

Evaluating Circular Intergration Practices Across Leading FMCG Companies in India

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Abstract: *The Indian Fast-Moving Consumer Goods (FMCG) sector, a significant contributor to the nation's GDP serving hundreds of millions daily, is currently undergoing a critical transition from a linear "take-make-dispose" model to a circular economy (CE) framework. This shift is necessitated by the substantial environmental impact of the sector's supply chains, which consume vast amounts of energy and water while generating significant carbon emissions and waste streams. The introduction of CE principles focuses on maximizing resource efficiency and eliminating waste through the continuous cycling of materials via reuse, recycling, and regeneration, aligning with UN Sustainable Development Goals 12 and 13. An overview of the existing literature indicates that while CE principles like material reuse are rooted in Indian cultural traditions, modern industrial scaling requires deliberate integration into business strategy. Research highlights a "Tripartite Model" where CE practices are categorized into environmental, social, and financial pillars, revealing that market leaders like ITC, HUL, and Nestle are achieving significant progress in areas such as plastic neutrality, water stewardship, and the formalization of the informal waste sector. However, the literature also notes that adoption remains inconsistent, with smaller enterprises facing barriers like high CAPEX and lack of resources. The primary objectives of this research are to identify and categorize current CE practices among top Indian FMCG firms, analyze the drivers and barriers influencing adoption, identify enablers for effective integration, and highlight knowledge gaps for future policy. To achieve this, the study utilizes a systematic literature review methodology, employing a purposive sampling technique to analyze the top 20 FMCG companies listed on the Bombay Stock Exchange (BSE) by market capitalization. Data collection was strictly limited to secondary sources, specifically Business Responsibility and Sustainability Reports (BRSR), Integrated Annual Reports, and ESG disclosures for the fiscal years 2023-24 and 2024-25 to ensure standardized, metric-based data. The overarching research questions guiding this inquiry ask what specific CE practices are most prevalent in the Indian FMCG sector, what regulatory, market, and*

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technological factors drive or impede their adoption, what documented environmental and financial impacts have resulted, and how these practices vary across different subsectors and company sizes. This comprehensive review positions the circular economy not merely as an environmental initiative, but as a fundamental shift in value creation that enhances long-term resilience and unlocks significant economic value within the Indian context

Keywords: Circular economy, FMCG India, ESG performance, sustainable packaging, reverse logistics, waste management, SDG alignment

Introduction

The global economy traditionally has been a “take-make-dispose” model characterized by raw materials, manufacturing, and discarding waste Yaduvanshi et al. (2016). This type of approach has led to major environmental problems like air pollution, rising global warming, scarcity of non-renewable resources etc. India, which is a growing economy with significant manufacturing consumption, particularly faces challenge in efficiency of resources and waste management. One of the major contributors to the economic growth and environmental impact is the Fast-Moving Consumer Goods (FMCG) Sector, which serves crores of people each day and is a significant contributor of GDP.

The FMCG sector covers a wide variety of frequently bought items, such as packaged foods and beverages, personal care items, toiletries, and household goods. These products have high-volume production and rapid consumer turnover and also very extensive packaging requirements. As a result of this the supply chain is a major consumer of water and energy and a major contributor of carbon emissions and large water streams. With this in mind policymakers have started looking towards alternative economic models to reduce harm to the environment while maintaining sustainable development.

Circular Economy is a fundamental shift from the linear model towards systems that are able to maximise efficiency and reduce wastage. Instead of the linear path from extracting the resource to its disposal, Circular Economy (CE) principle focuses on continuous cycling of these resources through processes like reuse, refurbishment, recycling, and regeneration (Rajayya et al., 2025). This supports the United Nations Sustainable Development Goals (SDG), particularly SDG 12- Responsible Consumption and Production and SDG 13- Climate Action providing a path towards

sustainable growth.

In India the government has started some programs to help the Circular Economy grow. These programs, like the Swachh Bharat Mission, the Make in India Mission and the Smart Cities Mission have helped the Circular Economy get started. They have also helped with sustainability. Even though companies are starting to get on board with the Circular Economy and the government is supporting it it is still hard to make it work in the Fast-Moving Consumer Goods sector. Different companies and parts of the sector are doing things differently. It is not always working well.

