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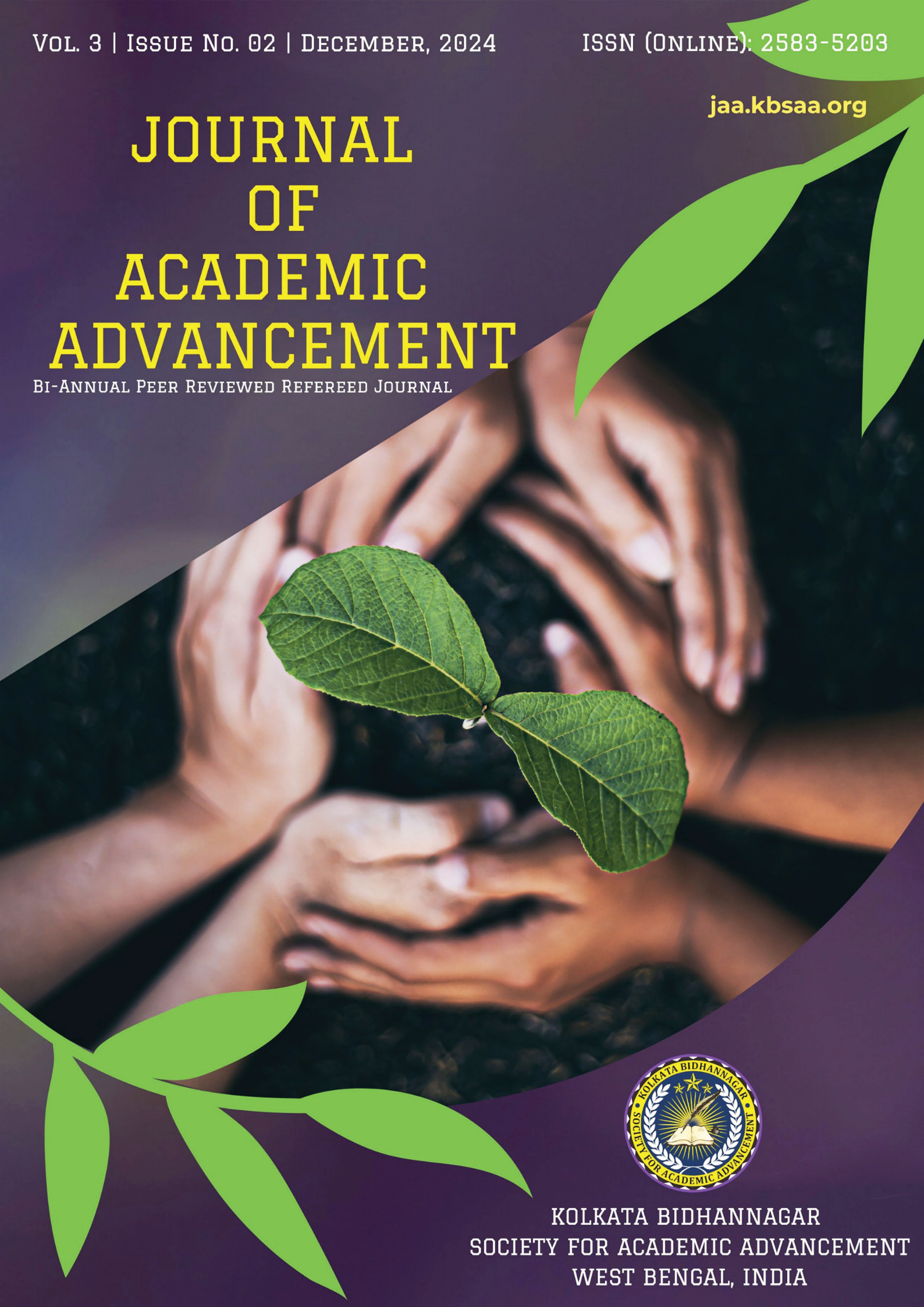

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EDITORIAL

We feel honoured and privileged to present the Bi-Annual Peer Reviewed Refereed Journal, ISSN (Online): 2583-5203, Volume 3, No. 02, December, 2024 among our esteemed readers and academic fraternity.

This Journal is the outcome of the contributions of insightful research-oriented papers/articles by various eminent academicians, and research scholars in a highly organized and lucid manner with a clear and detailed analysis related to the emerging areas in the fields of Social Sciences and Allied Areas.

