



Exploring Flipkart's Sustainable Packing, Supply chain and Warehousing Strategies

Prof. Dr. Padmapriya Irabatti¹, Mr. Anand Irabatti²

¹ Professor Business management Symbiosis Centre for Distance Learning. Pune.

² Research Scholar, JJT University, Jhunjhunu, Rajasthan

ABSTRACT:

The Flipkart Group which started in 2007, includes the companies like Flipkart, Myntra, Flipkart Wholesale and Shopsy a Social e-commerce platform. With a registered customer base of 400 million, it enabled millions of sellers, merchants and small businesses to be a part of India's Digital commerce revolution. Flipkart strongly believes in integrating sustainability into every aspect of its business operations and consistently identify new opportunities towards building a responsible value chain. This case study mainly highlights Flipkart's initiatives towards incorporating sustainable packaging practices. The e-commerce boom has revolutionized retail, but its rapid growth also impacted adversely on environmental balance. Environment is significantly affected due to Packaging waste and carbon emissions from delivery of the online products. The sustainable and eco-friendly Packaging is the solution to this problem. With reference to this case study, Sustainable Packaging prioritizes eco-friendly packaging solutions. Flipkart significantly reduces the environmental footprint, by opting for recycled materials like cardboard, paper pulp, or mushroom packaging. These materials are derived from renewable resources and thus decompose naturally, minimizing landfill waste and reduces the adverse impact on environment. Flipkart eliminated single-use plastic by using eco-friendly paper shreds, recycled paper bags, and carton waste shredded material. Flipkart have introduced sustainable packaging material by applying the core sustainable principles of reuse, reduce, recycle, repurpose and regenerate. Flipkart's approach towards sustainable packaging relies on engagement, innovation, capacity building and compliances. Oversized packaging is a common issue; therefore, sustainable packaging further advocates for optimum size of packaging instead of wasting the resources for oversized packaging.

Journey of Sustainable packaging at Flipkart started in March 2019, when Flipkart team kicked off the old design and development to scout for options to reduce and reuse packaging. By July 2021, it achieved the milestone of 100% elimination of single use plastic in its own supply chain. During this period, they gradually achieved several milestones which are discussed in detail in this case study. The transformation Journey towards sustainability was not easy, the employees were convinced and motivated to give their 100 percent through several awareness campaigns and engagement programs initiated in 2019. The challenges during these transitions are also explored and discussed in detail in the case study.

Flipkart has received multiple green certifications, including TRUE Gold certification for zero waste at four of its distribution and warehousing facilities. This certification is awarded to Flipkart by Green Business Certification Inc. for diverting over 97% of waste across all certified sites against its standard requirement of diverting at least 90% of waste from landfills, incineration, and the environment.

The case study further continues to investigate the impact of sustainable packaging on customer decision making and concludes that Customers appreciated Flipkart's eco-friendly packaging, leading to increased satisfaction and loyalty. The findings concludes that eco-friendly packaging boost customer purchase intentions, satisfaction, and loyalty.

Keywords: Sustainable Packaging, reuse, reduce, recycle, innovation, customer satisfaction.

Introduction:

Flipkart is considered to be the first Indian Ecommerce company. But that is not true. Isn't this shocking for you. Almost every Indian have this perception that Flipkart is the first ecommerce company of India. Actually 8 years before Flipkart started its business in 2007, ie in 1999, the actual first Indian Ecommerce companies Fabmall and Indiaplaza were started by K. Vaitheeswaran. There were many small and big ecommerce company also got started meanwhile till 2007 when Flipkart officially started in India. No company including Indiaplaza could survive in Indian market, but Flipkart survived, therefore there is misconception that it's the first Indian Ecommerce.

The Flipkart which started in 2007 by two alumina of IIT Delhi namely Bini Bansal and Sachin Bansal with the initial investment of Rs. 4,00,000. They were selling books in the beginning. But slowly started selling other products. They faced many challenges in the initial years of their establishment, many times they were also on the verge of getting bankrupt. Bur eventually due to innovative, proactive and customer centric business practices, in last 15 years their market share in ecommerce increased from 5% to 40%. Flipkart was the first company to offer the cash on deliver and no question refund and replacement policy in India.

Flipkart group in which Walmart has around 77% stake, includes the other companies like Flipkart, Myntra, Flipkart Wholesale and Shopsy a Social e-commerce platform. With a registered customer base of 400 million, it enabled millions of sellers, merchants and small businesses to be a part of India's Digital commerce revolution.