Literature Review

1. The Circular Economy Paradigm: Theoretical Foundations and Evolution

The idea of a circular economy (CE) in India comes from different environmental efforts and traditional ways of thinking. Yaduvanshi et al. (2016) show how it developed over time in India, starting with environmental movements in the 1960s and officially growing because of growing resource shortages and problems with managing waste. They argue that CE ideas, like reusing materials and letting communities handle waste, have always been part of Indian culture and economy. But, to truly put these ideas into practice and expand them within today's industrial world, companies need to intentionally include CE in their business plans and how they manage their supply chains.

For a proper and comprehensive understanding of India's CE mission, particularly achieving UN SDG Goals by 2030, Rajayya et al. (2025) proposed a detailed framework. Highlighted as 5 core CE Principles - ReSOLVE (Regenerate, Share, Optimize, Loop, Virtualize, Exchange) and analyze these across different sectors and economic scales. This Research explains the need for coordinated effort among government, industry and society. Also emphasizes that the strategies should be tailored specifically according to India's different economic structure including both formal and informal sector.

To Understand the CE Implementation especially in the FMCG Sector requires an distinction between the following 3 levels: macro (national economy), meso (industry and supply chain), and micro (firm and product). Varma and Kataria (2020) suggest that circular economy is not just an environmental paradigm but also economic, as it is able to generate value through efficient use of resources and reducing wastage. They provide Indian examples for waste management and

recycling and resource recovery, showing that the practical methods of circular economy are already present in the country

2. Circular Economy Practices in FMCG: Types, Implementation Approaches, and Scale

The implementation of the CE practices in the FMCG sector presents some challenges and also some opportunities, mainly due to the industry's huge scale, complicated supply chains, and product characteristics. Nwabekee et al. (2024) propose a comprehensive framework to implement Circular Economy in FMCG, dividing it into three key domains:

1. **Upstream practices:** focusing on designing, selection of material, and efficiency of production.
2. **Midstream practices:** these are practices which are related to distribution and retail operations.
3. **Downstream practices:** these address end of life product management and consumer engagement activities.

They stress that in order to get effective CE integration in the economy, synchronized effort across all these three domains is required, not isolated initiatives in one of them.

Packaging stands out as the most impactful area for CE adoption in FMCG because of its high volume and also environmental footprint. Terzioglu et al. (2024) identified and then categorised ten distinct strategies for the packaging of reusable systems, refill models, using recycled content, and material innovation. Their research is based on 200 global and Indian case studies, these together highlight that the choice of strategy is varied and changes significantly based on factors such as product category, supply chain dynamics and consumer market dynamics. For instance, beverage companies very often prioritize reusable bottle systems and deposit return schemes, while personal care and household product manufacturers focus on increasing recycled content and using single material packaging to enhance recyclability.

Certain concrete examples from the Indian FMCG sector are documented by Raha and Shil (2024), these showcase significant progress in India with regards to CE. ITC e.g. has achieved a 99% waste recycling rate through processes like robust material recovery, waste segregation, and circular supply chain management. Unilever India has invested heavily in innovation for packaging, including processes like lightweighting, greater use of recycled materials along with the introduction of

refillable product lines. Coca-Cola operates extensive collection networks across multiple states in India. These cases show and affirm that major advancements in circular packaging are definitely feasible within the Indian context, although scale and methodology of implementing these may differ among companies.

Beyond the packaging process, CE principles are actively being integrated into the wider supply chain and production process. Tyagi et al. (2021) examined India's specific CE initiatives in the packaging sector, they noted the involvement of community cooperatives for waste collection, industry led corporate recycling schemes, and government funded waste management infrastructure. Their analysis proves that CE transition in India is a complicated interplay between formal corporate systems and the informal waste management sector and the public policy. Successful implementation requires integration of these usually separate systems.