The views expressed in the research-oriented papers/articles solely belong to the paper contributor(s). Neither the Publisher nor the Editor(s) in any way can be held responsible for any comments, views and opinions expressed by **paper contributors.** While editing, we put in a reasonable effort to ensure that no infringement of any intellectual property right is tolerated.

We also express our sincere thanks and gratitude to all the contributors to research papers/ articles who have taken pain in preparing manuscripts, incorporating reviewer(s) valuable suggestions and cooperating with us in every possible way.

We also express our heartfelt gratitude to all the esteemed members of the Editorial Board, Esteemed Reviewer(s) who despite their busy schedules have given their valuable time, suggestions and comments to enrich the quality of the contributory resears paper(s) in bringing to light this December issue.

Last, but not least, we revere the patronage and moral support extended by our parents and family members whose constant encouragement and cooperation made it possible for us to complete on time.

We would highly appreciate and look forward to your valuable suggestions, comments and feedback at **editorbr2022@gmail.com**

December 31, 2024
West Bengal, India

PEMA LAMA
Editor-in-Chief

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RESEARCH ARTICLE

A Study on the Operational Sustainability and Financial Performance of Selected Sustainable Packaging Companies in India

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ABSTRACT

The emerging need for ecological sustainability has stimulated the concept of green packaging or sustainable packaging at the leading edge of both the consciousness of consumers and business practices. As the awareness of issues like depletion of resources, plastic waste and climatic changes is increasing globally, the need for solutions regarding packaging that can minimize the environmental impact becomes rapidly critical. Due to an increase in regulatory pressures and customer awareness, it is slowly becoming imperative for businesses to adopt sustainable packaging solutions.

This paper studies the financial performance of selected Indian firms practising sustainable packaging. A comparative analysis of the financial performance and operational sustainability of such firms has been conducted. Findings reveal that the company EPL, for a majority of the matrices has emerged with the highest mean about both the process sustainability performance and key financial performance. Waste intensity is the sole reliable index concerning operational sustainability whereas, for the financial performance, EBITDA Margin, Cash Profit Margin and Material Cost Consumption emerged as the reliable indicators.

1. INTRODUCTION

In recent times, the increasing need for ecological sustainability has changed the working of various industries with packaging arising as an important focus area. With the growing awareness amongst the consumers, companies are slowly striving towards adopting sustainable packaging solutions into its operations. As environmental issues like generation of plastic waste, resource depletion and other environmental threats are increasing at a fast pace, consumers and businesses are increasingly shifting towards prioritizing eco-friendly practices. Sustainable packaging efforts enclose a wide range of strategies which are aimed towards minimizing ecological impact throughout the lifecycle of a product. This covers the usage of biodegradable as well as compostable materials along with recyclable designs, and novel manufacturing techniques which will help to reduce the production of waste materials and the consumption of energy. With the emergence of online shopping and the changing behaviour of consumers, the demand for eco-friendly packaging options has slowly increased as shoppers nowadays look for products that align with their values and needs. Nowadays, firms are focusing on product and process sustainability to maintain the ecological balance. But, the financial performance of the firm is equally important when it comes to sustainability. Product sustainability relates to the method of formulating,

producing and delivering products in ways that shorten the ecological impact, boosts the responsibility towards the society as well as assure economic viability. This involves the utilization of renewable sources of energy, reducing the generation of waste emissions as well as guaranteeing principled labour management in the entire supply chain. A process that can be used and maintained over time without depleting the renewable sources of energy or jeopardizing the well-being of future generations is known as process sustainability. The main agenda is the creation of substances or products without hampering future generations.

Financial performance is vital for firms practising sustainable packaging as it helps to attract the capital required for eco-friendly innovations. A strong financial position of the company elevates its competitive position in the market which allows the company to reduce their cost and continue to offer a competitive pricing while maintaining a strong focus on sustainability. A strong financial standing also enhances the reputation of the firm among its customers as well as the stakeholders. Financial strength also allows the company to invest in the research and development sector to create new materials that reduce environmental impact.

