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# Role of Sustainable Packaging in Customer Engagement and Firm Performance in India: An Empirical Study

# Dr.M.Prasanna Mohan Raj,

Associate Professor, Department of Management Studies, Sri Sivasubramaniya Nadar College of Engineering, Chennai- 603110

### Dr. Dhiraj Sharma

Freelance Academic , Meerut, Uttar Pradesh, India Dhiraj\_Sharma @ Ymail.com

# Dr. Rajiv Jain

Assistant Professor MAIT Delhi rajivjain@mait.ac.in

#### **Mukund Kumar**

Research Scholar School of Business Sushant University (Erstwhile Ansal University), kumarmukund1976@gmail.com

#### **ABSTRACT**

Sustainable packaging is essential for customer engagement and firm performance in the Indian context. Companies choose sustainable packaging to fulfil regulations, decrease costs, and adapt to evolving customer tastes. Sustainable packaging beats conventional packaging. When making a purchase, customers are drawn to sustainable packaging purchases. Today, the most common determining factors when purchasing are the eco-friendly packaging materials and techniques used to create the product. This shift shapes demand, improves the image, and sets firms apart. Companies that can communicate their sustainability efforts effectively see increased customer engagement. Brands that utilize eco-friendly packaging are seen as more responsible by consumers, making consumers more willing to trust and support them. Customers who receive excellent service or experiences will likely return, become highly satisfied, and promote the brand through word-of-mouth. Brands that use biodegradable packaging want to attract special interests and use marketing techniques to ensure brands are making a difference on the planet in addition to their bottom line, forming a tighter bond with customers. Sustainable packaging, therefore, also influences firm performance. Cost reductions stem from minimizing material consumption, streamlined supply chains, and waste elimination. The research attempts to establish a relationship between sustainable packaging, consumer perception, and firm performance in India. It explores how companies' approaches to sustainability are integrated into their packaging strategies and how sustainability, in turn, influences consumer trust and profitability. A sample of 247 was collected from customers in different Sector. The factors that show the role of Sustainable Packaging in Customer Engagement and Firm Performance in India are Customer Engagement, Firm Performance, Consumer Awareness and Preferences, and Cost and Economic Factors.

**Keywords:** Sustainable packaging, customer engagement, sustainable business practices.

#### Introduction

The Effect of Sustainable Packaging on Customer Engagement and Firm Performance in India Sustainable packaging is adopted by businesses to comply with regulations, reduce waste, and meet consumer expectations (Gupta & Gupta, (2020). Customers also consider the sustainability of

packaging while making purchase decisions, as it impacts their brand trust and long-term relationships. Sustainable packaging becomes part of how companies operate, which will help them meet market needs and strengthen their competitive advantage to improve efficiency. Suppliers in India have increasingly adopted sustainable packaging in response to regulatory changes and shifting consumer behaviour. There is also a new policy from the government to reduce plastic waste and reward businesses for using recyclable materials. Companies invest in additive packaging after obtaining the necessary packaging certifications, product safety, and functionality. Applying sustainability affects materials selection, supply chain processes, and production methods.

Food, beverages, pharmaceuticals, and consumer goods industries are setting up biodegradable, recyclable, and reusable packaging solutions. These initiatives tackle environmental issues and create an image in consumers' heads. Firms weigh the costs of transitioning to sustainable materials with the benefits measured regarding product sales, the impact on operations, and regulatory compliance, as argued (Gaikwad & Sunnapwar, 2020). Sustainable brands are the consumer's preference. Companies embed sustainable packaging in their marketing and branding strategies to drive consumer behaviour. Meherishi et al. (2019) found that packaging and design (materials, shape, labelling, etc.) influence customers' perceptions. Sustainable packaging solutions include recyclability, biodegradable materials, and responsible sourcing as business benefits. Marketers convey these elements via product descriptions, labels, and certifications to the customers. Adeniji et al. (2020) explored that messaging about sustainability is transparent and builds trust, encouraging repeat purchases. Companies track how consumers engage with packaging features and revise their approaches accordingly. Brands that invest in sustainability draw consumers who prioritize responsible brands. So, firms that show a commitment to sustainability further enhance customer loyalty. Adopting sustainable practices also reduces risks from regulatory non-compliance and supply chain disruptions for companies.