On top of all that, **sustainable procurement** is really stepping up as a key way, right at the start, to weave Circular Economy (CE) ideas into the process, as Dhongde (2024) explores. This approach is all about being smart when picking suppliers, looking closely at how they handle environmental and social issues, actually working with them to boost resource efficiency, and building lasting relationships aimed at constantly improving sustainability. By tackling where materials come from and their efficiency, this early-stage focus pushes CE far beyond just dealing with waste at the end.

3. Drivers and Enablers of Circular Economy Adoption in FMCG

Drivers of CE Adoption:

- **Organizational Innovation and Technological Capability:** When we look at Indian FMCG companies, it really shows that their ability to innovate and their technological know-hows are major drivers in how much they adopt Circular Economy practices (Shukla et al., 2025). Especially in places like Uttar Pradesh the companies that are more geared towards innovation and invest more in technology are definitely ahead in putting Circular Economy into action. It's like those things set the stage which creates the perfect environment for CE to thrive in the economy.
- **Human Resource Management (HRM) and Workforce Development:** Making the shift to a successful Circular Economy will really depend on a change in the company's culture which gets fueled by employees who are motivated enough and truly involved (Chaudhari et al., 2024). Key Human Resources moves include teaching everyone about circular principles and

building up new skills for managing a circular supply chain and hiring people who are genuinely passionate about sustainability, also linking CE success right into how we reward and incentivize our teams.

- **Enabling Role of Industry 4.0 (I4.0) Technologies:** I4.0 (e.g. AI, blockchain, Internet of Things etc.) provide a rock solid foundation for successful CE implementation (Ajwani & Bhattacharya, 2022) because they have allowed for better data to be collected and analyzed and have also enhanced transparency throughout the material flows, they can also predict when products may need to be replaced in order to extend their useful lives and optimize the process of returning goods through a much more efficient reverse logistical process.

Critical Success Factors for Circular Business Models:

In order for India to implement CE and to succeed at every scale, every company's effort must be embedded within a much supportive value chain ecosystem. Therefore, Five critical success factors for circular business model implementation in FMCG have been identified (Bocken et al., 2022):

1. **Strong Partnerships:** Collaboration is crucial between FMCG companies and retailers or collection service providers.
2. **Consumer Participation:** Establishing strong mechanisms that are able to encourage the consumers to engage in circular systems is important.
3. **Operational Efficiency and Cost Competitiveness:** Circular models also must be efficient and cost-effective when compared to traditional alternatives.
4. **Profitability and Financial Sustainability:** It is crucial to ensure the financial viability of the circular business models in place.
5. **Ecosystem Infrastructure:** Developing the supporting infrastructure which is very necessary in order to enable smooth circular product flows.

4. Barriers and Challenges to Circular Economy Implementation

In spite of the recognized advantages of a Circular Economy, its widespread adoption in India's FMCG sector has been facing major hurdles. Nwabekee et al. (2024) prepares a detailed classification of these implementation barriers, which are grouped into several key categories such as:

4.1 Financial Barriers:

- **High Initial Capital:** It takes a substantial initial investment of factors like time, money, and resources in order to completely overhaul product designs and retool the supply chains needed for Circular Economy models.
- **Uncertainty of Returns:** There is a huge lack of clarity regarding the financial

profitability of CE investments among Indian companies.

- **Financing Difficulties:** It's often tough for CE businesses to get the funding they need because traditional banks just aren't familiar with how their models actually work.

4.2 Operational Barriers:

- **Reverse Supply Chain Complexity:** Often managing the logistics of collecting and processing these used products is inherently complex.
- **Product Collection Challenges:** Sometimes collection of used products from a geographically dispersed consumer base is quite difficult.
- **Technical Issues:** Often difficulties arise in the technical sorting out and reprocessing of certain materials.
- **Quality Assurance:** Sometimes maintaining consistent quality while utilizing recycled materials can pose a difficult challenge.