Flipkart is the factory of many sustainable business ideas. But this case study mainly highlights Flipkart's initiatives towards incorporating sustainable packaging practices. The e-commerce boom has revolutionized retail, but its rapid growth also impacted adversely on environmental balance. Environment is significantly affected due to Packaging waste and carbon emissions from delivery of the online products. In India around 9.5 million tonnes of plastic waste is generated annually. One may not believe that 40% of the total plastic produced is used for single use packaging which has the average utility life of Just 15 minutes. This all single use plastic gets filled in land and ocean and doesn't decompose for years. Therefore, the sustainable and eco-friendly packaging is the solution to this problem. Flipkart strongly believes in integrating sustainability into every aspect of its business operations and consistently identify new opportunities towards building a responsible value chain. Flipkart continues to search for the prospects to integrate sustainable packaging options.

Sustainable Packaging:

Plastic is not a natural product. Due to element of convenience associated with it, Plastic become the integral ingredient of modern lifestyle. Humans used it for packaging to electronics and even to fashion. But due to this, it is found its way into waste, food and water streams. This has become the huge problem now as it can't be disposed easily. Flipkart was very concerned for toward reducing this plastic waste. Therefore, team at Flipkart followed five guiding Principles.

1. **Reuse:** The used material of packaging could be reused again and again.
2. **Reduce:** the amount of virgin material used for creating the packaging could be reduced.
3. **Recycle:** the used packaging could be recycled.
4. **Repurpose:** the existing packaging material be repurposed for new use cases.
5. **Regenerate:** Packaging could be designed using innovative solutions that contribute to regeneration

Flipkart's approach towards sustainable packaging relies on Four Pillars.

1. **Engagement:** Engage government policy makers and legislators and stakeholders to define and standardise the norms of sustainable packaging for the ecommerce industry.
2. **Capacity Building:** Create awareness amongst, consumers, sellers and Flipkart employees through community education programs.
3. **Compliance:** engage with designated certified recycling agencies to ensure compliance as per current regulations.
4. **Innovation:** Along with the start-ups, Flipkart identified different solutions to find the alternative to single use plastic in packaging especially for Ecommerce.

Milestones of the Flipkart's Journey towards sustainable packaging: this Flipkart journey started in March 2019.

March 2019

The packaging Team at Flipkart reviewed the Packaging design and development process to discover the alternative options to reduce and reuse packaging, replacing single use plastic and recycle plastic waste to reduce the waste filling into land, water and food due to Flipkart Packaging and Logistics.

December 2019:

The plastic in all packaging filler material is completely replaced by Shredded paper, 2 Ply wraps and other alternative material.

February 2020:

Customised recyclable paper Bags replaced plastic security bags.

May 2020:

Replaced all single used plastic for the state of Maharashtra.

June 2020:

Flipkart stated working with recyclers to divert all plastic waste generated from Landfills.

August 2020

To convince for the elimination of outer packaging, Flipkart stated working with sellers and Suppliers without whom it would have been possible.

December 2020

After Maharashtra state the single use plastic was eliminated by 56% in Karnataka, Tamil Nadu, Telangana and Andhra Pradesh.

January 2021

61% reduction in single used plastic was achieved with Sustainable packaging introduced in Haryana.

May 2021

15% of products delivered by Flipkart were shipped only in primary packaging by shipping without secondary packaging.

July 2021:

The significant milestone of 100% elimination of Single use plastic.

Flipkart has received multiple green certifications, including:

TRUE Gold certification

In 2023, Flipkart received TRUE Gold certification for zero waste at four of its distribution and warehousing facilities. This certification is awarded by Green Business Certification Inc. and requires facilities to divert at least 90% of waste from landfills, incineration, and the environment. Flipkart exceeded this requirement, diverting over 97% of waste across all certified sites.

IGBC Platinum rating

Flipkart's Haringhata Big Box project in West Bengal received an IGBC Platinum rating for its green logistics and warehouses. This facility received the highest score in India under the IGBC Green Logistics Parks & Warehouses rating system.

IGBC Platinum pre-certification

Flipkart's Manesar RDC received Platinum pre-certification from the Indian Green Building Council (IGBC). This facility features rainwater harvesting systems, green spaces, and solar energy generation.

ISO 14001 certification

Most of Flipkart's facilities are ISO 14001 certified.

The Flipkart achievement so far could be summarised in below diagram.