2. LITERATURE REVIEW

Ameer and Othman (2012) revealed that global sustainable companies' emphasis more on the issues pertaining to eco-centric values rather than ethno-centric values. The results upheld the fact that the companies that follow or adopt green practices show a higher financial performance than the companies that do not. Results also highlighted that adopting these sustainable activities in the companies is highly encouraged by the shareholders and other legal owners of the ventures. Nayyar et al., (2014) highlighted the fact that in the current world scenario, participants trust that their choice of packaging should have ethicality and also the government should come up with regulations to make the participants choose sustainably packaged products. Enlightening Impact came second with a score of 13.67 per cent significance which states the effectiveness of the educational level of the participants and the government in taking strict actions to create a barrier for them while utilizing unhealthy environment and environment-friendly policies. Cognitive Prediction was third with 10.993 variance which proved that different types of packaging create an unhealthy environment due to its composition. Xin et al., (2019) revealed that there lies a direct relationship between eco-friendly packaging and the company in making more environmental supply chain management. The company should thus infuse sustainable packaging into its operational activities which will in turn be advantageous for the business along with the environment as well these benefits have a profound relationship with sustainable supply chain management. Siracusa and Rosa (2019) With the growing concern for environmental sustainability, packaging sectors are working towards reducing the volume as well as the weight of the packaging used for products. The other methods being used are reusability, recyclability and recovery of energy. Even after all the experiments, sustainable packaging is still a thought owing to the high cost and the performance of the materials. Due to increased biodegradation, the functions remain active only for a short period. Jyoti and Khanna (2021) studies the effect of a firm's sustainable performance on the profitability (financial) performance of a few selected companies listed on BSE. Findings reveal that there exists a significant negative relation between the environmental score and ROA and ROCE along with a combined score of environmental, social and governance. Only a notable negative relation was found to exist between social score and ROE. James and Kurian (2021) have found that the most important factor for the young Indian consumers aged between 20-40 years, influencing the purchasing intent of eco-friendly packaged products was the willingness to pay. Therefore, the study revealed that price is no longer an obstruction for implementing sustainable practices. Findings further revealed that the ease of use was another influential factor for consumers' purchasing intent for a product with a correlation coefficient of 0.606 (Pearson). Purchasing attitude and intention (0.114) showed to have a positive relationship. The study also proved that young consumers were more inclined towards environmental well-being.

Oloyede and Lignou, (2021) found out that consumers highlighted issues such as too much of plastic usage and over-packaging catering to current packaging techniques used. The main driving factor for consumer's purchasing intent turned out to be price and quality. Though the participants were enthralled by the sustainable prototypes, they were somehow not satisfied by the design. They were also not willing enough to pay extra for sustainable packaging. The main message that came out while designing eco-friendly packaging was - Reduce, Reuse and Recycle. Participants were also of the opinion that minimal amount should be used with respect to packaging and they should be clearly labelled for sustainability. Stark and Matuana (2021) studied that if cellulose was made commercially available, industries could then choose it as the best alternative for packaging. Lightweight designs by either removing components or by foaming the material of the packaging was believed to contribute towards sustainable packaging along with novel materials, packaging recycling and implementation of certification. Ibrahim et al., (2022) Eco-Friendly packaging can be made available by utilizing bio based as well as recyclable materials. Various materials like paper, paperboard, metals, glass and plastics (petrochemical and biopolymer) have been found to be useful with regards to sustainable packaging thus causing less harm to the environment. Owing to an increase consciousness for the ecological impact of packaging materials and environmental concerns, the need for sustainable packaging has increased. Morashti et al. (2022) revealed that the majority of the research has aimed towards studying science and engineering whereas, research regarding eco-friendly packaging in supply chain management was extremely limited before 2013 after which it had finally been able to gain momentum. The emergence of e-business, government policies and an increase in consumer awareness led to an increase in research about this area with cost efficiency, innovation in the field of technology and alternative development being recognised as the key drivers to the success of eco-friendly packaging.