4.3 Regulatory Barriers:

- **Inconsistent Policies:** The current policy framework in India is very frequently changing and also lacks stability.
- **Lack of Harmonization:** A lot of different jurisdictions exist and have varied and uncoordinated regulations.
- **Regulatory Uncertainty:** A lot of companies face difficulty in planning due to unknown future regulatory requirements that may arise.

4.4 Consumer Behavior Barriers:

- **Routine Purchasing:** Most of FMCG products are typically bought without consumers putting in much thought or deliberating about it.
- **Requirement for Participation:** Many CE models, such as refill systems and packaging returns, often depend on an active consumer base who are heavily involved with it.
- **Low Awareness and Reluctance to Change:** Too many consumers often lack knowledge of these CE concepts and are quite hesitant to alter the established purchasing and disposal habits which they have.
- **Need for Intervention:** Thus overcoming these behavioral barriers are necessary not only for educational campaigns but also for structural changes and incentives that make circular choices easy and appealing to the consumer.

4.5 Technology and Infrastructure Gaps (Specific to the Indian Context):

- **Technology Capability Gaps:** Mustafa (2025) has highlighted a significant technology shortfall, particularly among smaller companies, which impacts Circular Supply Chain Management (CSCM) adoption across India.
- **Informal Sector Disconnect:** India's huge informal waste management sector, which processes the most amount of waste, is very poorly integrated with formal corporate CE systems.
- **Underdeveloped Data Infrastructure:** The systems present for tracking material flows throughout circular supply chains are quite insufficient.
- **Logistics Deficiencies:** We really need to step up our efforts when it comes to the transportation and the logistics networks if we want our reverse supply chains to be efficient and keep costs down.

4.6 Informal Sector Integration:

Varma and Kataria (2020) points out that the informal waste management and recycling sector in India represents both a challenge and an opportunity. Millions of workers that are part of this sector and are responsible for handling a large volume of waste, still this sector largely operates without formal recognition or any regulatory oversight and also no seamless integration into corporate systems. A successful transition to Circular Economy requires significant *collaboration* and *integration* between these 2 sectors i.e. formal and informal. However, this integration also involves the addressing of a lot of complicated issues which are related to labor standards, environmental protection, and the equitable distribution of profits to stakeholders within the supply chain.

Integration of Circular Economy with Other Sustainability Frameworks

In everyday product industries, circular economy ideas now twist tightly into broader efforts around responsibility e.g. environmental care, fair treatment, solid leadership. These threads tie into global aims for better living conditions, long-term thinking on how companies run day to day. Progress shows up quietly, usually woven through choices that stretch beyond the profit alone.

Another way to look at it comes from Akther (2025), who has highlighted how circular economy ideas fit together with ethics and **Corporate Social Responsibility (CSR)**. Instead of tackling each issue alone, real progress is shown when the environment, society, and decision-making are considered all at once. Therefore, what matters grows clearer when these parts move together.

One step ahead, Rajayya et al. (2025) traces circular economy ideas straight into the UN sustainability goals. Especially to **SDG 12 (responsible consumption and production)**. Beyond that, hints appear tied to sustainable cities, decent work, and climate action. They conclude that CE functions as an integrated strategy for sustainable development, affecting multiple SDGs by redesigning the very fundamentals of the production and consumption system.

Linking up with SDG plans gives FMCG sector's CE efforts more weight showing how their actions help meet national environmental targets. Because of this overlap, new paths open for teamwork between public and private aiming at similar outcomes.

Analysis of Current Research

A fresh look at how big FMCG firms operate such as ITC, which is successfully implementing sustainable procurement and advanced waste recovery- but progress isn't steady everywhere. Pushed forward by regulatory mandates and commitments by the leadership, still many SMEs can't keep pace simply because they lack resources. Even though it's clear these new methods work in practice, most stick to single efforts instead of rewiring how they run things.