Cost efficiency is affected by operational factors, including material sourcing, packaging design, and waste management. Companies formulate to balance sustainability with production and logistics costs best. Companies evaluate the effectiveness of pack redesigns by looking at their financial results, resource efficiency, and market competitiveness. Sustainable packaging impacts customer engagement and long-term business results. Companies implementing sustainable packaging face obstacles around cost, availability of materials, and production. The availability of bio-based and recyclable materials differs from region to region, making consistent packaging solutions difficult. Because research, development, and production are so expensive, decision-making is impacted as explored (Ghosh, 2019).

When packaging strategies incorporate sustainability, businesses are cognizant of the cost implications. Logistical challenges come up when moving to sustainable materials. Some materials are so hazardous to people or the environment that they require new storage, transportation, and handling approaches. The companies assess these challenges and strive to overcome them to retain product integrity while adopting sustainable packaging. They also evaluate customers' feelings about alternative packaging materials and adapt strategies based on market response. Insights regarding how firms pursued the implementation of sustainable packaging and how customers respond to such initiatives have been provided more in-depth in the Indian market, as found in recent research (Gadekar, Sarkar, & Gadekar, 2022).

#### Literature review

Consumers consider sustainable packaging as they review brands, impacting their purchases. They choose products made with sustainable materials, recyclable packaging, or biodegradable. Wandosell et al. (2021) found that sustainable packaging helps build consumer trust that can easily convert into repeat purchases. Consumers are adopting sustainability efforts as a mark of corporate responsibility, and this is deepening their connection with brands. Customers stay loyal to brands that are committed to packaging sustainability. Brands aligned with sustainable values retain customers seeking more sustainable options. From their perspective, consistent sustainability makes them think that the company can be a reliable partner and engage them for the long term. Urbanization and the rising global population make firms that incorporate green packaging within their business model stand out from their competitors and continue to deliver solid customer relationships. Visamitanan and Assarut (2024) discussed that sustainable packaging adds value to the product for consumers. They see ecofriendly packaging as guaranteeing better quality and ethical raw materials. Sustainable product packaging helps build a positive brand image; this naturally enhances customer trust. Businesses that value sustainable practices will attract consumers who prioritize environmentally friendly efforts as they often lead purchasing trends through endorsements and recommendations. Brands use ecofriendly packaging to remain competitive.

Sahoo and Vijayvargy (2021) discussed that packaging should drive customers to minimize environmental harm. Sustainability messaging has become a key part of brands' marketing strategy, filling a gap for conscious consumers. They tout these efforts with innovative packaging — that uses less material, is compostable, or contains a refillable container. By employing such strategies, brands are responsible market leaders while gaining sound visibility. Companies conduct consumer awareness campaigns to showcase their sustainable initiatives. They implement eco-friendly packaging labels and QR codes and create biodegradable packaging by utilizing eco-go-pack materials for packaging that can help reduce environmental damage. They create packaging from natural fibres, starch-based polymers, and biodegradable plastics.

Birou, Green, and Inman (2019) recommended that marketers use material that decomposes faster than traditional plastics, thus preventing waste from piling up. Companies invest in biodegradable alternatives to achieve sustainability goals and appeal to environmentally conscious consumers. They work with materials suppliers to ensure they are durable while providing environmental benefits. Reusable, Refillable Packaging Models to Enable Circular Economy They create packaging that enables people to return, refill, or reuse containers. Personal care, beverage, and household products companies roll out refill stations and returnable packaging programs. These may also help reduce waste and lower the cost of producing packaging. Brands drive consumer engagement by incentivizing the return or reuse of packaging. Refillable models also build brand loyalty by making sustainability a part of the purchase experience. Various businesses deploy lightweight packing solutions to decrease material and transportation costs. They substitute bulky packing with thinner, high-strength materials that protect products.

