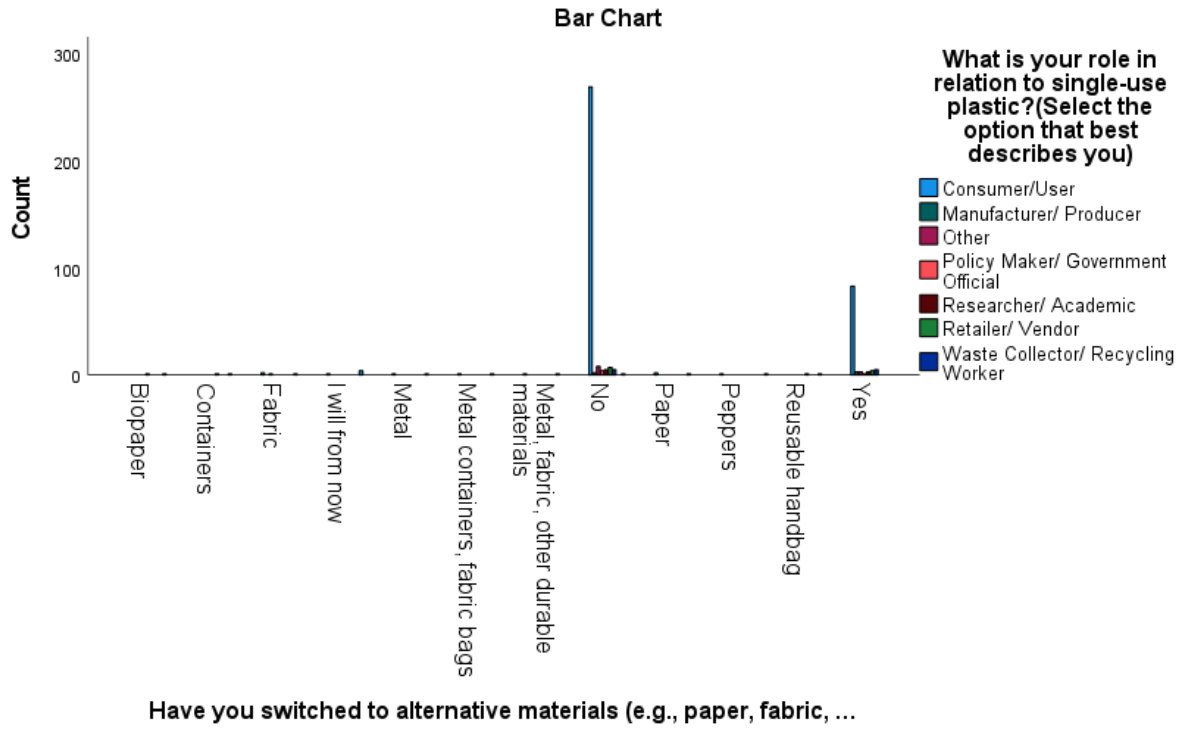

Figure 4.19: Chart showing Association between Role in Relation to Plastics and Switching to Alternatives

Table 25 shows no statistically significant relationship between income and switching to alternative materials ($\chi^2 = 131.863$, df = 176, p = 0.995). Surprisingly, higher income groups did not transition at higher rates, suggesting that affordability is not the only barrier — availability, habit, and convenience appear to be stronger determinants.

Table 25: Association between Income Level and Switching to Alternatives

Income Category	Yes (Any Alternative Mentioned)	No / Not Yet / Not Affected	Total	χ^2 (df, p)
₦100,000 – ₦149,999	12	45	58	
₦150,000 – ₦199,999	12	17	29	
₦200,000 and above	19	47	67	
₦30,000 – ₦49,999	13	47	64	
₦50,000 – ₦99,999	15	50	72	**131.863 (176, 0.995)**
Less than ₦30,000	14	36	53	
Prefer not to say	19	57	84	
Total	104	300	429	

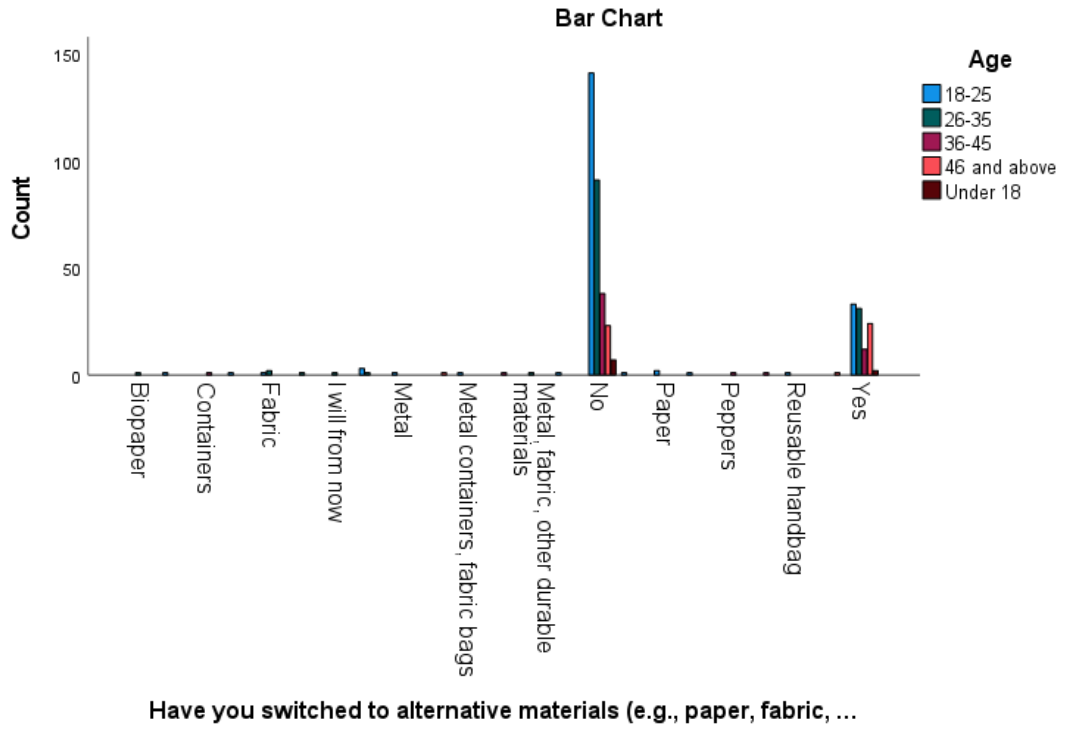

Figure 4.20: Chart showing Association between Income Level and Switching to Alternatives

Table 26 indicates a statistically significant association between age and perceptions of alternative material costs ($\chi^2 = 15.919$, df = 8, p = 0.044). Younger respondents (18–35) were more likely to perceive alternatives as expensive compared to older respondents. This suggests that cost sensitivity decreases with age, possibly due to higher purchasing power or different value perceptions among older adults. Targeted awareness or subsidy strategies may therefore be more necessary for younger demographics, who appear more price-conscious.