Identified Research Gaps

- **Longitudinal Data:** An unfortunate lack of long-term studies makes it difficult to track how circular economy (CE) outcomes evolve over time. Lengthy research gaps leave a fuzzy picture of how things change years later.
- **Consumer Behavior:** There is also insufficient quantitative data on how to effectively drive Indian consumers toward adopting circular FMCG models.
- **Sector Integration:** Research is yet to fully explore how to coordinate the formal corporate CE systems with India's huge informal waste management sector.
- **Economic Clarity:** Very often companies fail to track the detailed cost-benefit analysis, implementation costs and financial breakeven points for specific CE practices.
- **Policy & SMEs:** Analysis and comparison of regulatory barriers are needed so that better support systems can be developed so that SME actively participate in the circular economy.

Significance of The Study

Reasons why the FMCG sector is important for CE research:

- **High Volume/Rapid Turnover:** This has created a lot of opportunities for waste reduction and resource efficiency.
- **Consumer Interface:** This has somewhat allowed behavioral change and enabled demand-side CE drivers.
- **Complex Supply Chains:** This presents both a challenge and an opportunity for the circular systems.
- **Global Targets:** This helps in generating competitive pressure from leading international companies to local players, it also sets an example for them to look ahead to.

Research Objectives and Questions

Objectives

1. Identify and categorize the types of CE practices currently implemented by Indian FMCG companies.
2. Analysing the drivers and barriers that are influencing CE adoption in the sector.
3. Identifying the enablers and also the success factors for effective CE integration.
4. Highlight gaps in the current knowledge and real-world approaches points to where studies and rules should look next.

Research Questions

1. What specific CE practices are most prevalent in the Indian FMCG sector?
2. Which regulatory, market, technological, and organizational factors drive CE adoption
3. Which operational, financial, and logistical challenges prevent more widespread implementation?
4. What environmental and financial outcomes have been documented?
5. How do CE practices vary across different company sizes, geographic regions, and subsectors within the FMCG sector?

Research Methodology

1. Theoretical Framework: The Tripartite Model of Circular Economy

A systematic literature review needs a very precise framework for circular economy. This framework is built upon three interconnected pillars:

1.1 The Environmental Pillar:

Definition and Mechanism: The environmental pillar's core strategy is to eliminate waste and pollution and to keep products in continuous use, and also actively restore natural ecosystems. This process involves transitioning from fossil fuels to renewable energy and therefore, achieving closed material loops through processes like recycling, reusing, and composting.

- **Key Indicators (FMCG Focus):**
 - **Plastic Waste Management (PWM):** Achievement of 100% recyclable packaging and utilization of Post-Consumer Recycled content and then meeting all Extended Producer Responsibility (EPR) mandates.
 - **Water Stewardship:** Another indicator is to progress beyond simple efficiency to "Water Positivity" which is the practice of replenishing more water to the environment and communities than is used by companies in their manufacturing operations usually.
 - **Carbon Circularity:** It is crucial to close the carbon loop through the utilization of waste-to-energy systems and biomass energy.

1.2 The Social Pillar:

Definition and Mechanism: This particular pillar is focused on improving the quality of life, social coordination and the assurance of a "Just Transition." This pillar assesses how circular practices have and do impact the labor standards and human rights.

- **Key Indicators (FMCG Focus):**
 - **Informal Sector Integration:** Implementation of programs to formalize waste workers which ensures their safety and provides them with fair wages, and recognizes their dignity (e.g. models like ITC's WOW and Nestle's Hilldaari).
 - **Community Engagement:** Executing Corporate Social Responsibility (CSR) activities help educate the consumers on proper recycling and support agricultural partners to opt for regenerative farming techniques.
 - **Health and Safety:** Guaranteeing that "zero waste" targets will not compromise on the health of workers who handle potentially hazardous materials.

1.3 The Financial Pillar:

Definition and Mechanism: This pillar is specifically dedicated to enable sustainable economic growth and also ensure prosperity while simultaneously upholding the standards of the other two pillars. This includes transparency in accounting for Environmental, Social, and Governance (ESG) risks and monetizing

waste.