Agrawal et al. (2022) found that the effectiveness of lightweight packaging makes less use of resources and improves the entire supply chain. For example, the food, pharmaceutical, and electronics industries can reduce logistics costs and lower carbon footprints. They strike a balance between material reduction and durability in order to achieve product safety standards without negatively impacting the environment.) Firms are integrating innovative packaging technologies for increased consumer engagement and sustainability. They leverage QR codes, tracking systems, and digital verification to provide complete product visibility and prove sustainability stories. Smart labels

provide information about material origin, disposal instructions, and environmental impact. With packaging that consumers can scan for real-time sustainability data, companies enhance transparency. These innovations enhance trust and reinforce consumer-brand relationships. Sustainable printing decreases chemical waste during packaging production. Companies use eco-friendly inks, water-based coatings, and energy-efficient printing. They replace harmful solvents or petroleum-based dyes, reducing emissions and environmental pollution. Das (2018) discussed that companies will print sustainability certifications and responsible sourcing labels and use eco-friendly packages to promote their environmentally friendly objectives. These printing advancements also help improve recyclability and are supported in line with global environmental standards.

Biodegradable, reusable, lightweight, and intelligent packaging provides companies with the necessary sustainability improvement. They use sustainable printing practices to minimize chemical waste and increase transparency within packaging. These innovations enhance consumer trust and reinforce lasting environmental accountability. These are just a fraction of the movements that seek to educate consumers on sustainable practices. Through the design of their packages, brands communicate material sourcing, disposal methods, and carbon footprint reduction. These details are how customers interact, and they make selections based on sustainability claims. For example, businesses that educate consumers on their environmental initiatives will increase brand credibility and encourage sustainable buying habits. Concern about waste reduction drives customer purchasing behaviour and brand loyalty, and it is a market differentiator.

García-Granero et al. (2018) found that sustainability-focused companies see better brand perception and greater customer engagement through consumer trust and long-term loyalty. Sustaina, through awareness campaigns and marketing strategies packaging, gives you a competitive edge in an environment where customers are willing to pay for environmentally friendly practices—negative information. The companies redesign the packaging to comply with government regulations, ensuring it follows environmental laws and does not break any laws, resulting in legal penalties. They remove un-recyclables, limit plastics and use bio-based alternatives. Companies must adhere to packaging waste management regulations to ensure operational stability and avoid supply chain disruption.

Abdallah and Al-Ghwayeen (2020) argued that those who lead from the front and align with regulatory policies reduce their cost of compliance and increase efficiency. Companies often integrate sustainable materials and diversify sourcing strategies to enhance supply chain resilience. They invest in biodegradable, recycled and plant-based alternatives to reduce dependence on petroleum-based packaging. Companies build flexible sourcing networks to ensure a constant supply of sustainable materials. They streamline logistics through redesigned packaging that cuts weight and volume, lowering transportation emissions and costs. However, businesses that enhance supply chain resilience achieve better market adaptability and long-lasting sustainability. Firms conform to EPR by installing waste management measures that encourage recycling and reclamation of resources. To meet waste reduction goals, they ensure their packaging is reusable, recyclable, or compostable.

Genel (2022) discussed that businesses incorporate take-back programs, work alongside waste collection agencies, and encourage consumer participation in recycling. EPR reduces environmental impact and enhances firms' regulatory credibility. Now, businesses are building retailer partnerships to help scale up sustainable packaging efforts while differentiating themselves in the market. They work with retailers, so product placement complies with sustainability objectives. Brands work to ensure shelf space for greener alternatives, making it easier for consumers. The retailer considers

brands with responsible packaging practices as preferable, and they will often make or break a purchasing decision.