Thomas and Bhaumik (2023) revealed that sustainable activities done by the listed companies in India had accounted for a positive influence on the performance of the firm. Further study revealed that amongst the three sustainable variables chosen for the research - government pillar, social pillar and environmental pillar, social and governance initiatives of the firm proved to have a positive influence on the performance whereas environmental activities accounted for a negative and insignificant correlation with the performance of the firm. Maximum value was found to exist for the government pillar (96.99) followed by social pillar (93.31). Haleem et al., (2023) in their study throw a light on Green Manufacturing, highlighting its significance in encouraging a green environment. It recognizes and explores different strategic tools along with specialized methods to implement Green Manufacturing, Study has also been extended to recognize the important applications that assist to environmental sustainability. The most evident merit of green manufacturing has been found out to be its ability to entice more end users generating an increase in business. Businesses not just help to balance the environment through adopting sustainable packaging options, but also are able to increase the profitability by garnering the interest of eco-friendly consumers and building a strong reputation for the company. Hussain et al., (2024) aimed to focus on the different types of sustainable materials and methods used for packaging of food, their necessity and their impact on future sustainable goals. It has been found that in order to reduce the risk on the ecology, it is an urgent need for companies to come up with eco-friendly alternatives. Sustainable options like bio-nanocomposites as well as antimicrobial packaging were found. The choice of packaging should depend on factors like sustainability along with cost and regularities. The choice of chemical methods should depend on food safety regulations along with the product type and properties required.

3. RESEARCH GAP AND RESEARCH OBJECTIVES

The literature covered for the purpose of this study has focused mainly on the product sustainability aspect of the packaging firms, the perception and acceptance of sustainable and eco-friendly packages among consumers. Moreover, there is a dearth of studies on the

financial performance of sustainable packaging firms, with no specific study with respect to Indian firms.

With this in view, the main aim of this study is to conduct a comparative analysis of the operational sustainability and financial performance of selected listed sustainable packaging companies in India. Accordingly, the objectives of this study are:

- To understand how sustainable packaging practices affect the profitability of the companies by comparing and analyzing variations in key process sustainability indices and financial performance indicators of the selected listed sustainable packaging companies in India.
- To determine the consistency and reliability of the measures of the key process sustainability indices and key financial performance indicators of the selected listed sustainable packaging companies in India.
- To understand through various literature reviews, the various factors that influence the decision regarding the choice of sustainable packaging to be used by companies for packaging of food.

4. RESEARCH METHODOLOGY

Type of Research: The study is descriptive in nature, involving a comparative explanation of the process sustainability and financial performance of the sustainable packaging companies under consideration.

Elements: The following sustainable packaging companies are selected for the study: EPL Ltd., TCPL Ltd., Uflex Ltd. and Huhtamaki India Ltd.

Sample Frame: 4 sustainable packaging companies have been selected for the study.

Sampling Method: Convenience and Purposive Sampling. The companies considered for the study were selected on the basis of data availability, extent of market share and market capitalisation.

Sources of Data: Secondary data has been collected from the Annual Financial Reports and Business Responsibility and Sustainability Reports (BRSR) of the selected companies.

Methods of Analysis

A comparative study is conducted between the selected companies from two perspectives - Process Sustainability and Financial Performance. The following measures are taken as indices of process sustainability: Energy intensity (units consumed per rupee of revenue generated), Water intensity (units consumed per rupee of revenue generated), GHG Scope emissions intensity (units emitted per rupee of revenue generated), Waste intensity (units produced per rupee of revenue generated) and Waste Recovery Rate (Waste recycled and reutilized in the production process as a % of total waste generated). The following measures are taken as the key financial performance indicators: EBITDA Margin, PAT Margin, Return on Capital Employed, Return on Equity, Cash Profit Margin, Interest Coverage Rate and Material Cost Composition.

Analysis Techniques: Three-year mean and Standard deviation of the process sustainability indices for the period 2021-22, 2022-23 and 2023-24 and five five-year mean and Standard deviation of the key financial performance indicators for the period 2019-20 to 2023-24 have been computed for depicting the gross performance and absolute volatility of the variables under study.

The coefficient of Variation (CV) of the companies under study has been determined for every variable considered and compared to analyze the relative volatility of the performance variables between the companies. Cronbach's Alpha has been computed for every performance variable to determine the internal consistency of the data and the overall reliability of the performance indices.

5. DATA ANALYSIS AND RESULTS

The Jamovi Statistical Software has been used in the data analysis process.