- **Key Indicators (FMCG Focus):**

- **Cost Optimization:** Financial gains from efficiency like reduced packaging weight (light-weighting), minimized disposal costs (achieving Zero Waste to Landfill), and increased energy efficiency.
- **Capital Allocation (CAPEX):** Strategic investment in key areas, including green energy infrastructure, recycling technologies, and research and development for biodegradable materials.
- **Risk Mitigation:** The clear financial gain from avoiding government fines and punishment, and the advantage of having strong raw material sources that can withstand the problems caused by climate change.

Methodology

2.1 Sampling Strategy and Unit of Analysis

A **purposive sampling** technique was utilized to select undisputed market leaders in the FMCG sector. The goal was to capture and analyze the "best-in-class" reporting methods that are often seen as the best in the industry.

Source: The sample list was generated from the Bombay Stock Exchange (BSE) FMCG sector listing, sourced via Screener.in.

Selection Criteria:

- **Listing:** Must be listed on the Bombay Stock Exchange (BSE).
- **Sector:** Must be classified under the Fast-Moving Consumer Goods (FMCG) category (
- **Rank:** The Top 20 companies by Market Capitalization as of the study date were selected.
- **Data Availability:** A published Annual Report, Sustainability Report, or Business Responsibility and Sustainability Report (BRSR) for fiscal year (FY) 2023-24 or FY 2024-25 must be publicly available.

The Sample (Top 20 FMCG Companies):

- Hindustan Unilever Ltd (HUL)
- ITC Ltd
- Nestle India Ltd
- Varun Beverages Ltd (VBL)
- Britannia Industries Ltd

- Godrej Consumer Products Ltd (GCPL)
- Tata Consumer Products Ltd
- United Spirits Ltd (Diageo India)
- Marico Ltd
- Dabur India Ltd
- Patanjali Foods Ltd
- Colgate-Palmolive (India) Ltd
- United Breweries Ltd (UBL)
- Procter & Gamble Hygiene and Health Care Ltd (P&G Hygiene)
- Radico Khaitan Ltd
- Godfrey Phillips India Ltd
- Adani Wilmar Ltd
- Gillette India Ltd
- Emami Ltd
- Hatsun Agro Product Ltd

2.2 Data Collection: Data collection is mainly focused on original sources to ensure the information was real and complete. A priority of documents was used for gathering data:

1. **Business Responsibility and Sustainability Report (BRSR):** This mandatory ESG disclosure format for top listed Indian companies provided standardized, metric-based data.
2. **Integrated Annual Reports:** These reports were used to identify the strategic connection between financial and natural capital.
3. **Dedicated Sustainability/ESG Reports:** Utilized for granular case studies and rich qualitative context.
4. **Official Corporate Websites:** Consulted for access to policy documents and the most up-to-date information.

3. Comprehensive Analysis of Circular Economy Practices

Company Name	Environmental Impact	Social Impact	Financial Impact
Hindustan Unilever (HUL)	62% waste reduction since 2008; 100% plastic waste collection (EPR); recovery of multi-layered plastics.	Project Circular Bharat: This project brings waste pickers into the proper system for recycling, it also focuses on changing people's habits and making sure everyone is included.	EPR credits are essential for a company to operate legally, as it acts as a safeguard against fines and damage to its reputation.
ITC Ltd	The WOW program has successfully collected 67,100 MT of dry waste, achieving an exceptional 99% waste recycling rate. Furthermore, they have maintained a Water Positive status for over 20 years.	WOW Program: Supports 17,900+ waste collectors and 150+ social entrepreneurs to secure the supply chain.	CAPEX investments (INR 15,860 lakhs total) in watershed and agri-practices to secure raw material availability.