Plastic	Alternate	Current State
Invoice Poly Bag	Paper Pouch	Fully Converted
Stretch Wrap	Nylon Belts	Fully Converted
Bubble Wrap	2 Ply wrap, Shredded Fillers	Fully Converted
Security Bag - Reverse	MUPC Bag	In experiment stage
Security Bag - Forward	Paper bag, Shipping without packaging (ecom ready packaging)	100% Converted (Implemented GP on 85% marketplace network)
Others (Shrink + Pouch)	Paper Sticker, Paper Pouch	Implemented in MH, Under Observation



Source: report by WWF based on case study on sustainable packaging by Flipkart

Sustainable warehousing by Flipkart:

Flipkart's Warehouse in Haringhata- West Bengal. Spanning an area equivalent to 12 Olympic football fields is India's largest warehouse which provides an in-depth look into Flipkart's expansive warehouse, this facility is the largest of its kind in India.

The warehouse showcases Flipkart's commitment to advanced technology and employee well-being. It is equipped with AI-enabled systems and state-of-the-art technology, 70% of which is developed in India. These innovations aim to reduce turnaround time, minimize employee fatigue, and enhance overall efficiency, enabling the processing of over one million orders daily. □

Sustainability is a key focus of the facility, featuring water harvesting systems, sewage treatment plants, solar panels, and EV charging points. These initiatives contribute to a greener supply chain and have earned the warehouse pre-certification from the Indian Green Building Council.

Safety measures are prioritized to ensure the well-being of employees and the facility. The warehouse also plays a significant role in connecting thousands of sellers and customers nationwide, facilitating faster deliveries and creating numerous jobs across the supply chain. This underscores the vital role of e-commerce in supporting Indian businesses of all sizes. □

Green Building Certification: The Haringhata Big Box project has achieved a Platinum certification from the Indian Green Building Council (IGBC), marking it as the first e-commerce warehouse in India to receive this distinction. This certification reflects Flipkart's commitment to sustainable infrastructure development.

Renewable Energy Integration: The warehouse is equipped with a 2.75 MW solar rooftop photovoltaic plant, which meets 100% of its daytime power requirements. This initiative aligns with Flipkart's broader goal of sourcing 100% of its electricity needs from renewable sources by 2030, as part of its commitment to the Climate Group's RE100 initiative.

Water Conservation Efforts: The facility incorporates a pond with a rainwater harvesting capacity of 8,000 cubic meters and ensures 100% wastewater treatment and reuse for landscaping and flushing purposes. These measures significantly reduce the warehouse's reliance on external water sources and promote sustainable water management practices.

Waste Management and Recycling: Flipkart has eliminated single-use plastic from its packaging and utilizes eco-friendly alternatives, including recycled materials. The company has also developed a green packaging technique that optimizes material usage by selecting appropriate packaging based on product characteristics, thereby reducing waste.

Electric Mobility in Deliveries: Flipkart is electrifying its logistics network with the goal of powering 100% of its last-mile deliveries via electric vehicles (EVs) by 2030. This transition to EVs is a significant step towards reducing carbon emissions in its supply chain operations.

Through these initiatives, Flipkart's Haringhata- West Bengal warehouse demonstrates the company's commitment to building a sustainable and responsible supply chain that minimizes environmental impact while enhancing operational efficiency.