TABLE 1: PROCESS SUSTAINABILITY INDICES

Energy Intensity (Units/Rs. of Sales)					Water Intensity (Units/Rs. of Sales)			
	MEAN	SD	CV	ALPHA	MEAN	SD	CV	ALPHA
EPL	17.85	1.2352	6.919888	0.282	9.5	1.3289	13.98842	0.53
TCPL	1.33	0.1185	8.909774		1.02	0.0808	7.921569	
UFLEX	2.35	0.08	3.404255		5.55	0.4053	7.302703	
HAHTAMAKI	1.65	0.0289	1.751515		5.53	0.1528	2.76311	
Waste Intensity (Units/Rs. of Sales)					Waste Recovery Rate (in Decimals)			
	MEAN	SD	CV	ALPHA	MEAN	SD	CV	ALPHA
EPL	0.5167	0.0252	4.877105	0.735	0.9936	0.00917	0.922907	-0.655
TCPL	0.1433	0.0503	35.10119		7.30E-04	0.00119	163.0137	
UFLEX	0.0475	2.94E-04	0.618947		0.0845	0.00111	1.313609	
HAHTAMAKI	0.19	0.02	10.52632		0.9749	0.01338	1.372448	
Emissions Intensity (Units/Rs. of Sales)								
	MEAN	SD	CV	ALPHA				
EPL	2.4767	0.9655	38.98332	0.309				
TCPL	0.24	0.0265	11.04167					
UFLEX	0.08	0.01	12.5					
HAHTAMAKI	2.1667	0.1528	7.052199					

Source: BRSR, Annual Reports

TABLE 2: FINANCIAL PERFORMANCE INDICATORS

	MEAN	SD	CV	ALPHA
EPL	0.1828	0.0182	9.956236	0.882
TCPL	0.1616	0.0146	9.034653	
UFLEX	0.133	0.0237	17.81955	
HAHTAMAKI	0.0806	0.0298	36.9727	
Cash Profit Margin (in Decimals)				
	MEAN	SD	CV	ALPHA
EPL	0.2353	0.0137	5.822354	0.879
TCPL	0.1075	0.0104	9.674419	
UFLEX	0.0858	0.0153	17.83217	
HAHTAMAKI	0.0589	0.028	47.5382	
ROE (in Decimals)				
	MEAN	SD	CV	ALPHA
EPL	0.1362	0.0167	12.26138	0.266
TCPL	0.2022	0.0593	29.3274	
UFLEX	0.0706	0.0165	23.3711	

HAHTAMAKI	0.1518	0.1516	99.86825	
Material Cost Composition				
	MEAN	SD	CV	ALPHA
EPL	52.1	3.72	7.140115	0.884
TCPL	64.1	1.53	2.386895	
UFLEX	66.3	4.31	6.500754	
HAHTAMAKI	69.8	3.51	5.028653	
PAT Margin (In Decimals)				
	MEAN	SD	CV	ALPHA
EPL	0.1597	0.02336	14.62743	0.611
TCPL	0.0638	0.01999	31.33229	
UFLEX	0.0368	0.0091	24.72826	
HAHTAMAKI	0.0974	0.06526	67.00205	
Interest Coverage Rate (In Times)				
	MEAN	SD	CV	ALPHA
EPL	10.84	2.588	23.87454	0.681
TCPL	3.09	0.903	29.2233	
UFLEX	2.54	0.6	23.62205	
HAHTAMAKI	6.51	3.617	55.56068	
ROCE (in Decimals)				
	MEAN	SD	CV	ALPHA
EPL	0.161	0.0262	16.27329	0.656
TCPL	0.233	0.0476	20.42918	
UFLEX	0.118	0.0212	17.9661	
HAHTAMAKI	0.131	0.0922	70.38168	

(Source: Company BRSR Reports)

Table 1 shows the mean, standard deviation (SD), Coefficient of Variation (CV) and Cronbach's Alpha (Alpha) values of process sustainability indicators of the selected sustainable packaging companies, while Table 2 shows similar statistical values for the key financial performance indicators for the same companies. As per Table 1, EPL has the highest mean energy intensity but also the highest CV, indicating comparatively higher volatility in relative energy consumption per unit of revenue generated. Hahtamaki has the lowest CV for energy intensity, denoting comparatively stable energy usage. The Alpha value (0.282) is lower than 0.7, denoting inconsistency of the data and unreliability of the metric. For water intensity, mean usage is highest for Uflex and lowest for EPL, while relative stability in water usage as per CV is highest for Hahtamaki and lowest for EPL. The Alpha value (0.53) is less than 0.7, denoting inconsistency of the data and unreliability of the metric. For GHG emissions intensity, mean emissions are highest for EPL and lowest for TCPL, while relative stability in emissions generated as per CV is best for Hahtamaki and worst for EPL. Again, the Alpha value (0.309) is lower than 0.7, denoting inconsistency of the data and unreliability of the metric. For Waste Intensity, EPL has the highest as well as the most stable (as per CV) mean waste generation. Here, the Alpha value (0.735) is higher than 0.7, denoting that the data is consistent and the metric is reliable. For the Waste recovery rate, EPL has the highest and the most stable mean recovery rate. However, the Alpha value is significantly below 0.7, denoting inconsistency of the data and unreliability of the metric.

