

Chapter 1

Background of the study

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1 Introduction

The automotive industry has indeed been making significant strides towards sustainability, with a focus on eco-friendly practices and the adoption of green technologies (Sun et al., 2018). This shift has also extended to the maintenance and repair sector, giving rise to the green spare parts industry, which plays a pivotal role in promoting sustainability by offering environmentally friendly alternatives for vehicle maintenance and repair (Sun et al., 2018). The green spare parts industry encompasses components and materials designed, manufactured, and utilized with a focus on minimizing environmental impact (Sun et al., 2018). This includes spare parts made from recycled materials, energy-efficient manufacturing processes, and components contributing to fuel efficiency and emissions reduction (Sun et al., 2018). The industry aligns with the global effort to reduce the carbon footprint of transportation and mitigate the adverse effects of vehicle-related pollution (Sun et al., 2018). One of the key elements that distinguish the green spare parts industry is its contribution to the circular economy, reducing waste and conserving resources through reusing and recycling materials (Sun et al., 2018). As automotive manufacturers increasingly adopt green initiatives, the demand for eco-friendly spare parts has grown, driving innovation and research in this emerging sector (Sun et al., 2018). Customer engagement emerges as a critical factor in the success of green spare parts initiatives, emphasizing interactions, communication, and shared values between businesses and customers (Rachbini, 2018). As customers become more environmentally conscious, businesses in the green spare parts industry need to connect with their audience on a deeper level, aligning their values with those of their customers (Rachbini, 2018). The automotive industry is one of the largest contributors to environmental pollution, primarily due to the production and use of vehicles (Olabi, Wilberforce & Abdelkareem, 2021, Ogunkunle & Ahmed, 2019). As a response to this, there has been a growing trend towards sustainability in the industry, including the promotion of green initiatives such as the use of green spare parts. Green spare parts are environmentally friendly components that are either recycled, remanufactured, or made from sustainable materials. These parts help reduce the environmental impact of vehicle maintenance and repair by minimizing

waste and energy consumption (Cenci, et. al., 2022, Sinha & Modak, 2021). However, the success of green spare parts initiatives relies heavily on customer engagement. Customers play a crucial role in adopting and promoting these initiatives, as their choices and behaviours influence the demand for sustainable products and services (Lim, 2022, TM, et. al., 2021). Engaging customers effectively in green spare parts initiatives requires understanding their attitudes, preferences, and motivations towards sustainability, as well as implementing tailored engagement strategies that resonate with them (Nygaard, 2024, Riley, et. al., 2021). Despite the importance of customer engagement in green spare parts initiatives, there is limited research on the topic, particularly in the context of the automotive industry (Adelakun et al., 2024). This study aims to address this gap by examining the customer engagement techniques used in green spare parts initiatives and their effectiveness. By understanding how customers can be effectively engaged in these initiatives, automotive companies can enhance their sustainability efforts and contribute to a more environmentally friendly industry (Oyinkansola,2024).

1.2 Statement of the Problem

As the automotive industry embraces sustainability, the green spare parts sector stands at a critical juncture, necessitating a deep dive into the realm of customer engagement strategies to promote environmental responsibility. At the core of this research lies the recognition of a central research problem: the absence of comprehensive quantitative insights into customer engagement strategies tailored specifically for the green spare parts sector. To address this gap, it is imperative to unravel the challenges and opportunities that businesses in this sector encounter when integrating sustainability into their spare parts operations. Quantitative research is crucial for understanding the magnitude of issues and opportunities within the green spare parts industry. To elucidate this, it is essential to delve into industry-specific data and statistics that shed light on the current landscape. The challenges are multifaceted, ranging from consumer perceptions to supply chain complexities. A quantitative analysis of these challenges is vital for crafting targeted solutions that can foster sustainable practices in the spare parts sector. One significant challenge is the inertia in consumer behavior. Despite the increasing global awareness of environmental issues, the adoption of green spare parts remains relatively low. Quantifying consumer attitudes and preferences through surveys and market research can unveil the underlying factors that hinder the widespread acceptance of sustainable spare parts. Are consumers deterred by perceived higher costs, lack of awareness, or skepticism about the actual environmental impact of green spare parts? These are questions that demand empirical answers. Furthermore, the spare parts industry is intricately connected to the larger automotive ecosystem, which presents its own set of challenges and