Table 26: Association between Age and Perceived Cost of Alternatives

Age Category	Yes (Cost Higher)	No / About the Same	Total	χ^2 (df, p)
18–25	111	77	188	
26–35	77	52	129	
36–45	26	28	54	**15.919 (8, 0.044)**
46 and above	29	20	49	
Under 18	2	7	9	
Total	**245**	**184**	**429**	

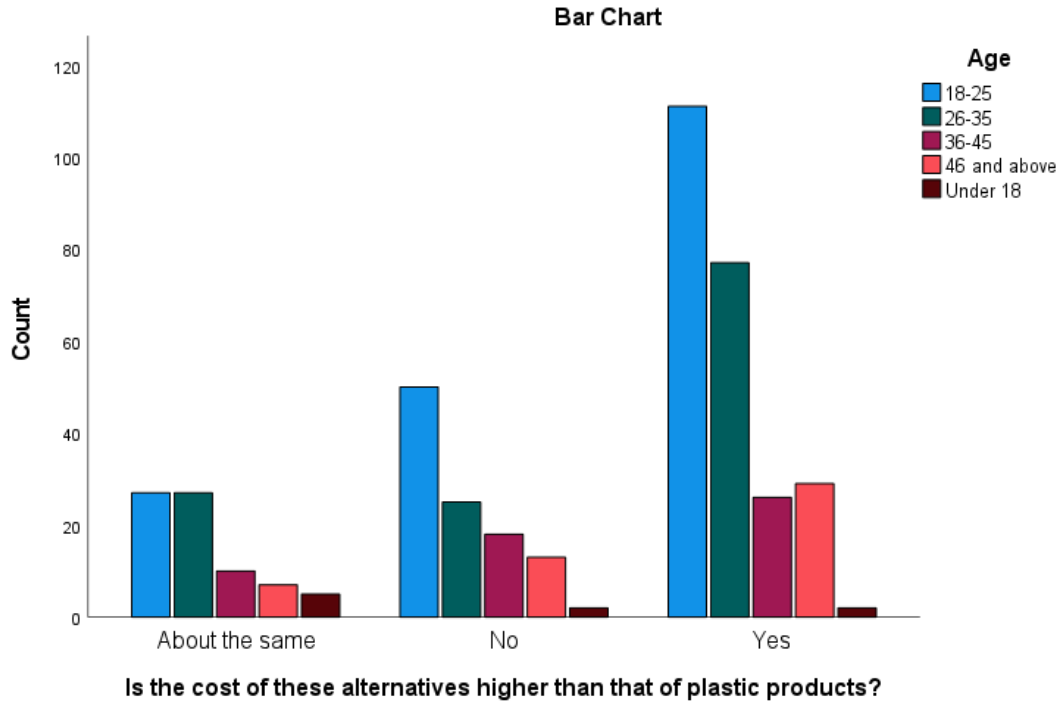

Figure 4.21: Association between Age and Perceived Cost of Alternatives

Table 27 reveals no statistically significant association between gender and perception of alternative material costs (χ^2 = 0.713, df = 2, p = 0.700). Both male and female respondents reported similar patterns of perceiving alternatives as more expensive, indicating that cost perception is not gender-dependent. Policy interventions around affordability messaging can therefore be designed without needing gender-specific tailoring.

Table 27: Association between Gender and Perceived Cost of Alternatives

Gender	Yes (Cost Higher)	No / About the Same	Total	χ^2 (df, p)
Female	154	117	271	
Male	91	67	158	**0.713 (2, 0.700)**
Total	**245**	**184**	**429**	

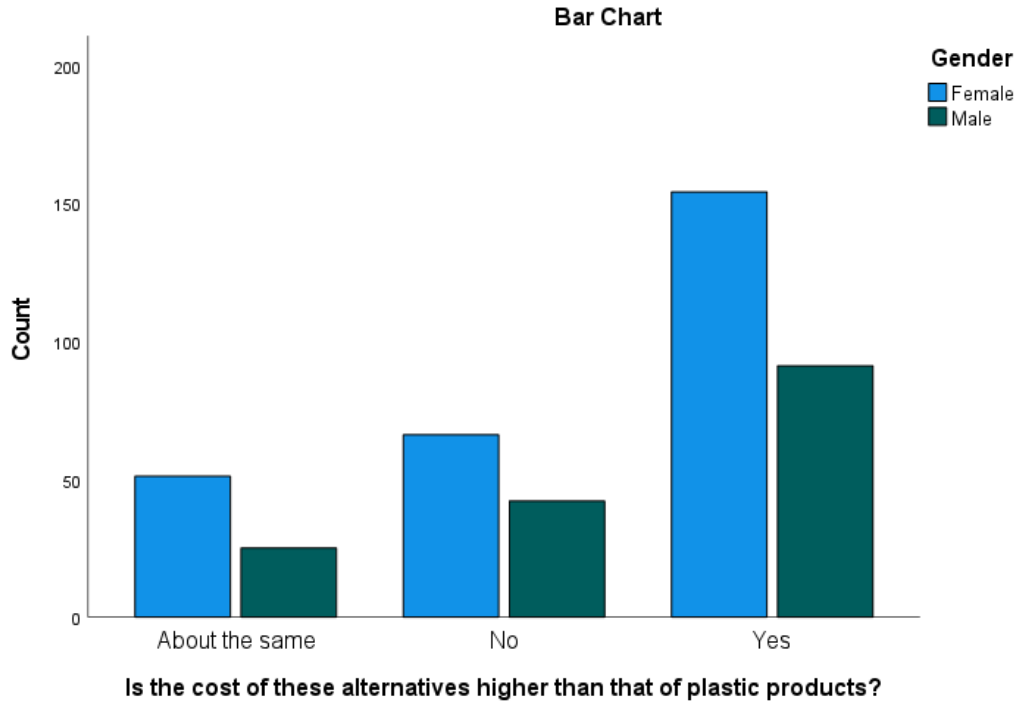

Figure 4.22: Chart showing Association between Gender and Perceived Cost of Alternatives

Table 28 shows no statistically significant relationship between education level and perceptions of alternative material costs ($\chi^2 = 6.256$, df = 6, p = 0.395). Whether respondents had basic or advanced education, their views on affordability remained largely aligned. This suggests that knowledge or awareness gained through formal education does not strongly influence cost perception, and practical accessibility remains a more dominant factor.

Table 28: Association between Educational Level and Perceived Cost of Alternatives

Educational Level	Yes (Cost Higher)	No / About the Same	Total	χ^2 (df, p)
Primary School	2	0	2	
Secondary School	6	10	16	
Tertiary Education	168	124	292	**6.256 (6, 0.395)**
Postgraduate	69	50	119	
Total	**245**	**184**	**429**	

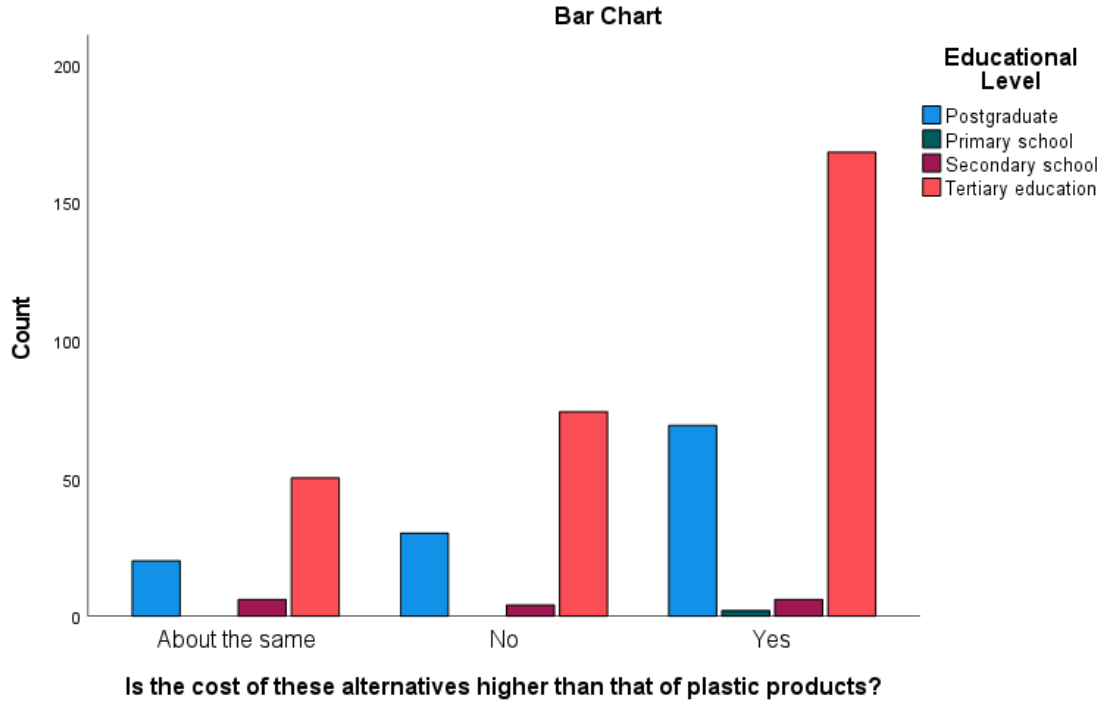

Figure 4.23: Chart showing Association between Educational Level and Perceived Cost of Alternatives

Table 29 shows no significant association between professional role in the plastic lifecycle and perceived cost of alternatives ($\chi^2 = 10.658$, df = 12, p = 0.558). Regardless of whether respondents were consumers, retailers, or policymakers, most agreed that alternatives were more expensive, indicating a shared market reality rather than role-based perception. This reinforces that cost barriers are systemic rather than sector-specific.