These customers boost the retailers' sustainability scoring and raise the visibility of their products. Consumer trust and corporate reputation are built by companies investing in sustainable packaging. Buyers see sustainable packaging as a signal of a brand's environmental responsibility. Data is consumed to help companies develop sustainability messaging into their branding strategies and make ethical business more than just a list of procedures. They also tout sustainable certifications, material sourcing, and other waste-reduction initiatives in packaging. Transparency breeds credibility and long-term consumer loyalty for businesses making sustainability claims. Firms combine with global packaging sustainability standards to enhance international trading opportunities. as **analyzed by** Duarte et al. (2024).

They qualify for export markets by adhering to eco-labelling, recyclability and carbon footprint reduction standards. (Kautish et al., 2022). Discussed that businesses increasingly use green processes and materials to meet global environmental laws. Following global sustainability trends helps businesses remain competitive and gain a more significant market share. High material and production costs limit scalability for small and medium-sized enterprises (SMEs) regarding sustainable packaging. They find it challenging to incorporate sustainability and stay profitable. Because they do not have much money, SMEs believe in using cheap materials for lightweight packaging and raw materials sourced locally. They partner with industry groups and government programs to secure funding and technical assistance. Companies that surmount scalability challenges implementing sustainable practices while ensuring financial resilience. Sustainable packaging mitigates environmental risks and can avoid reputational damage from waste disposal issues.

Responsible packaging reduces pollution, keeps pace with evolving regulations, and meets consumer expectations — leading to bottom-line benefits for the firm. Tylenol has not recovered its market share even if it appears safe." Businesses that prepare for environmental issues protect brand equity and ensure long-term market sustainability. Firms are incorporating sustainability into packaging strategies to fulfil regulations, improve supply chain resilience, and build consumer empathy. To retain the competitive edge, they work with retailers, operate by global standards, and tackle scalability problems. Thus, businesses investing in responsible packaging mitigate environmental risks and enhance their long-term profits. Sustainable packaging has become an important topic of consumer discussion on social media, affecting brand reputation and engagement. They write reviews, film unboxing videos, and discuss eco-friendly packaging, all of which help guide purchasing decisions. Brands that make sustainable packaging part of their offering get good press and customer loyalty. To stay ahead of the curve, companies track social media interactions for insights into consumer expectations so they can advise their packaging strategies accordingly. In the age of digital platforms, consumer voices have more resonance, and sustainability has become a significant component of brand perception. as **explored by** Morashti et al. (2022).

Products with sustainable packaging are promoted more frequently by supermarkets and e-commerce platforms, impacting consumer purchasing preferences. Sustainable solutions are displayed in-store and appear as filters on retailers' websites, coaxing consumers to make greener choices. Many e-commerce platforms also showcase sustainability certifications and material descriptions, guiding buyers in making responsible choices. Giacomarra et al. (2020) explored how responsible packaging also gets you better placement in the stores, helping you boost sales and market share. To meet this demand, companies that fail to comply with retailer sustainability standards will lose shelf space and

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visibility on their E-commerce channels. Packaging choices create an emotional connection for consumers with brands aligned with their environmental concerns. It reinforces brand loyalty because it connects sustainable packaging with responsible business practices. Packaging that embodies environmental values increases consumer trust and fosters deeper engagement. Brands that leverage their design, messaging, and certifications to communicate their sustainability efforts form meaningful bonds with their customers. Companies that fail to prioritize sustainability may leave eco-friendly consumers without their business.

They build trust when brands include clear information about packaging materials, recyclability, and disposal. Consumers want visibility into sustainability claims, including expecting comprehensive labelling. Brands employ QR codes, digital guides, and certification logos to raise consumer awareness of proper disposal practices. Transparent packaging approaches build trust and promote appropriate waste disposal.