Source: <https://www.youtube.com/watch?v=sWpb-bR0Uw8>



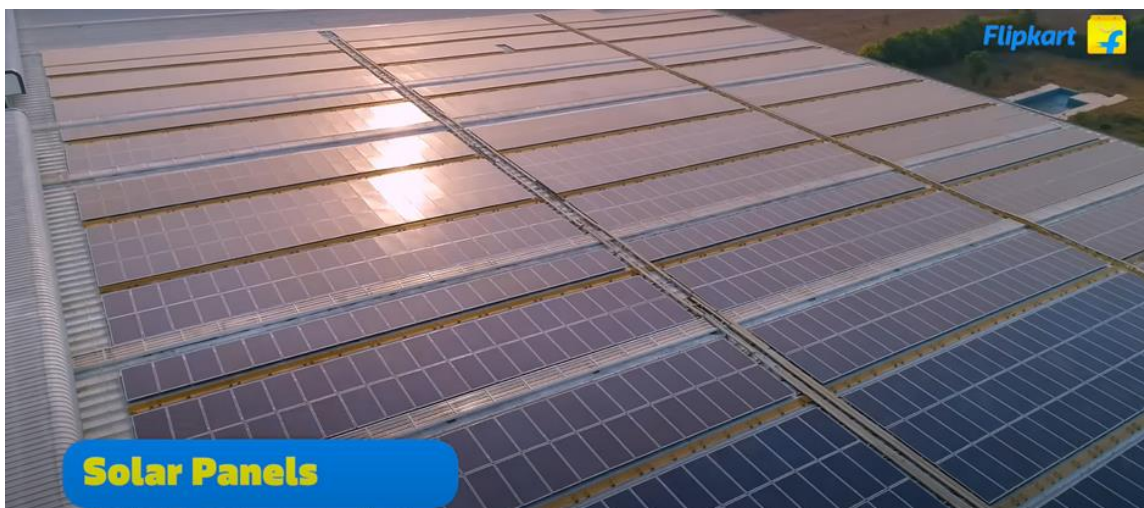
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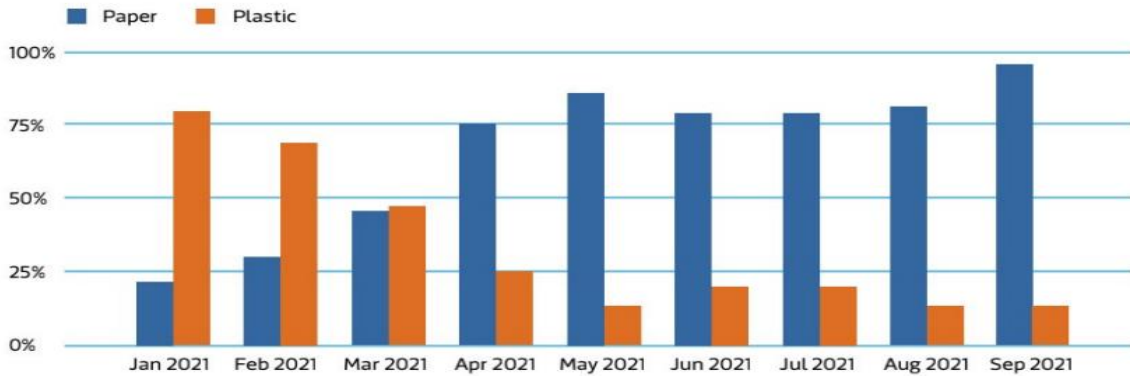


Source: <https://www.youtube.com/watch?v=sWpb-bR0Uw8>

Initiatives of Myntra towards Sustainable Packaging.

Myntra company which is the very popular ecommerce brand, is integral part of Flipkart group. Following Flipkart, Myntra also places strong emphasis on sustainable packaging. Myntra Started its journey of sustainable packaging in Jan 2021, and Myntra's supply chain is now entirely sustainable with 100% elimination of plastic.

Paper and Plastic consumption at Myntra's fulfilment centres



Source: report by WWF based on case study on sustainable packaging by Flipkart

Research study on impact of sustainable packaging on customer purchase decision:

The initiatives of Flipkart towards sustainable packaging were really admirable and thus further motivate the authors to proceed to evaluate the effect of these initiatives on Consumer decisions, preferences and satisfaction level.

Research methodology:

This research is descriptive research to investigate how sustainable packaging impact on Consumer purchase decision to prefer Flipkart over other ecommerce sites, mainly because of Sustainable packaging. Using convenience sampling method, the sample of 100 customers were selected for this study. The data is collected by sending structure questionnaire on WhatsApp. The email ID for sending the filled in questionnaire is provided in the message. The responses from 88 respondents were collected within the duration of one week.

Research Objective:

1. To identify the awareness level of Sustainable packaging amongst the Flipkart customers.
2. To evaluate the impact of sustainable packaging on Consumer's buying decision.
3. To suggest the further course of decisions to Flipkart to leverage the sustainable packaging initiatives.