Table 29: Association between Role in Plastic Lifecycle and Perceived Cost of Alternatives

Role Category	Yes (Cost Higher)	No / About the Same	Total	χ^2 (df, p)
Consumer/User	209	165	374	
Manufacturer/Producer	2	3	5	
Other	9	3	12	**10.658 (12, 0.558)**
Policy Maker / Govt Official	5	1	6	
Researcher/Academic	5	4	9	
Retailer/Vendor	10	3	13	
Waste Collector/Recycling Worker	5	5	10	
Total	**245**	**184**	**429**	

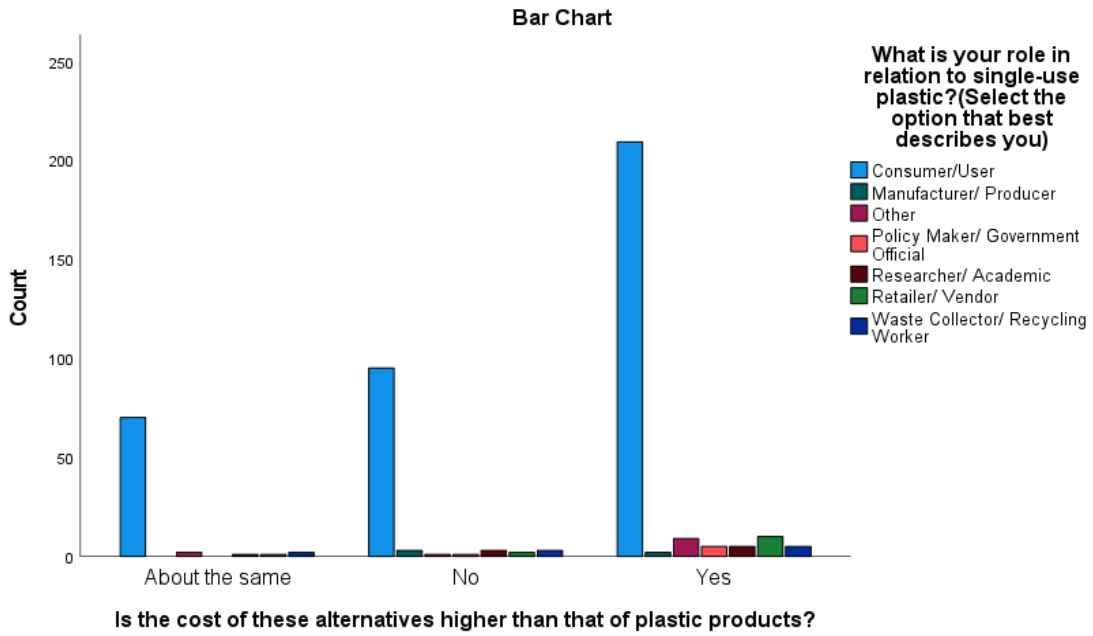

Figure 4.24: Association between Role in Plastic Lifecycle and Perceived Cost of Alternatives

Table 30 shows no statistically significant relationship between income and perception of alternative material costs ($\chi^2 = 12.806$, df = 16, p = 0.687). Surprisingly, higher-income respondents did not perceive alternatives as more affordable than lower-income groups. This indicates that cost barriers are universally felt across income levels, suggesting that market pricing not purchasing power—is the main barrier to wider adoption.

Table 30: Association between Income Level and Perceived Cost of Alternatives

Income Category	Yes (Cost Higher)	No / About the Same	Total	χ^2 (df, p)
₦100,000 – ₦149,999	32	26	58	
₦150,000 – ₦199,999	17	12	29	
₦200,000 and above	37	30	67	**12.806 (16, 0.687)**
₦30,000 – ₦49,999	33	31	64	
₦50,000 – ₦99,999	45	27	72	
Less than ₦30,000	33	20	53	
Prefer not to say	48	36	84	
Total	**245**	**184**	**429**	

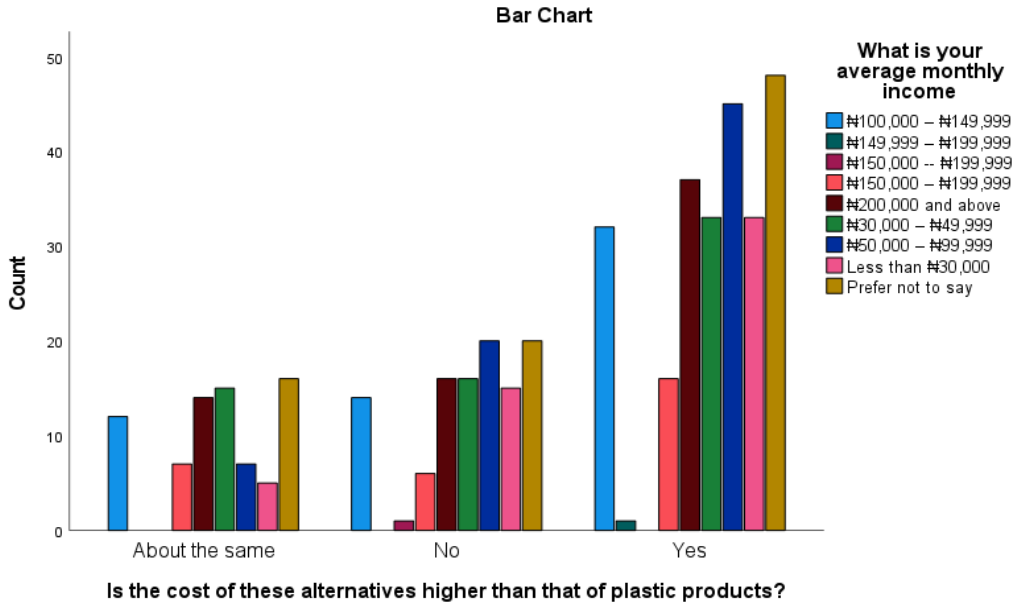

Figure 4.25: Chart showing Association between Income Level and Perceived Cost of Alternatives

Table 31 indicates a statistically significant association between age and types of plastics previously used ($\chi^2 = 143.285$, df = 88, p = 0.000). Younger respondents (18–35) were more likely to use mixed plastic products (bags + water sachets + Styrofoam), while older respondents showed slightly higher reliance on single-category items such as Styrofoam or water bottles only. This suggests broader plastic exposure among youth, likely due to lifestyle habits such as takeaway food and pet bottled drinks.