# **Objective**

To examine the Role of Sustainable Packaging in Customer Engagement and Firm Performance in India.

### Methodology

A sample of 247 participants was collected from participants in different Sector. The method of sampling was 'Judgemental Sampling" for the collection of data, and analysis was done by "Explanatory Factor Analysis" (EFA).

### **Findings**

The table demonstrates demographic details: 52.63% are Male, and 47.37% are female. Looking at the age, 27.93% are between 28 and 33 years old, 32.79% are between 33 and 38 years old, and 39.28% are above 38 years of age. Regarding Sector, 31.17% are FMCG, 36.03% are Healthcare & Medical, and 32.80% are Cosmetics.

Participant's Details

Variables	Participants	Percentage
Gender		
Male	130	52.63%
Female	117	47.37%
Total	247	100
Ages in years		
28 to 33	69	27.93%
33 to 38	81	32.79%
Above 38	97	39.28%
Total	247	100
Sectors		
FMCG	77	31.17%
Healthcare & Medical	89	36.03%
Cosmetics	81	32.80%
Total	247	100

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# "KMO and Bartlett's Test"

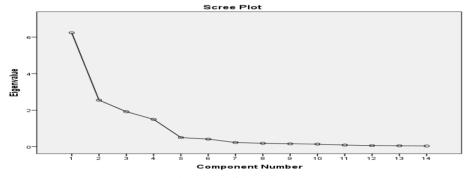
"Kaiser-Meyer-Olkin Measure of Sampling Adequacy"		.782
"Bartlett's Test of Sphericity"	"Approx. Chi-Square"	4054.695
	df	91
	Significance	.000

<sup>&</sup>quot;KMO and Bartlett's Test", the value of KMO is .782

"Total Variance Explained"

"Initial Eigenvalues" "Rotation Sums of Squared Loadings"						
"Component"		"% Of Variance"	"Cumulative	"Total"	"% Of Variance"	"Cumulative %"
1.	6.239	44.565	44.565	3.777	26.982	26.982
2.	2.545	18.180	62.744	3.616	25.830	52.811
3.	1.914	13.673	76.417	2.508	17.917	70.729
4.	1.492	10.658	87.076	2.289	16.347	87.076
5.	.496	3.545	90.621			
6.	.410	2.931	93.552			
7.	.224	1.598	95.150			
8.	.181	1.290	96.440			
9.	.151	1.077	97.517			
10.	.135	.966	98.483			
11.	.082	.586	99.069			
12.	.054	.386	99.456			
13.	.045	.318	99.774			
14.	.032	.226	100.000			

The four factors contribute towards explaining a total of 87.076% of the variance. Variance that Customer Engagement explains is 26.982, Firm Performance is 25.830%, Consumer Awareness and Preferences is 17.917%, and Cost and Economic Factors is 16.347%.



**Figure 1 Scree Plot** 

"Rotated Component Matrix"

<sup>&</sup>quot;Factor Analysis"

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S. No.	Statements	Factor Loading	Factor Reliability
	Customer Engagement		.952
1.	By adopting sustainable packaging, companies show commitment towards the environment, leading to consumer loyalty	.952	
2.	Brands using sustainable packaging promote transparency, leading to increased engagement	.894	
3.	Adopting environmentally friendly packaging makes it more attractive to conscious consumers	.862	
4.	Sustainable packaging led to organic promotion through reviews and word-of-mouth, increasing customer engagement	.859	
	Firm Performance		.960
1.	Firms investing in recyclable or biodegradable materials also avoid some of the costs associated with waste management	.953	
2.	By adopting eco-friendly packaging, companies can stay ahead of regulatory changes, avoiding potential fines or restrictions	.913	
3.	By switching to sustainable packaging, companies often streamline their operations to reduce waste and optimize material usage	.898	
4.	Where environmental consciousness is on the rise, this can significantly boost market share and sales volumes	.887	
	Consumer Awareness and Preferences		.877
1.	Consumers become informed about environmental impacts, demanding eco-friendly options, making companies adopt sustainable packaging	.910	
2.	Customers are more likely to engage with brands that reflect their values, and sustainable packaging serves	.857	
3.	Customers' willingness to pay more for sustainable packaging can affect a firm's ability to implement such practices	.816	
	Cost and Economic Factors		.831
1.	Materials like biodegradable plastics and recycled paper come at a higher cost compared to traditional packaging	.933	