Nestle India	41% reduction in plastic weight since 2019; 100% pre-consumer plastic packaging waste recycled.	Hilldaari Project: Professionalizes the waste sector; provides ID cards and health schemes for 550+ workers.	Variable remuneration is directly tied to meeting sustainability targets.
Varun Beverages (VBL)	Replenished 5,688M liters of water in 2024; committed to 30% recycled PET (rPET) usage by 2025.	Rejuvenation of Water Bodies (RWB): Restores local ponds/lakes to secure social license in water-stressed areas.	Reducing the cost of goods sold (COGS) and providing a hedge against future taxes on virgin plastics are key benefits of implementing light-weighting and energy efficiency strategies.
Britannia Industries	79% of packaging is recyclable; 75% recycling rate for difficult laminate waste at factories.	Britannia Nutrition Foundation: 305,000+ beneficiaries; engagement with 2,981 dairy farmers.	A 17km reduction in the average distance per trip significantly enhances logistics efficiency, resulting in a direct decrease in both fuel expenses and carbon emissions.
Godrej Consumer (GCPL)	20% reduction in plastic intensity; 63% recyclable packaging (target 80% by 2027); uses PCR content.	Focus on "Green Chemistry" and reducing hazardous chemicals to protect workers and consumers.	Reduced plastic intensity lowers EPR obligations; 15% of executive compensation tied to ESG goals.

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Tata Consumer Products	Zero Waste to Landfill certification; Water Positivity Index of 2.2 (returns 2x more water than consumed).	Reached 1.5M beneficiaries; culture of sustainability evidenced by 88,000 employee volunteering hours.	The company employs risk-adjusted Return on Investment (ROI) models for project evaluation and significantly reduces procurement expenses by utilizing recycled materials.
United Spirits (Diageo)	Eliminated mono-cartons from 95% of portfolio; 99% of packaging is widely recyclable (glass-led).	Focus on Inclusion & Diversity to build brand resonance and social license for the alcohol industry.	Removing mono-cartons is a form of value engineering; this cost-saving measure eliminates non-essential expenses and thus improves profit margins.
Marico Ltd	95% recyclable packaging portfolio; upcycled 80.5 MT of waste; used 28,013 MT of post-consumer plastic.	Parachute Kalpavriksha: Enrolled 1.22 lakh farmers to improve yields and ensure sustainable raw material flow.	Material savings of 749.9 MT; generated ₹17.6 lakh in revenue directly from upcycling initiatives.
Dabur India	India's first "Plastic Waste Positive" FMCG (105% processed); transitioning to biomass boilers.	Sustainability awareness programs for value chain partners to ensure upstream human rights/standards.	15.60% of total CAPEX allocated to environmental initiatives, focusing on long-term process efficiency.

Patanjali Foods	Recycled 51,794 MT of waste; 7 Zero Liquid Discharge (ZLD) sites to minimize freshwater withdrawal.	Supports 202 Farmer Producer Organizations (FPOs); claims 6.77% of rural India's job creation.	Strategic investment in domestic palm oil plantations to hedge against global price volatility/imports.
Colgate-Palmolive	100% of manufacturing sites are "Zero Waste to Landfill" certified.	Bright Smiles, Bright Futures: Large-scale oral health education to build a long-term social contract.	"Organize-Optimize-Outperform" framework; efficiency savings are reinvested to drive business growth.
United Breweries (UBL)	98.06% renewable energy usage; 99% recyclable packaging due to glass-heavy portfolio.	Focus on "Responsible Drinking" initiatives and community development around brewery locations.	Returnable Glass Bottle (RGB) system drastically reduces packaging costs compared to single-use models.
P&G Hygiene	Goa and Baddi plants are Zero Manufacturing Waste to Landfill; piloting rigid packaging recovery.	P&G Shiksha: Impacted 50 lakh children through educational support in underserved communities.	Views resource efficiency ("Productivity") as a competitive advantage that boosts the bottom line.

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Radico Khaitan	Operates Zero Liquid Discharge (ZLD) with zero water discharge reported.	CSR focused on rural health and welfare; maintains a growth-oriented work culture for employees.	Bio-gas production from effluent (3500 M3/Day) generates green energy, saving fuel and water costs.
Godfrey Phillips	Introduced biodegradable packaging and BOPP films; ZLD at Reconstituted Tobacco facility.	Constructed 47 check-dams to benefit tobacco farmers and secure the local water table.	Effective waste management framed as a cost-saving opportunity by reducing disposal and consumption fees.
Adani Wilmar	7273 KWp solar capacity; pioneered recyclable packaging for edible oil pouches.	Fortune SuPoshan: Targets malnutrition and anemia, aligning business core with social needs.	Over 90% traceability of Palm Oil to mills allows access to premium, sustainability-conscious markets.
Gillette India	Zero manufacturing waste to landfill; achieved 2768 KL of circular water via condensate recovery.	Grooming the Next Generation: Focus on education and scholarships for youth.	24% year-on-year reduction in waste disposal costs achieved through process efficiency.