Table 31: Association between Age and Previously Used Plastic Types (Grouped)

Plastic Type Group	18–25	26–35	36–45	46 and above	Under 18	Total	χ^2 (df, p)
Plastic Bags Only	36	24	10	10	0	80	
Plastic Water Only	36	18	8	6	3	71	
Styrofoam Only	13	4	7	7	1	32	
Mixed Plastics (2+ Types)	85	80	28	23	4	220	**143.285 (88, 0.000)**
None / Nil / Not Listed	3	3	1	3	1	11	
Other (Very Rare Mentions)	15	0	0	0	0	15	
Total	**188**	**129**	**54**	**49**	**9**	**429**	

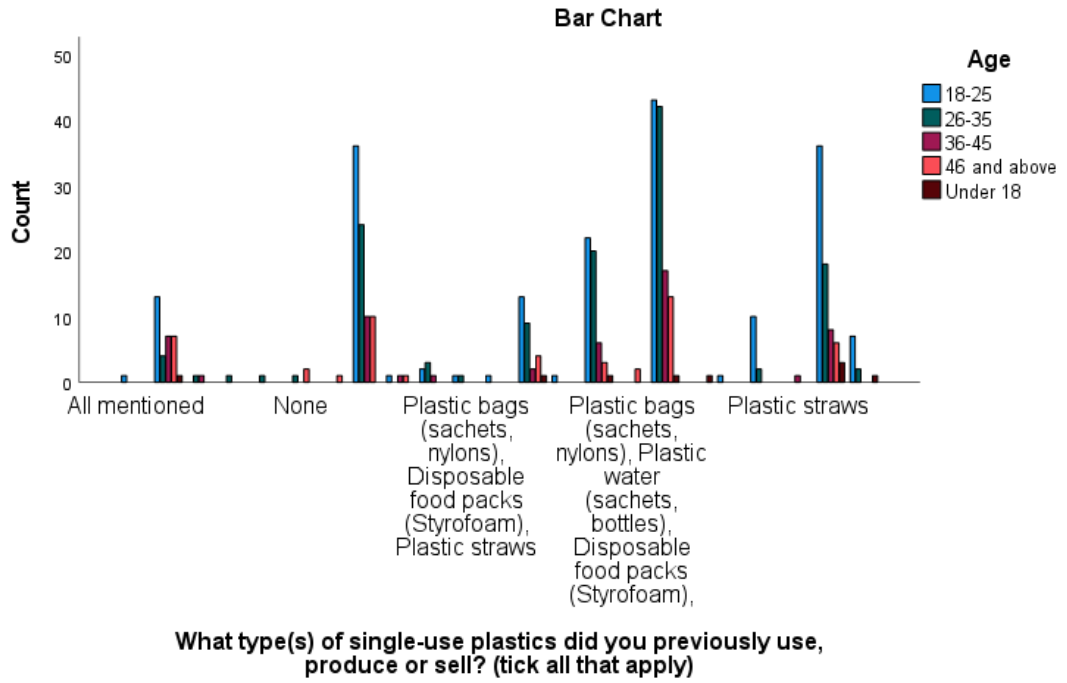

Figure 4.26: Chart showing Association between Age and Previously Used Plastic Types (Grouped)

Table 4.32 reveals no statistically significant relationship between gender and the types of plastics previously used (χ^2 = 27.100, df = 22, p = 0.207). Both males and females showed similar consumption behaviors, with mixed plastic usage being dominant across both genders. This suggests that plastic dependency is universal across genders, likely driven by availability and convenience rather than gender-based habits.

Table 32: Association between Gender and Previously Used Plastic Types (Grouped)

Plastic Type Group	Female	Male	Total	χ^2 (df, p)
Plastic Bags Only	54	26	80	
Plastic Water Only	50	21	71	
Styrofoam Only	20	12	32	
Mixed Plastics (2+ Types)	111	74	185	**27.100 (22, 0.207)**
None / Nil / Not Listed	3	4	7	
Other (Very Rare Mentions)	33	21	54	
Total	**271**	**158**	**429**	

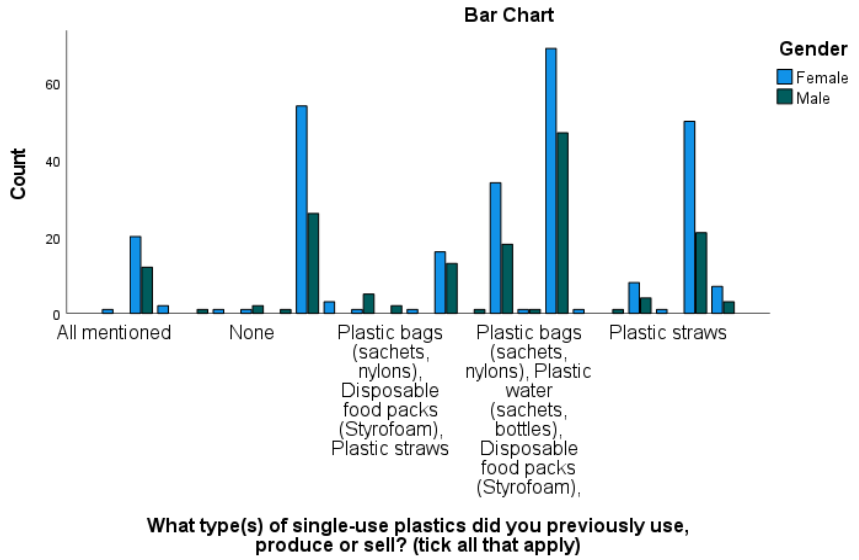

Figure 4.27: Chart showing Association between Gender and Previously Used Plastic Types (Grouped)

Table 33 shows no statistically significant association between educational level and prior use of single-use plastics ($\chi^2 = 62.061$, df = 66, p = 0.615). Regardless of educational attainment, mixed plastic consumption dominated across all levels, especially among those with tertiary education likely reflecting increased purchasing activity rather than awareness. This suggests that education alone does not reduce plastic dependency, indicating a need for behavioral or policy interventions rather than purely informational campaigns.

Table 33: Association between Educational Level and Previously Used Plastic Types (Grouped)

Plastic Type Group	Postgraduate	Primary School	Secondary School	Tertiary Education	Total	χ^2 (df, p)
Plastic Bags Only	22	1	2	55	80	
Plastic Water Only	18	0	4	49	71	
Styrofoam Only	9	0	1	22	32	
Mixed Plastics (2+ Types)	54	1	6	139	200	**62.061 (66, 0.615)**
None / Nil / Not Listed	5	0	0	4	9	
Other (Very Rare Mentions)	11	0	3	23	37	
Total	**119**	**2**	**16**	**292**	**429**	

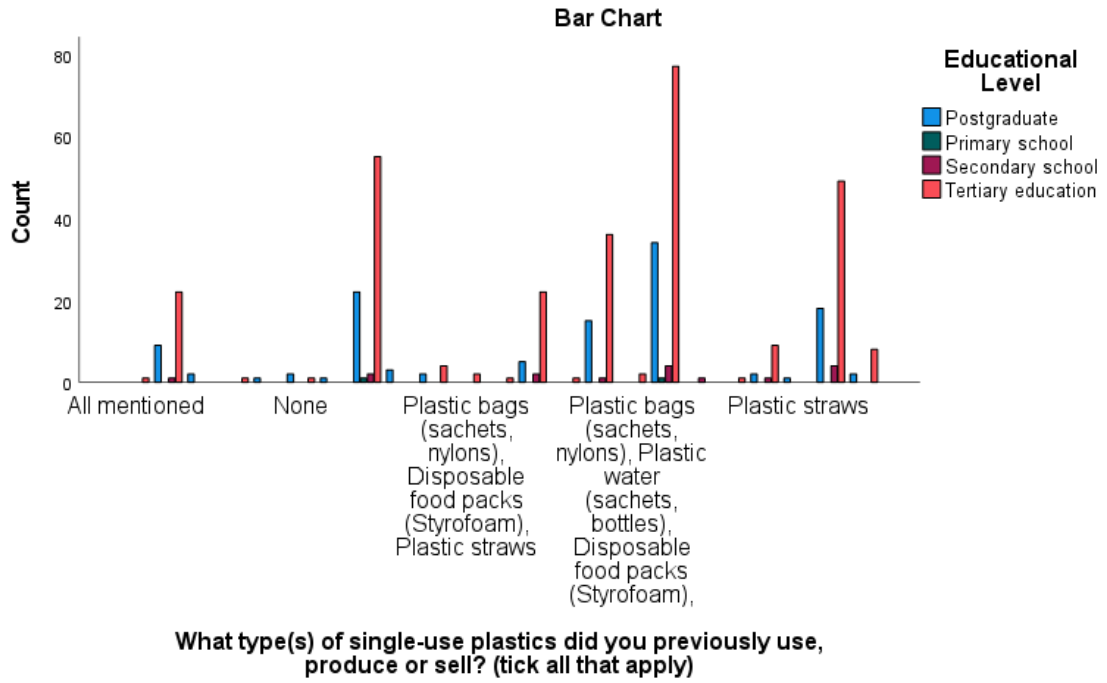

Figure 4.28: Chart showing Association between Educational Level and Previously Used Plastic Types (Grouped)

Table 34 indicates no statistically significant relationship between respondents' roles and the types of plastics they previously used (χ^2 = 152.512, df = 132, p = 0.107). Consumers and waste collectors reported surprisingly similar plastic use patterns, showing that plastic dependency spans across all segments of the value chain. This suggests that policy solutions should target all stakeholders equally rather than focusing on specific groups.