opportunities. Quantitative analysis can uncover the current state of sustainability initiatives within automotive manufacturers, dealerships, and spare parts suppliers. What percentage of automotive businesses are actively promoting green spare parts, and to what extent? Understanding the dynamics of the supply chain through quantitative data is instrumental in identifying leverage points for encouraging sustainable practices. A crucial aspect of the problem statement involves industry-specific quantitative data on the environmental impact of traditional spare parts versus green alternatives. Quantifying the reduction in carbon emissions, energy consumption, and waste generation associated with the adoption of green spare parts is pivotal for making a compelling case for sustainability. Hard data can provide businesses with tangible evidence of the positive ecological footprint of green spare parts, thereby influencing decision-makers and consumers alike. Equally important is an exploration of the economic viability of sustainable practices in the spare parts sector. Quantitative insights into the cost implications of adopting green initiatives can dispel misconceptions about the economic feasibility of such endeavors. By comparing the long-term benefits and savings associated with sustainability, businesses can make informed decisions that align with both environmental and financial objectives. In conclusion, the problem statement of this project revolves around the urgent need for comprehensive quantitative insights into customer engagement strategies tailored for the green spare parts sector. This entails a meticulous examination of industry-specific data and statistics to unravel the challenges and opportunities that businesses encounter in integrating sustainability into their spare parts operations. Through rigorous quantitative analysis, this research aims to pave the way for informed decision-making, promoting a more sustainable future for the automotive industry.

1.3 Research Questions

This study seeks to address the following research questions:

- 1) To what extent does personalised communication influence the promotion of environmentally sustainable spare parts?
- 2) To what extent does loyalty programs influence the promotion of environmentally sustainable spare parts?
- 3) To what extent does eco-friendly product incentives influence the promotion of environmentally sustainable spare parts?
- 4) To what extent does digital engagement platforms influence the promotion of environmentally sustainable spare parts?

1.4 Objectives of the Study

The main aim of this research is to examine customer engagement techniques in green spare parts initiatives. The specific objectives are to:

1. Examine the influence personalised communication has on the promotion of environmentally sustainable spare parts
2. Investigate the influence loyalty programs has on the promotion of environmentally sustainable spare parts
3. Assess the influence eco-friendly product incentives has on the promotion of environmentally sustainable spare parts
4. Examine the influence digital engagement platforms has on the promotion of environmentally sustainable spare parts.

1.5 Research Hypotheses

H01: Personalised communication has no significant influence on the promotion of environmentally sustainable spare parts

H02: Loyalty programs has no significant influence on the promotion of environmentally sustainable spare parts

H03: Eco-friendly product incentives has no significant influence on the promotion of environmentally sustainable spare parts.

H04: Digital engagement platforms has no significant influence on the promotion of environmentally sustainable spare parts

1.6 Scope of the study

The scope of this study is centred on examining various customer engagement techniques employed in green spare parts initiatives within the automotive and manufacturing sectors. It will focus on identifying and analysing key strategies such as personalised communication, loyalty programs, eco-friendly product incentives, and digital engagement platforms that companies use to promote environmentally sustainable spare parts. The research will primarily explore how these engagement techniques influence customer awareness, adoption, and long-term commitment to green spare parts. The geographical focus of this study is Nigeria, with specific attention given to leading

automotive and industrial firms that have adopted green initiatives in their spare parts operations. Additionally, this study will investigate the challenges companies face in implementing effective customer engagement techniques in green initiatives, such as cost implications, customer resistance, and limited awareness of green products. By evaluating both successful and underperforming strategies, the research aims to provide recommendations for improving customer involvement in green spare parts initiatives. Data will be collected through surveys to offer a comprehensive view of the effectiveness of customer engagement techniques in promoting environmental sustainability.

1.7 Significance of the study

The significance of this study on customer engagement techniques in green spare parts initiatives is twofold, addressing both theoretical and practical aspects. From a theoretical perspective, it contributes to the growing body of knowledge on sustainable business practices, specifically within the realm of customer engagement and green initiatives. This study helps bridge the gap in existing literature by exploring how companies can foster more meaningful interactions with customers when promoting environmentally friendly spare parts. By doing so, it provides a nuanced understanding of how sustainability can be integrated into customer engagement strategies, thus contributing to the fields of environmental sustainability and marketing. Practically, the findings of this study are valuable for businesses in industries where spare parts are a significant component of operations, such as automotive, electronics, and machinery. Companies can apply the insights gained to improve their customer engagement strategies by aligning them with sustainability goals. For instance, businesses can leverage customer education, awareness campaigns, and personalised communication to build stronger relationships with consumers who are increasingly concerned about environmental impact. As a result, organisations can boost customer loyalty, enhance brand reputation, and potentially increase sales of green spare parts, contributing to both environmental sustainability and business growth. Moreover, this research has broader implications for policymakers and environmental advocates. By identifying effective customer engagement techniques, this study can inform policy frameworks and industry standards that encourage businesses to adopt green spare parts initiatives. This can contribute to wider societal goals of reducing waste, promoting a circular economy, and advancing sustainability in various industries. The study, therefore, holds significance not only for businesses but also for the overall effort to mitigate environmental degradation through responsible consumption and production.