According to Table 2 (For the key financial performance indicators), The mean EBITDA Margin is highest for EPL while stability in EBITDA generation is relatively better for TCPL. The Alpha value (0.882) is higher than 0.7, denoting that the data is consistent and the metric is reliable. The mean cash profit margin as well as the stability in cash profit generation is best for EPL. Here, the Alpha value (0.879) is higher than 0.7, denoting that the data is consistent and the metric is reliable. The mean Return on Equity is highest for TCPL while the relative stability in ROE generation is best for EPL. However, the Alpha value (0.266) is lower than 0.7, denoting inconsistency of the data and unreliability of the metric.

The mean material cost composition is highest for Hahtamaki while the relative stability is best for TCPL. The Alpha value (0.884) is above 0.7, denoting that the data is consistent and the metric is reliable. EPL has the highest as well as the most stable mean PAT Margin. However, the Alpha value (0.611) is below 0.7, denoting inconsistency of the data and unreliability of the metric. EPL has the highest mean Interest Coverage Ratio, while Uflex relatively has the most stable Interest Coverage Ratio. However, the Alpha value (0.681) is below 0.7, denoting inconsistency of the data and unreliability of the metric. TCPL has the highest mean Return on Capital Employed, while EPL relatively has the most stable ROCE generation. Again, the Alpha value (0.656) is below 0.7, denoting inconsistency of the data and unreliability of the metric. For process sustainability performance, EPL has the highest mean for most metrics and also has the best stability for most indices. While having the highest mean Waste Recovery Rate is a good sustainability indicator, getting the highest mean in other metrics is a matter of concern, denoting higher environmental cost per rupee of financial benefits generated. Waste intensity is found to be the only reliable index. For Key financial performance indicators, EPL has the highest mean as well as the best stability for most of the indicators. This is a good sign of healthy income generation from the business's sustainable operations. The EBITDA Margin, Cash Profit Margin and Material Cost Consumption are found to be reliable indicators.

6. CONCLUSION

The trends in sustainable packaging in India reveal a prominent diversion towards ecologically sound practices that harmonize with global sustainability practices. Owing to an increase in the consumer's consciousness regarding environmental issues, businesses are being driven to adopt and innovate eco-friendly practices. Various factors such as regulations by the government, and an increase in consumer demand for sustainability packaging options along global policies and frameworks are acting as key drivers behind this ongoing packaging evolution.

In conclusion, this study highlights the crucial relationship between sustainable strategies and economic feasibility. The findings indicate that the firms focusing on sustainability not only elevate their ecological impact but also encounter improved monetary outcomes. By embracing innovative activities and materials, these firms can not only reduce their costs but also increase their level of efficiency, and meet the increasing demand of consumers for sustainable solutions. Finally, the study suggests that combining sustainability into the fundamental business framework is not only beneficial for the ecosystem but is also an important driver of long-term monetary success in India's developing market landscape.

It has also been found that the design of packaging along with the weight of the packaging are the influential factors regarding the choice of sustainable packaging material to be used by the companies. The packaging should focus on being lightweight and cost-efficient as well. Challenges such as the infrastructure required for the production of ecologically favourable packaging solutions, the associated cost as well as the presence of lack of awareness among the customers are hindering the shift towards sustainable packaging in the economy. Educating the consumers towards the effectiveness and usefulness of eco-friendly packaging, continuous investment, and improvements in the field of research and development along with supportive government policies will help encourage a sustainable packaging environment which will not only cater to the present needs but also will also be able to secure a healthier environment for the upcoming generations.