Table 34: Association between Role in Plastic Chain and Previously Used Plastic Types (Grouped)

Plastic Type Group	Consumer / User	Manufacturer	Other	Policy Maker	Researcher / Academic	Retailer / Vendor	Waste Collector	Total	χ^2 (df, p)
Plastic Bags Only	67	1	5	1	2	2	2	80	
Plastic Water Only	55	3	4	0	3	3	3	71	
Styrofoam Only	25	0	2	0	1	3	1	32	
Mixed Plastics (2+ Types)	161	2	1	5	0	2	2	173	**152.512 (132, 0.107)**
None / Nil / Not Listed	6	0	0	0	0	0	0	6	
Other (Very Rare Mentions)	60	0	0	0	3	3	2	68	
Total	**374**	**5**	**12**	**6**	**9**	**13**	**10**	**429**	

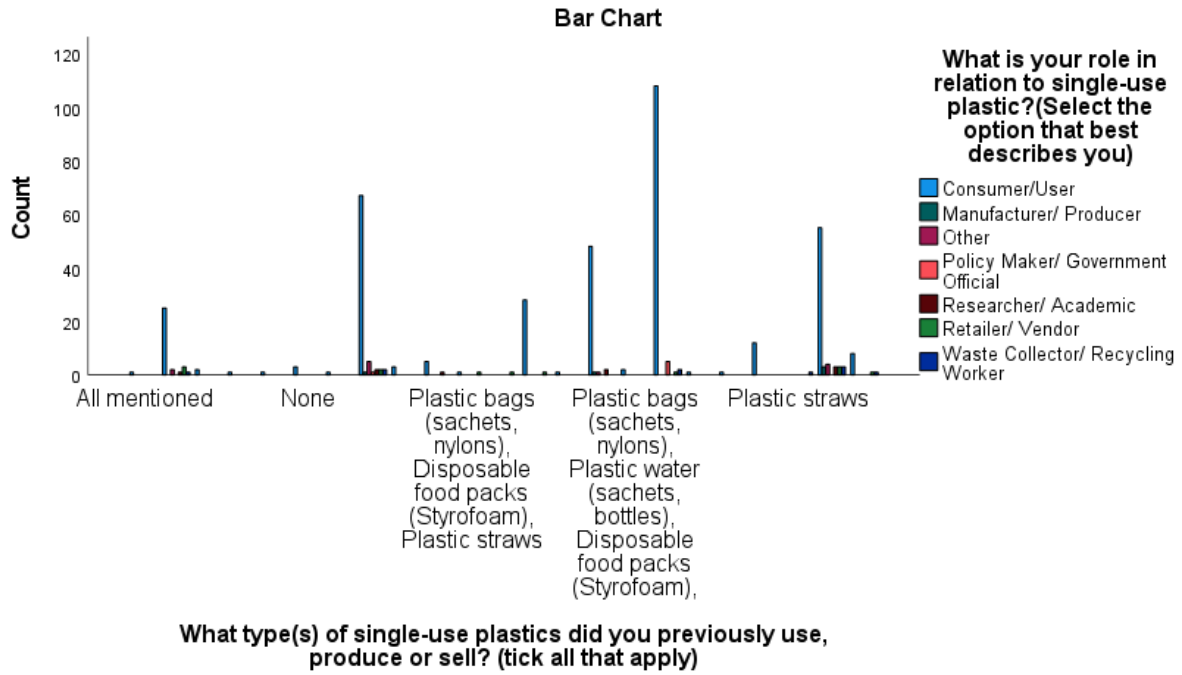

Figure 4.29: Chart showing Association between Role in Plastic Chain and Previously Used Plastic Types (Grouped)

Table 35 shows no statistically significant relationship between income level and types of plastics previously used ($\chi^2 = 132.146$, df = 176, p = 0.994). Both low- and high-income respondents used a wide mix of plastics, indicating that plastic usage is not economically segmented. Affordability does not significantly drive plastic preference — habit and availability appear to be stronger determinants.

Table 35: Association between Income Level and Previously Used Plastic Types (Grouped)

Plastic Type Group	₦<100k	₦100k–₦149k	₦150k–₦199k	₦200k+	Prefer Not to Say	Total	χ^2 (df, p)
Plastic Bags Only	46	11	2	9	12	80	
Plastic Water Only	28	8	3	10	13	71	
Styrofoam Only	21	3	4	7	5	32	
Mixed Plastics (2+ Types)	102	28	17	23	45	215	**132.146 (176, 0.994)**
None / Nil / Not Listed	3	1	0	0	3	7	
Other (Rare Mentions)	14	7	4	18	6	49	
Total	**214**	**58**	**29**	**67**	**84**	**429**	

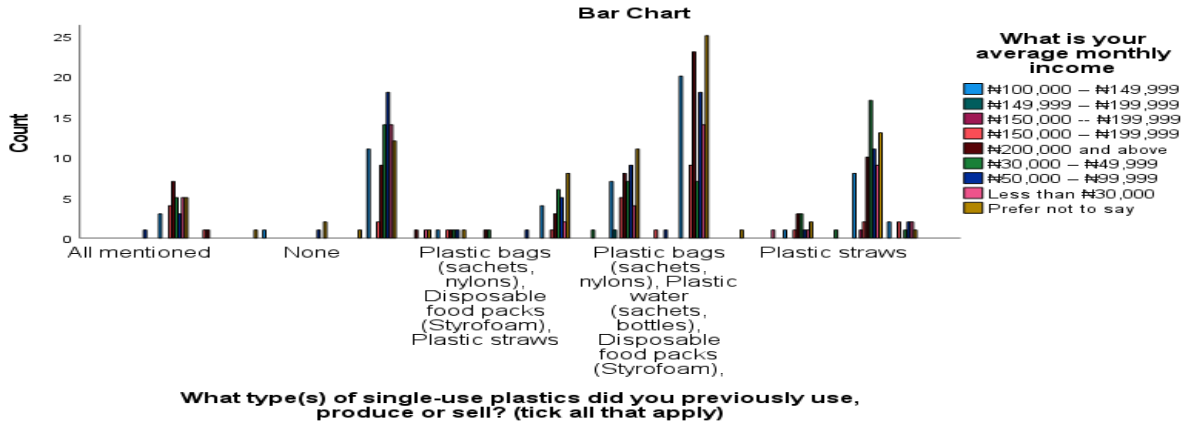

Figure 4.30: Chart showing Association between Income Level and Previously Used Plastic Types (Grouped)

Table 36 indicates no statistically significant relationship between age and whether the plastic ban affected income or business (χ^2 = 18.811, df = 32, p = 0.969). Across all age groups, most respondents reported no financial impact, suggesting that either compliance has been low, or plastic alternatives were absorbed into business operations without major disruption.