Emami Ltd	100% EPR compliance with approved partners; reuse of treated water for cooling and gardening.	Prioritized sustainable livelihoods for 5.7 lakh beneficiaries through various CSR programs.	Eco-friendly packaging viewed as a driver for R&D innovation and a hedge against stricter EPR costs.
Hatsun Agro Product	98% of energy requirements met via renewable sources (Wind and Solar).	Direct procurement model eliminates middlemen, ensuring better margins and equity for dairy farmers.	Captive renewable energy plants shield the company from grid price volatility and stabilize operating costs.

This shift in India’s top 20 FMCG companies toward a **Circular Economy** is happening by carefully blending care for the environment, fairness for people, and strong finances. In terms of environmental progress, the Fast-Moving Consumer Goods (FMCG) sector has evolved beyond basic waste management toward **resource regeneration**. Examples include leaders like **HUL and Dabur**, which have achieved plastic neutrality, and companies such as **ITC and Tata Consumer**, which have reached significant water-positive milestones. Socially, these companies are formalizing the informal economy by integrating waste pickers into the value chain through projects like **Nestle’s Hillaari**, while others like **Marico and Patanjali**, for example, boost supply chain resilience by supporting millions of farmers in adopting sustainable agricultural practices. Financially, circularity has transformed into a means of both **value engineering** and risk mitigation. Specifically, by reducing their material and energy footprints, companies such as **Diageo and Godrej** are achieving direct reductions in operating expenses and effectively insulating themselves from potential regulatory costs. The rising maturity in this area is highlighted by changes in corporate governance: sustainability goals are now often tied to **executive compensation**. This integration ensures that circularity serves as a fundamental driver of long-term **enterprise value**, moving beyond its traditional role as a secondary Corporate Social Responsibility (CSR) activity.

Conclusion

Moving towards a Circular Economy (CE) is becoming a popular and effective way for the Indian FMCG sector to become more sustainable. Studies already show that this shift is good for the environment and makes good business sense. However, to get the biggest benefit from CE, some big hurdles need to be cleared. The main challenges are: moving successful small projects into the wider industry, successfully linking the official and unofficial parts of the economy, better understanding what motivates consumers, and creating simple, long-term ways to measure success.

For India's fast-moving consumer goods (FMCG) sector to fully adopt a Circular Economy (CE), everyone needs to work together. Companies must focus on new ideas and stick with them. The government is crucial for creating helpful rules and building the necessary facilities. Schools and universities need to teach the right skills and knowledge. Finally, shoppers must change their buying and waste disposal habits to be more sustainable. Future studies should look closely at: how things change over time, exactly how consumers act, ways to bring together official and unofficial recycling groups, whether policies actually work, and clear studies of costs versus benefits to guide and speed up the move to a CE based on good evidence.

India's fast-moving consumer goods (FMCG) sector is moving towards a Circular Economy, which is more than just being "green." It's a basic change in how companies create value, moving away from the old "take-make-dispose" model to one where making money doesn't have to hurt the environment. Our study of the top 20 FMCG companies shows this change is happening in three main areas: Environmentally, companies are setting serious goals like "water positivity" and plastic neutrality, instead of just managing waste. Socially, they are leading a "Just Transition" by truly including the informal waste workers as official partners. Financially, this circular approach is proving beneficial by lowering operating costs and protecting against stricter rules. However, this shift isn't simple; initial costs are high, managing the return of products and materials is complex, and getting all customers to participate takes time. For this complete change to happen across the whole industry, everyone needs to be involved, from businesses adopting new technologies to policymakers creating a clear, common set of rules to turn individual company successes into a standard for the entire sector.

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