REFERENCES

[1] Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on the top global corporations. *Journal of Business Ethics,* 108(1), 61–79. https://doi.org/10.1007/s10551-011-1063-9

[2] Asim, Z., Al Shamsi, I. R., Wahaj, M., Raza, A., Hasan, S. A., Siddiqui, S. A., Aladresi, A., Sorooshian, S., & Teck, T. S. (2022). Significance of sustainable packaging: A case study from a supply chain perspective. *Applied Systems Innovation,* 5(6), 117. https://doi.org/10.3390/asi5060117

[3] Choudhury, A., & Ghosh, A. (2021). Consumer awareness and acceptance of sustainable packaging in India: An empirical study. *International Journal of Business and Management,* 16(5), 23-34.

[4] Haleem, A., Javaid, M., Singh, R. P., Suman, R., & Qadri, M. A. (2023). A pervasive study on green manufacturing towards attaining sustainability. *Green Technologies and Sustainability,* 1(2), 100018. https://doi.org/10.1016/j.grets.2023.100018

[5] Hussain, S., Akhter, R., & Maktedar, S. S. (2024). Advancements in sustainable food packaging: From eco-friendly materials to innovative technologies. *Sustainable Food Technology,* 2(5), 1297-1364. https://doi.org/10.1039/d4fb00084f

[6] Ibrahim, I. D., Hamam, Y., Sadiku, E. R., Ndambuki, J. M., Kupolati, W. K., Jamiru, T., Eze, A. A., & Snyman, J. (2022). Need for sustainable packaging: An overview. *Polymers,* 14(20), 4430. https://doi.org/10.3390/polym14204430

[7] Jain, P., & Hudnurkar, M. (2022). Sustainable packaging in the FMCG industry. *Cleaner and Responsible Consumption, 7,* 100075. https://doi.org/10.1016/j.clrc.2022.100075

[8] James, F., & Kurian, A. (2021). Sustainable packaging: A study on consumer perception on sustainable packaging options in the e-commerce industry. *Natural Volatiles & Essential Oils*, 8(5), 10547-10559.

[9] Jyoti, G., & Khanna, A. (2021). Does sustainability performance impact financial performance? Evidence from Indian service sector firms. *Sustainable Development,* 29(6), 1086–1095. https://doi.org/10.1002/sd.2204

[10] Kumar, S., & Singh, R. (2020). Sustainable packaging in India: A review of current trends and future directions. *Journal of Cleaner Production,* 256, 120-135.

[11] Morashti, J. A., An, Y., & Jang, H. (2022). A systematic literature review of sustainable packaging in supply chain management. *Sustainability,* 14(9), 4921. https://doi.org/10.3390/su14094921

[12] Nayyar, V., Pahuja, A., & Dogra, B. (2014). Sustainable packaging: An exploration of green Indian consumers. *International Journal of Management Excellence*, 2(3), 281–287.

[13] Oloyede, O. O., & Lignou, S. (2021). Sustainable paper-based packaging: A consumer's perspective. Sensory and consumer research for a sustainable food system, 10(5), 1035. https://doi.org/10.3390/foods10051035

[14] Patel, M., & Shah, A. (2022). Innovations in biodegradable packaging materials: A case study of the Indian market. *Materials Today: Proceedings,* 54, 103-108.

[15] Rani, P., & Kumar, V. (2023). The role of government policies in promoting sustainable packaging in India. *Environmental Science and Policy,* 125, 56-67.

[16] Siracusa, V., & Rosa, M. D. (2018). Sustainable packaging. In *Sustainable Food Systems from Agriculture to Industry*, 274-307. https://doi.org/10.1016/B978-0-12-811935-8.00008-1

[17] Stark, N. M., & Matuana, L. M. (2021). Trends in sustainable biobased packaging materials: A mini-review. *Materials Today: Sustainability*. https://doi.org/10.1016/j.matsu.2021.100010

[18] Thomas, A. E., & Bhaumik, A. (2023). Sustainability practices and firm performance: Evidence from listed companies in India. *International Journal of Professional Business Review,* 8(10), e03606. https://doi.org/10.26668/businessreview/2023.v8i10.3606

[19] Verma, R., & Joshi, M. (2022). Trends in sustainable packaging: Insights from the Indian FMCG sector. *Journal of Retailing and Consumer Services,* 64, 102776.

[20] Wong, K. X., Yap, K. S., & Rajendran, S. D. (2019). A study on the benefits of eco-friendly packaging on sustainable supply chain management in the fast-moving consumer goods industry. E3S Web of Conferences, 136. https://doi.org/10.1051/e3sconf/2019136040.