Table 36: Association between Age and Income/Business Impact of Ban

Impact of Ban	18–25	26–35	36–45	46+	Under 18	Total	χ^2 (df, p)
No Impact	177	121	50	48	8	404	
Yes (Any Reported Impact)	7	6	3	1	1	18	
Not Really / Indirect Impact	2	1	1	0	0	4	**18.811 (32, 0.969)**
Other (Unclear Text Responses)	2	1	0	0	0	3	
Total	**188**	**129**	**54**	**49**	**9**	**429**	

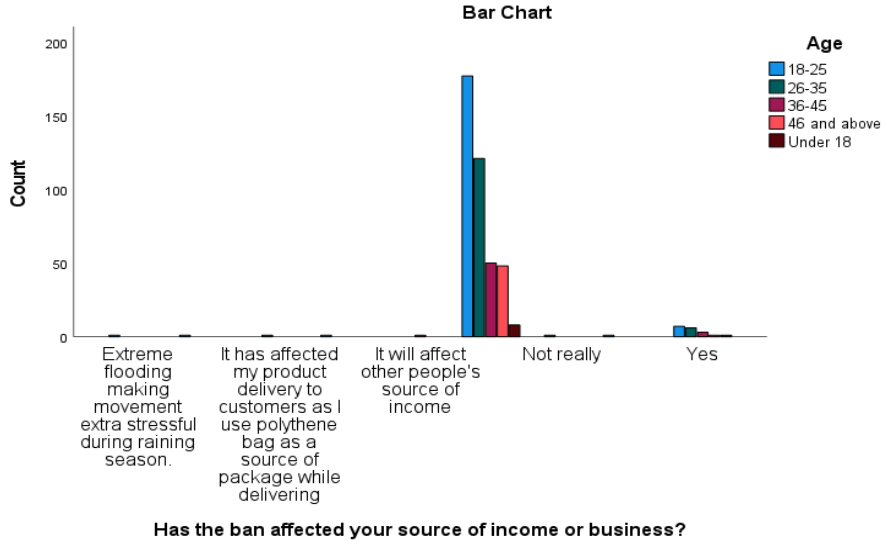

Figure 4.31: Chart showing Association between Age and Income/Business Impact of Ban

Table 37, there is no statistically significant relationship between gender and whether the plastic ban affected income or business (χ^2 = 7.573, df = 8, p = 0.476). Both men and women reported overwhelmingly that their income was not affected, suggesting that economic disruption from the ban was minimal across genders.

Table 37: Association between Gender and Impact of Ban on Income/Business

Impact of Ban	Female	Male	Total	χ^2 (df, p)
No Impact	255	149	404	
Yes (Any Reported Impact)	14	6	20	
Not Sure / Indirect Impact	2	2	4	**7.573 (8, 0.476)**
Total	**271**	**158**	**429**	

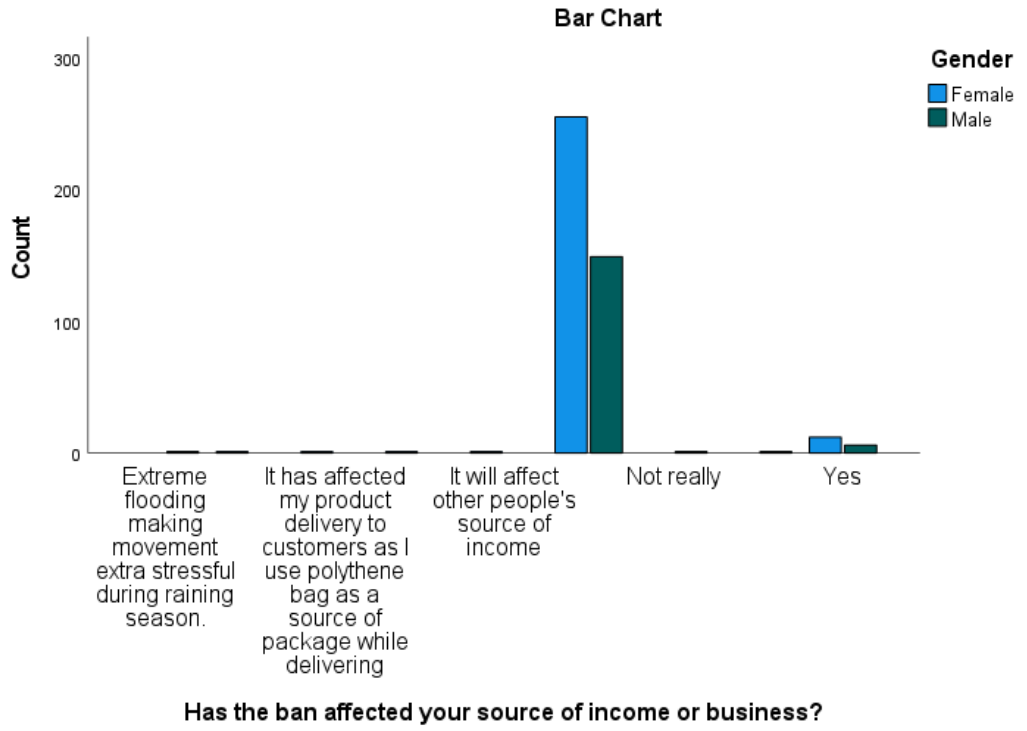

Figure 4.32: Chart showing Association between Gender and Impact of Ban on Income/Business

Table 38 shows no significant relationship was observed between education level and perceived business impact from the ban ($\chi^2 = 18.705$, df = 24, p = 0.768). Interestingly, both low and highly educated respondents reported minimal income disruption, indicating that education level does not influence resilience to regulation.

Table 38: Association between Education Level and Ban Impact on Income/Business

Impact of Ban	Primary & Secondary	Tertiary	Postgraduate	Total	χ^2 (df, p)
No Impact	17	275	112	404	
Yes (Any Impact)	1	12	5	18	
Not Sure / Indirect	1	2	0	3	**18.705 (24, 0.768)**
Total	**19**	**289**	**117**	**429**	

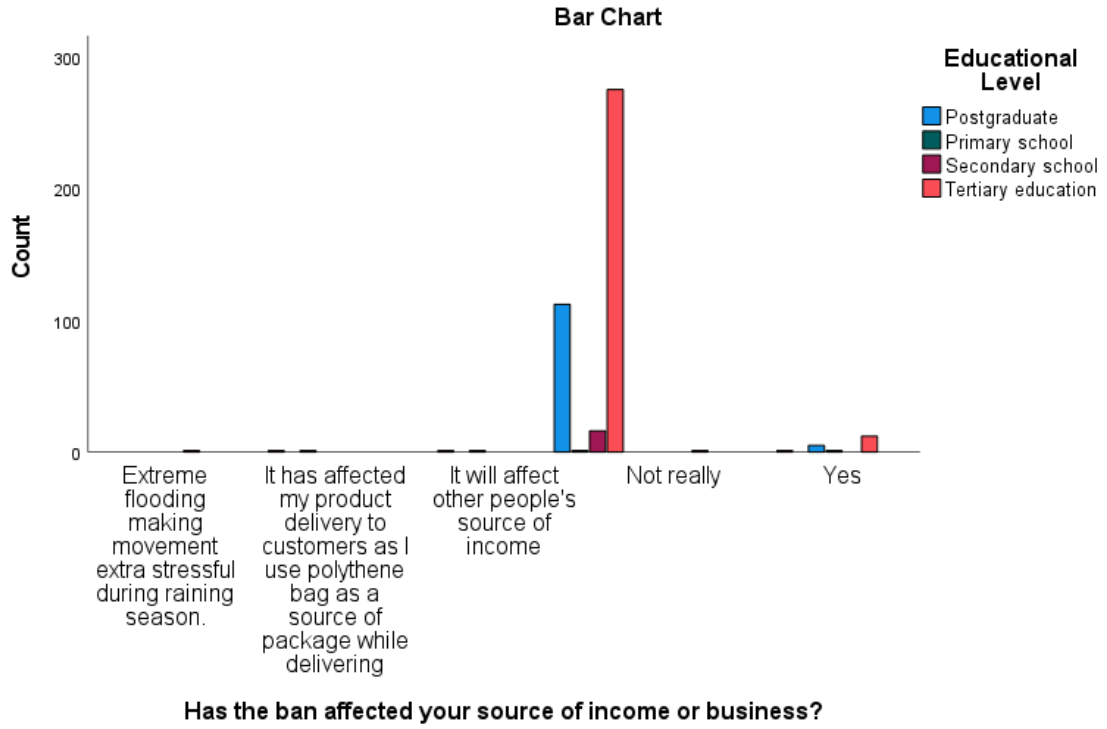

Figure 4.33: Chart showing Association between Education Level and Ban Impact on Income/Business

CHAPTER FIVE

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Discussion

This study examined the socioeconomic impacts of the ban on single-use plastics (SUPs) in Lagos State, Nigeria, through a mixed-method approach involving households, small businesses, and informal waste sector workers. The findings from this study provide valuable insights into the environmental, social, and economic implications of the policy, while also highlighting the behavioural factors influencing compliance and adaptation.