Analysis of Data:

Female are the potential customers of Flipkart. Majority of the customers are in the age group of 20-40 years and they generally purchase once in a month

Fig. 1

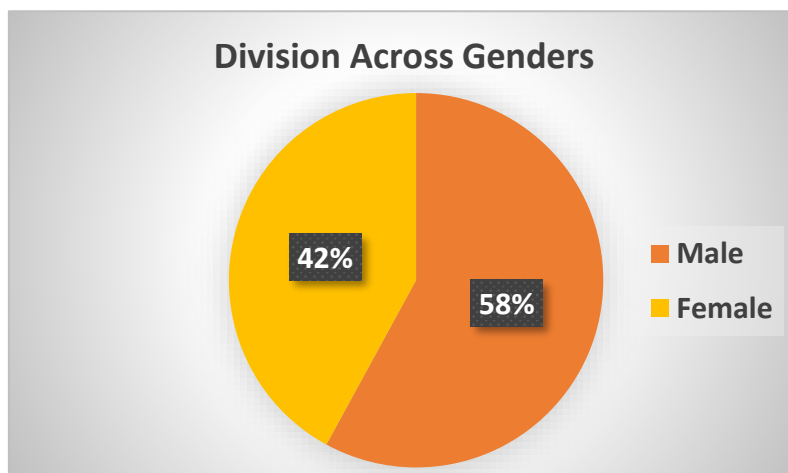


Fig 2

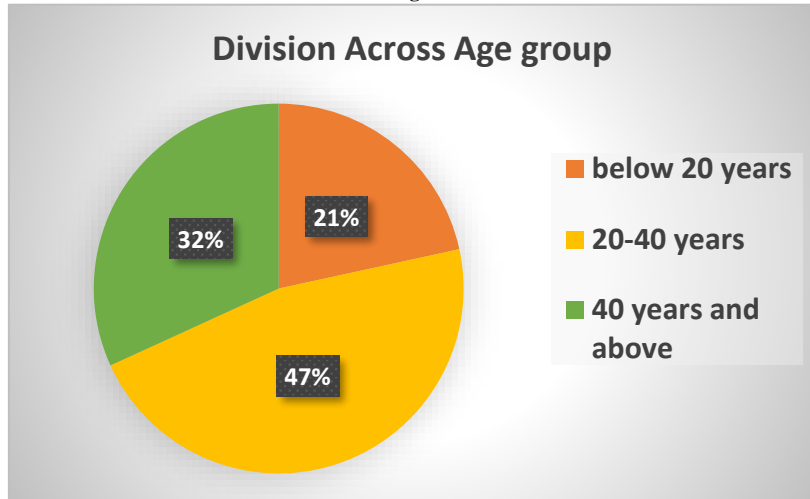


Fig.3

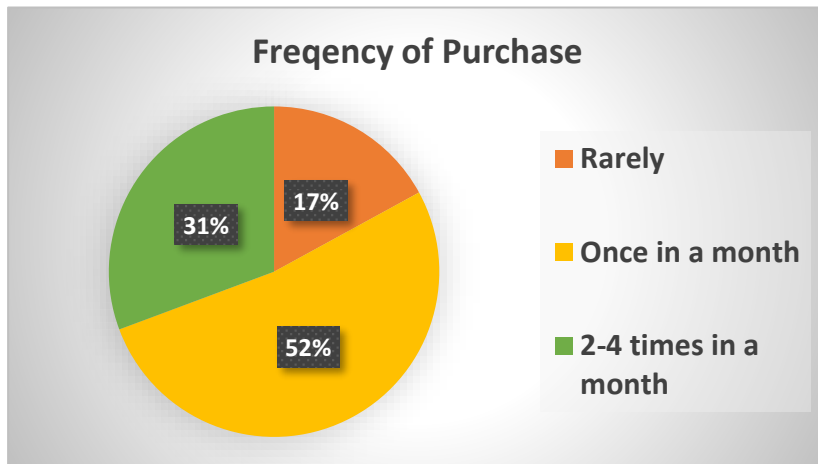


Fig. 4

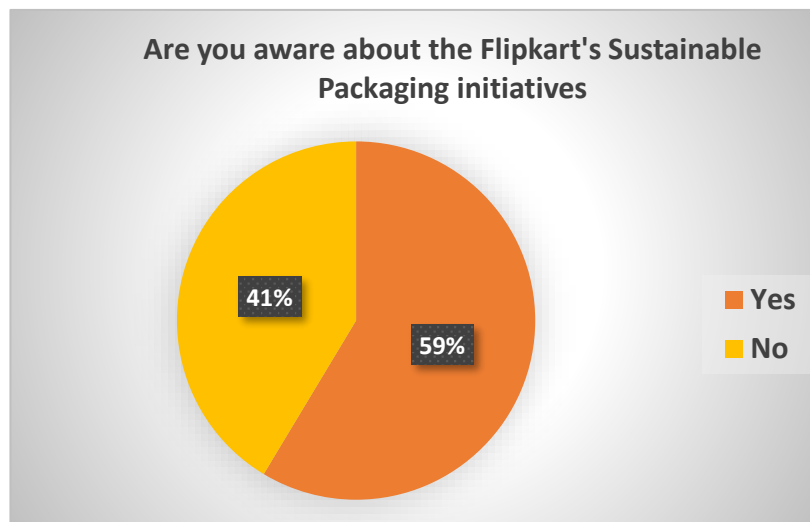


Fig. 5

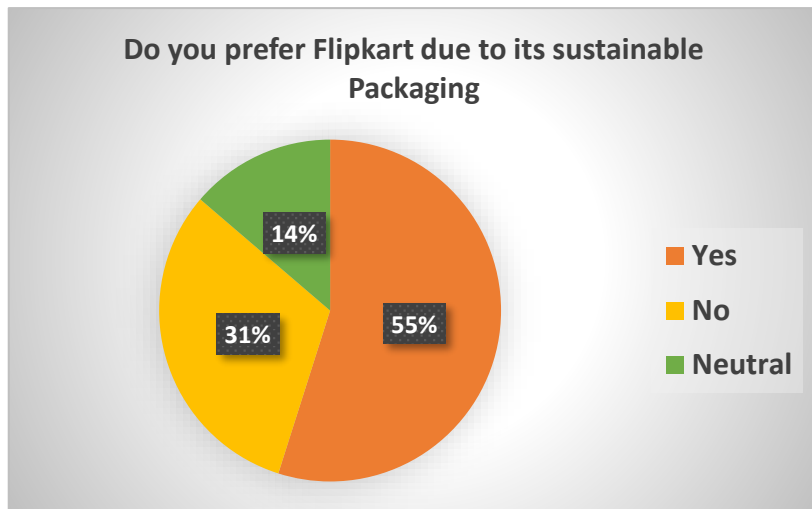


Fig. 6



Though Flipkart customers are aware and prefer sustainable Packaging, they are not ready to pay extra for Sustainable Packaging

Fig.7

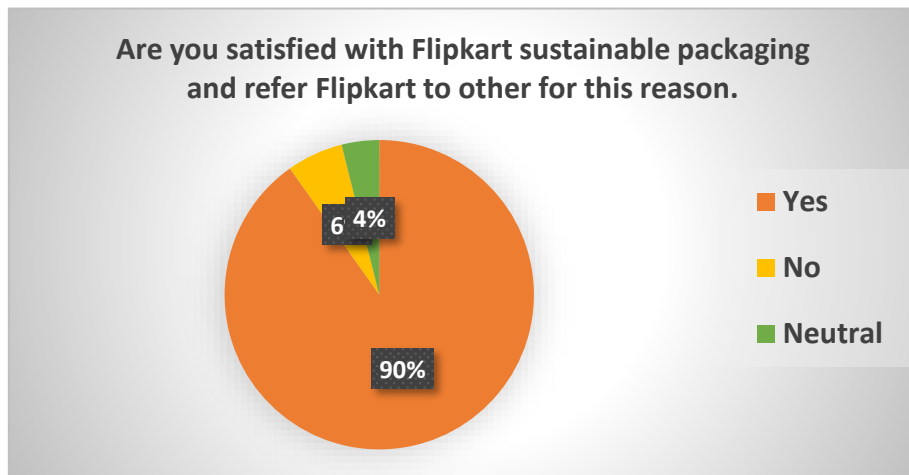


Table-1 Correlation

Correlation	Purchase Decision	Sustainable Packaging	Satisfaction and Loyalty
Purchase Decision	1		
Sustainable Packaging	0.81	1	
Satisfaction and Loyalty	0.92	0.73	1

Purchase Decision is strongly related with Sustainable packaging (0.81). Customer Satisfaction and loyalty is fairly related with Sustainable packaging (0.73).

Conclusion:

Investigation on the impact of sustainable packaging on customer decision making concludes that Customers appreciated Flipkart's eco-friendly packaging, leading to increased satisfaction and loyalty. The findings concludes that eco-friendly packaging boost customer purchase intentions, satisfaction, and loyalty.

Suggestions and recommendations to Flipkart:

1. As considerable percentage of customers (41%) are still not aware about the Flipkart initiatives for Sustainable packaging, Flipkart should extensively arrange awareness and promotion program for creating awareness about their initiative for sustainable packaging.
2. Though majority of the customers prefer to get the product delivered in sustainable packaging, they are not willing to pay extra for that. Therefore the Flipkart should also develop cost effective sustainable packaging alternatives.

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