1.8. Limitation of the study

This study on customer engagement techniques in green spare parts initiatives is subject to several limitations. Firstly, the research focuses on a specific sector, which may limit the generalisability of the findings to other industries. The automotive industry, in particular, was a primary focus due to its significant role in environmental sustainability, and while the insights gained are valuable, they may not entirely apply to other sectors such as electronics or heavy machinery, where green initiatives might differ in scale or approach. Additionally, the study primarily targeted a limited geographical region, which may not fully capture global perspectives on customer engagement in green initiatives. Another limitation lies in the data collection methods. The research relied heavily on surveys and self-reported data from consumers, which may introduce bias, such as social desirability bias, where respondents could provide answers they believe are more environmentally conscious rather than reflecting their actual behaviour. Furthermore, the sample size, while adequate for initial analysis, may not be large enough to represent all customer segments, particularly those with diverse attitudes towards sustainability. This could lead to skewed results, limiting the study's ability to capture the full spectrum of customer engagement. Lastly, the study did not account for the long-term impact of customer engagement techniques on green initiatives. While it examined immediate reactions and short-term engagement strategies, it did not explore whether these initiatives lead to sustained customer loyalty or behavioural change. As the adoption of green spare parts is still an emerging area, future research could benefit from longitudinal studies that assess the durability of customer engagement and the effectiveness of different techniques over time, providing a more comprehensive understanding of their lasting impact.

1.9 Operational Definition of Terms

Green Spare Parts: Green spare parts refer to replacement components for vehicles, machinery, or other equipment that are manufactured or sourced with a focus on environmental sustainability. These parts are typically made from recycled, reusable, or eco-friendly materials and are designed to reduce waste and energy consumption throughout their lifecycle.

Customer Engagement Techniques: Customer engagement techniques are strategies and practices that businesses use to interact with customers and build strong, lasting relationships. These techniques aim to increase customer satisfaction, loyalty, and active participation in a company's offerings. Examples include personalised communication, loyalty programs, and interactive digital platforms.

Personalised Communication: Personalised communication involves tailoring messages and interactions to the individual preferences, needs, or behaviours of customers. By using customer data and insights, businesses can create customised marketing content, offers, and services that resonate more effectively with each customer.

Loyalty Programs: Loyalty programs are structured marketing strategies designed to encourage repeat business by rewarding customers for their continued patronage. Customers earn points, discounts, or other incentives for making purchases or engaging with the brand, which fosters long-term relationships and brand loyalty.

Eco-friendly Product Incentives: Eco-friendly product incentives are rewards or discounts offered to customers who choose to purchase sustainable or environmentally friendly products. These incentives are aimed at encouraging consumers to make greener choices by providing financial or non-financial benefits for supporting eco-friendly initiatives.

Digital Engagement Platforms: Digital engagement platforms are online or mobile-based tools and technologies that businesses use to interact with customers. These platforms can include social media, websites, mobile apps, or online communities that facilitate two-way communication, content sharing, and customer feedback, allowing companies to engage customers more effectively in real-time.

1.10 Organisation of the Study

The study is presented in five chapters.

Chapter 1 of the study, discusses the background of the study, where a brief explanation is made of the intended study. Chapter 2 covers the general literature review and theories relevant to the study. Literature review is critical and crucial to any research work. This is because the review of literature guides what is done in a particular field. It facilitates insight into the understanding of the subject matter of research. Here, all the various opinions were discussed to make it easy for other researchers who may wish to embark on the related subject matter. However, the following were discussed in this chapter: conceptual framework, theoretical framework, and empirical review of the Literature. Chapter 3 deals with the methodology adopted during the research. It contains a detailed step-by-step procedure of the study was done. It is a blueprint or framework for the study. Chapter 4 presents the statistical tool that used to interpret the data gathered to answer the questions or test hypotheses to draw conclusions and inferences from the research problem. Chapter 5 shows the overall summary of the project, where a conclusion was

drawn, and findings and appropriate recommendations offered to the relevant stakeholders.