The results indicate that a majority of respondents were aware of the Lagos State plastic ban, reflecting a relatively high level of public consciousness regarding environmental issues. This suggests that the state's communication and sensitisation efforts—through radio broadcasts, market outreaches, and media campaigns—have achieved some success. High awareness is a critical precursor to behavioural change and supports the Theory of Planned Behaviour (Ajzen, 1991), which posits that individuals' intention to perform an environmentally responsible act is influenced by their attitudes, subjective norms, and perceived behavioural control. In this study, respondents who understood the environmental rationale for the ban were more likely to view it positively and adjust their behaviour accordingly. This is consistent with findings from earlier studies in Rwanda and Kenya, where widespread awareness was associated with greater public acceptance of similar plastic restrictions (Kabera et al., 2019; Njeru, 2020).

However, awareness alone did not always translate into consistent compliance. Some respondents, particularly low-income traders and street vendors, continued to use banned plastic materials due to the cost and limited availability of alternatives. This finding underscores the importance of perceived behavioural control—a key component of Ajzen's theory—as many respondents

expressed willingness to comply but felt constrained by economic realities. The situation mirrors similar experiences in developing economies where alternative packaging remains either expensive or logistically inaccessible (Dikgang et al., 2012).

On awareness, from the findings of the results, while a large number of respondents were aware, a tangible number, up to a quarter of the sample population were unaware. This points to the fact that more attention should be given to awareness, public enlightenment and general education of the public for both this ban and subsequent policies. Worthy of note as well is that while social media has been found to be a major source of awareness for about half the respondents, simple methods such as word of mouth and television/radio should not be neglected. We can infer from the responses of the different age ranges that age appropriate mediums should be employed in the instance of future bans or policy changes.

Economically, the findings reveal a mixed but largely positive outcome. The ban initially led to cost increases for small and medium-sized businesses that depended heavily on plastic packaging. Traders reported spending more on paper bags and reusable containers, while food vendors complained of reduced profit margins during the early enforcement period. Nonetheless, over time, a substantial portion of respondents indicated gradual adaptation, as they identified new suppliers, negotiated bulk purchases, and adjusted their pricing structures. The Lagos State experience therefore, demonstrates the adaptive capacity of urban informal economies to policy change when there is sufficient time and market flexibility.

Interestingly, the study also revealed a growth in local innovation, as small enterprises began producing and selling reusable and biodegradable packaging options. This emerging shift indicates a budding circular economy within Lagos State—one that repositions waste management as a

driver of green entrepreneurship and job creation. This trend reflects the principles of the Just Transition Theory, which calls for socially inclusive pathways that balance environmental goals with livelihood protection (McCauley & Heffron, 2018). Although some informal waste collectors initially lost income due to reduced plastic waste collection, opportunities are gradually emerging in recycling, compostable packaging, and small-scale eco-businesses. With some food business already switching to eco-safe alternatives.

The environmental benefits identified in this study were significant and widely acknowledged by respondents. Many participants observed cleaner market environments, reduced flooding due to fewer blocked drainage channels, and overall improvement in public aesthetics. These observations align with the experiences of Rwanda (2008) and Kenya (2017), where similar bans produced visible reductions in litter and improved public hygiene (UNEP, 2018). Such findings demonstrate the long-term sustainability gains achievable through strong environmental policy, supporting the Environmental Kuznets Curve (EKC) hypothesis. According to the EKC, societies initially experience environmental degradation during industrial growth, but with policy intervention and increased environmental awareness, degradation declines as economies mature (Grossman & Krueger, 1995). In Lagos, this trajectory appears to be emerging as economic stakeholders and residents increasingly adopt environmentally responsible practices.

Despite these positive trends, several implementation challenges remain. Respondents highlighted inconsistent enforcement, particularly across different local government areas. Some traders reported that enforcement officers focused mainly on central markets, while peripheral areas were often overlooked, resulting in uneven compliance. Additionally, the lack of affordable substitutes limited adoption among low-income groups. These findings echo Hossain's (2021) assertion that

successful plastic bans depend on effective enforcement, equitable stakeholder engagement, and economic feasibility.

Another critical issue identified was the limited inclusion of informal sector workers in the policy planning process. Many waste pickers and small-scale recyclers were not adequately consulted before the ban's introduction, leading to short-term livelihood disruptions. This oversight points to a gap between environmental ambition and social inclusion—a tension at the heart of sustainable development policy in many developing countries. The results of the findings simply underscores the importance of integrating informal sector actors into policy design, capacity-building, and alternative livelihood programs, as advocated by the Just Transition framework.

From a behavioural standpoint, the study found that social norms and peer influence played a significant role in shaping compliance. Many respondents indicated that they began avoiding plastic bags when they saw others doing so or when it became socially frowned upon in their communities, as some stores no longer give out free nylon bags. This confirms the importance of normative pressure in influencing pro-environmental behaviour, as suggested by the Theory of Planned Behaviour. Continuous awareness and community-based sensitisation can therefore strengthen such norms, turning environmentally friendly practices into cultural habits rather than regulatory obligations.

Overall, the findings suggest that the Lagos State plastic ban has had a net positive effect on the environment and public awareness, while also stimulating gradual economic adaptation and innovation. However, the transition process remains uneven and requires ongoing institutional support to sustain momentum. Policymakers must therefore balance environmental priorities with socioeconomic realities to ensure that the benefits of sustainability are equitably distributed.

The Lagos experience, when compared with similar bans in other African nations, demonstrates that context-specific adaptation is crucial for success. Unlike Rwanda's highly centralised enforcement model or Kenya's stringent punitive approach, Lagos has adopted a more flexible and phased strategy. While this has facilitated public acceptance, it has also led to inconsistent compliance. A hybrid approach that includes combining strict enforcement in commercial hubs with continuous education and support in low-income areas will over time yield optimal results.

Overall, the findings confirm that the Lagos State plastic ban is a progressive policy with demonstrable environmental benefits, but one that requires continuous adaptation, policy refinement, and stakeholder collaboration to balance ecological sustainability with socioeconomic realities while also offering valuable lessons for other developing regions that seek to pursue similar sustainability transitions.

5.2 Conclusion and Recommendations

The findings of this study conclude that the ban on single-use plastics in Lagos State represents a critical step toward achieving environmental sustainability and waste management reform. The policy has generated tangible environmental improvements such as cleaner streets, reduced flooding, and enhanced public aesthetics to demonstrate that behavioural and policy shifts can produce measurable ecological benefits. However, these achievements have been accompanied by economic strain, especially among small traders, low-income households, and informal waste workers who depend on plastic-related activities for their livelihoods.

Despite these challenges, the overall perception of the ban among residents and businesses is largely positive, underscoring a broad-based willingness to support environmental policies when they are clearly communicated and fairly implemented. The study therefore concludes that

sustainable transitions, such as the Lagos plastic ban, must be inclusive, participatory, and economically sensitive. Success depends on combining environmental enforcement with socioeconomic support mechanisms, ongoing education, and the creation of markets for affordable, eco-friendly alternatives.