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2.	Companies must balance the sustainability of their packaging with the overall cost-effectiveness of the solution	.927	
3.	Firms can avoid fines related to non-compliance with environmental regulations for improved financial performance	.619	

#### Factors of the study and its related variables

The first factor of the study is Customer Engagement. The variables it includes are Adopting sustainable packaging, companies showing commitment towards the environment, leading to consumer loyalty, Brands using sustainable packaging promoting transparency, leading to increased engagement, adopting environmentally friendly packaging making it more attractive to conscious consumers, and Sustainable packaging led to organic promotion through reviews, and word-of-mouth, increasing customer engagement. Firm performance is the second factor; its variables are firms investing in recyclable or biodegradable materials and avoiding some of the costs associated with waste management. By adopting eco-friendly packaging, companies can stay ahead of regulatory changes, avoiding potential fines or restrictions. Companies often streamline operations by switching to sustainable packaging to reduce waste and optimize material usage. Where environmental consciousness is on the rise, this can significantly boost market share and sales volumes. Consumer Awareness and Preferences are the third factors; its variables are Consumers becoming informed about environmental impacts, demanding eco-friendly options, and making companies adopt sustainable packaging; customers are more likely to engage with brands that reflect their values, and sustainable packaging serves and Customers' willingness to pay more for sustainable packaging can affect a firm's ability to implement such practices. The last and fourth factors are Cost and Economic Factors, which include variables like Materials like biodegradable plastics and recycled paper, which come at a higher cost than traditional packaging. Companies must balance the sustainability of their packaging with the overall cost-effectiveness of the solution, and Firms can avoid fines related to non-compliance with environmental regulations for improved financial performance.

# "Reliability Statistics"

"Cronbach's Alpha"	"Number of Items"	
.894	14	

The total reliability of 14 items, including variables for the role of sustainable packaging in customer engagement and firm performance in India, is 0.894.

#### Conclusion

Companies that provide verifiable information on sustainability strengthen credibility and consumer confidence. Indian consumers are prepared to pay a premium for environmentally friendly packaging and are brand-loyal regarding sustainability. Firms releasing sustainable packaging maintain grade standards in their products and secure some benefits from this change. Brands that build justification for premium pricing with responsible sourcing, recyclability, and waste mitigation ultimately find market acceptance. Long-term customer loyalty is guaranteed for businesses implementing pricing strategies based on sustainability trends. Sustainable packaging matters for consumers, retailers, and brands. This augmentation of brand trust drives competitiveness in market dynamics by wrapping packaging decisions around transparency, emotional connectivity, and price decisions. Businesses

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that adjust to changing consumer expectations reinforce customer relationships and long-term profitability. The factors that show the role of Sustainable Packaging in Customer Engagement and Firm Performance in India are Customer Engagement, Firm Performance, Consumer Awareness and Preferences, and Cost and Economic Factors.

#### References

Abdallah, A. B., & Al-Ghwayeen, W. S. (2020). Green supply chain management and business performance: The mediating roles of environmental and operational performances. *Business Process Management Journal*, 26(2), 489–512.

Adeniji, A., Osibanjo, A., Salau, O., Atolagbe, T., Ojebola, O., Osoko, A., ... & Edewor, O. (2020). Leadership dimensions, employee engagement and job performance of selected consumer-packaged goods firms. *Cogent arts & humanities*, 7(1), 1801115.