The government has more work to do in so many ways. However, it should not be relegated to government responsibilities alone, there should be Continuous sensitisation campaigns through media, schools, and community associations to deepen public understanding of the long-term benefits of plastic reduction and proper waste management. This will help to bridge the knowledge gap of the public regarding environmental sustainability and can be carried out by non-governmental organizations, schools and research institutes. Likewise, the government should incentivise local entrepreneurs and manufacturers to produce affordable, biodegradable packaging materials. Tax breaks or grants can be offered to encourage investment in the circular economy and green manufacturing. Initiatives such as micro-credit schemes, training, and business development programs should be implemented to help traders and waste collectors transition to sustainable livelihoods aligning with the principles of the Just Transition Theory.

Similarly, the Lagos State Ministry of the Environment and her agencies should ensure consistent monitoring and enforcement of the ban across all local government areas. Enforcement should be fair and accompanied by guidance rather than punishment, particularly for small traders. There should be established framework to periodically assess the social, economic, and environmental outcomes of the ban. This would enable timely adjustments to the policy based on data-driven insights.

For a successful transition and implementation of the ban, as earlier stated partnerships between the government, the private sector, and NGOs should be strengthened to foster innovation in recycling, eco-packaging, and waste management technologies. Likewise, environmental education should be mainstreamed at primary and secondary levels to foster long-term behavioural change and environmental stewardship among young people.

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APPENDICES

APPENDIX 1

Socioeconomic Impact of the Ban On Single-Use Plastics.

Dear Respondent,

This questionnaire is part of an academic research project titled "Socioeconomic Impact of the Ban on Single-Use Plastics in Lagos State", conducted by a student in the Department of Environmental Management and Toxicology, University of Benin. The aim is to assess how the ban on single-use plastics affects individuals, businesses, and the environment. Your honest responses are crucial and will be used strictly for academic purposes. All information provided will be treated with utmost confidentiality. Kindly take a few minutes to complete this questionnaire.

Section A: Demographic Information

1. Age:
[ ] Under 18 [ ] 18–25 [ ] 26–35 [ ] 36–45 [ ] 46 and above

2. Gender:
[ ] Male [ ] Female [ ] Prefer not to say

3. Educational Level:
[ ] No formal education [ ] Primary [ ] Secondary [ ] Tertiary [ ] Postgraduate

4. Occupation:
[ ] Student [ ] Trader [ ] Manufacturer [ ] Civil Servant [ ] Artisan [ ] Transport worker [ ] Other (please specify): _____

5. What is your role in relation to single-use plastics? (Select the option that best describes you)

[ ] Consumer/User

[ ] Retailer/Vendor

[ ] Manufacturer/Producer

[ ] Waste Collector/Recycling Worker

[ ] Policy Maker/Government Official

[ ] Environmental NGO or Advocate

[ ] Researcher/Academic

[ ] Other (please specify): _____

6. What is your average monthly income?

[ ] Less than ₦30,000

[ ] ₦30,000 – ₦49,999

[ ] ₦50,000 – ₦99,999

[ ] ₦100,000 – ₦149,999

[ ] ₦150,000 – ₦199,999

[ ] ₦200,000 and above

[ ] Prefer not to say

7. Local Government Area (LGA): _____

Section B: Awareness and Perception of the Ban

8. Are you aware that the Lagos State government is implementing or proposing a ban on single-use plastics?

[ ] Yes

[ ] No

9. How did you become aware of this ban?

[ ] Television/Radio

[ ] Social media

[ ] Community meetings

[ ] Government notice or signage

[ ] Word of mouth

[ ] Other: _____

10. Do you personally support the ban?

[ ] Strongly support

[ ] Support

[ ] Neutral

[ ] Oppose

[ ] Strongly oppose

11. Why do you think the ban was introduced? (Select all that apply)
[ ] To reduce flooding caused by plastic waste

[ ] To protect marine life

[ ] To improve public health

[ ] Pressure from international organizations

[ ] Other: _____

Section C: Economic Impact

12. Has the ban affected your source of income or business?
[ ] Yes

[ ] No

If yes, please explain how: _____

13. What type(s) of single-use plastics did you previously use, produce or sell?
[ ] Plastic bags (sachets, nylons)

[ ] Plastic water (sachets, bottles)

[ ] Disposable food packs (Styrofoam)

[ ] Plastic straws

[ ] Other: _____

14. How often did you use single-use plastic items before the ban?

(Single-use plastics include plastic bags, bottles, straws, food packs, etc.)

[ ] Daily

[ ] Several times a week

[ ] Once a week

[ ] Occasionally

[ ] Rarely

[ ] Never

15. Have you switched to alternative materials (e.g., paper, fabric, metal containers)?
[ ] Yes

[ ] No

If yes, which one(s)? _____

16 Is the cost of these alternatives higher than that of plastic products?
[ ] Yes

[ ] No

[ ] About the same

17. Do you think the ban has led to the loss of jobs or businesses?
[ ] Yes

[ ] No

[ ] Not sure

18. Do you think the ban could lead to new jobs or businesses (e.g., recycling, paper bag production)?
[ ] Yes

[ ] No

[ ] Not sure

19. What are your major concerns regarding the ban on single-use plastics?

(You may select more than one)

[ ] Increased cost of alternatives

[ ] Unavailability of suitable alternatives

[ ] Impact on small businesses

[ ] Inadequate public awareness

[ ] Poor enforcement of the ban

[ ] Negative effect on hygiene or convenience

[ ] Other (please specify): _____

20. What kind of support would help you adjust to the ban?
[ ] Access to affordable alternatives

[ ] Government financial support

[ ] Public awareness campaigns

[ ] Business training on eco-friendly practices

[ ] Other: _____

Section D: Social Impact

21. How has your community responded to the ban on single-use plastics?

[ ] Strong support

[ ] Moderate support

[ ] Indifferent

[ ] Opposed

[ ] Not aware of the ban

22. Have social norms in your area changed due to the ban (e.g., bringing reusable bags, rejecting plastic)?

[ ] Yes, significantly

[ ] Slightly

[ ] No change

[ ] Not sure

23. Have you received any form of education or awareness about the ban and its environmental impact?

[ ] Yes, from government campaigns

[ ] Yes, from NGOs or community groups

[ ] Yes, through social media

[ ] No awareness received

24. In your opinion, how effective have awareness efforts been in changing people's behavior?

[ ] Very effective

[ ] Somewhat effective

[ ] Not effective

[ ] No awareness campaigns observed

Section E: Environmental and Behavioral Changes

25. Have you personally reduced your use of single-use plastics since the ban?
[ ] Yes, significantly

[ ] Yes, a little

[ ] No

[ ] Not applicable

26. Do you believe the ban is helping to reduce plastic pollution in Lagos?
[ ] Strongly agree

[ ] Agree

[ ] Neutral

[ ] Disagree

[ ] Strongly disagree

27. How effective is the enforcement of the ban in your area?
[ ] Very effective

[ ] Moderately effective

[ ] Not effective

[ ] No enforcement observed

Section F: Open-Ended Questions

28. What are your general thoughts about the ban on single-use plastics?

_____

_____

_____

29. What major challenges do you face as a result of this ban?

30. What suggestions do you have for the government or stakeholders?

APPENDIX 2

LAGOS STATE GOVERNMENT

MOE/4988/39 **16th July, 2025**

To Whom IT May Concern

Dear Sir/Ma,

Letter of Consent to Administer Questionnaire within Lagos State

This is to acknowledge that the Lagos State Ministry of the Environment has granted permission to **Amusan Mosunmola Comfort**, a student of Environmental Management and Toxicology at the University of Benin, to administer research questionnaires within Lagos State for an academic study titled "**Socioeconomic Impacts of the Ban on Single-Use Plastic in Lagos State**".

The Ministry understands that the research seeks to gather data from selected households, market traders, and small business operators across various local government areas of Lagos State. The study aims to support academic research efforts that contribute to a better understanding and policy formulation on environmental sustainability and plastic waste management.

This consent is granted on the condition that the information collected will be used strictly for academic purposes, respondents' confidentiality will be maintained, and ethical standards of data collection will be upheld throughout the research process.

We wish the researcher success in the completion of this study.

Thank you

Dr. Hassan A. Sanuth
For: Permanent Secretary

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