Agrawal, R., Wankhede, V. A., Kumar, A., Upadhyay, A., & Garza-Reyes, J. A. (2022). Nexus of circular economy and sustainable business performance in the era of digitalization. *International Journal of Productivity and Performance Management*, 71(3), 748–774.

Birou, L. M., Green, K. W., & Inman, R. A. (2019). Sustainability knowledge and training: Outcomes and firm performance. *Journal of Manufacturing Technology Management*, 30(2), 294–311.

Das, D. (2018). The impact of Sustainable Supply Chain Management practices on firm performance: Lessons from Indian organizations. *Journal of Cleaner Production*, 203, 179–196.

Gadekar, R., Sarkar, B., & Gadekar, A. (2022). Investigating the relationship among Industry 4.0 drivers, adoption, risks reduction, and sustainable organizational performance in manufacturing industries: An empirical study. *Sustainable Production and Consumption*, 31, 670-692.

Gaikwad, L., & Sunnapwar, V. (2020). Development of an integrated framework of LGSS strategies for Indian manufacturing firms to improve business performance: an empirical study. *The TQM Journal*, 33(1), 257-291.

García-Granero, E. M., Piedra-Muñoz, L., & Galdeano-Gómez, E. (2018). Eco-innovation measurement: A review of firm performance indicators. *Journal of Cleaner Production*, 191, 304-317.

Ghosh, M. (2019). Determinants of green procurement implementation and its impact on firm performance. *Journal of Manufacturing Technology Management*, 30(2), 462–482.

Gupta, A. K., & Gupta, N. (2020). Effect of corporate environmental Sustainability on dimensions of firm performance—Towards sustainable development: Evidence from India. *Journal of cleaner production*, 253, 119948.

Ibrahim, I. D., Hamam, Y., Sadiku, E. R., Ndambuki, J. M., Kupolati, W. K., Jamiru, T., ... & Snyman, J. (2022). Need for sustainable packaging: an overview. *Polymers*, *14*(20), 4430.

Meherishi, L., Narayana, S. A., & Ranjani, K. S. (2019). Sustainable packaging for supply chain management in the circular economy: A review. *Journal of cleaner production*, 237, 117582.

ISSN: 1526-4726 Vol 5 Issue 1 (2025)

Sahoo, S., & Vijayvargy, L. (2021). Green supply chain management practices and its impact on organizational performance: evidence from Indian manufacturers. *Journal of Manufacturing Technology Management*, 32(4), 862–886.

Visamitanan, K., & Assarut, N. (2024). Impact of green supply chain management practices on employee engagement and organizational commitment: the mediating role of firm performance. *Global Business Review*, 25(5), 1336-1355.

Wandosell, G., Parra-Meroño, M. C., Alcayde, A., & Baños, R. (2021). Green packaging from consumer and business perspectives. *Sustainability*, *13*(3), 1356.

Genel, Z. (2022). Digital Transformation of Consumer Engagement by Sustainable Communication Tools. In Handbook of Research on Digital Citizenship and Management During Crises (pp. 56–73). IGI Global.

Kautish, P., Paco, A., & Thaichon, P. (2022). Sustainable consumption and plastic packaging: Relationships among product involvement, perceived marketplace influence and choice behaviour. Journal of Retailing and Consumer Services, 67, 103032.

Duarte, P., Silva, S. C., Roza, A. S., & Dias, J. C. (2024). Enhancing Consumer Purchase Intentions for Sustainable Packaging Products: An In-Depth Analysis of Key Determinants and Strategic Insights. Sustainable Futures, 100193.

Morashti, J. A., An, Y., & Jang, H. (2022). A systematic literature review of sustainable packaging in supply chain management. Sustainability, 14(9), 4921.

Giacomarra, M., Crescimanno, M., Sakka, G., & Galati, A. (2020). Stakeholder engagement toward value co-creation in the F&B packaging industry. EuroMed Journal of Business, 15(3), 315-331.