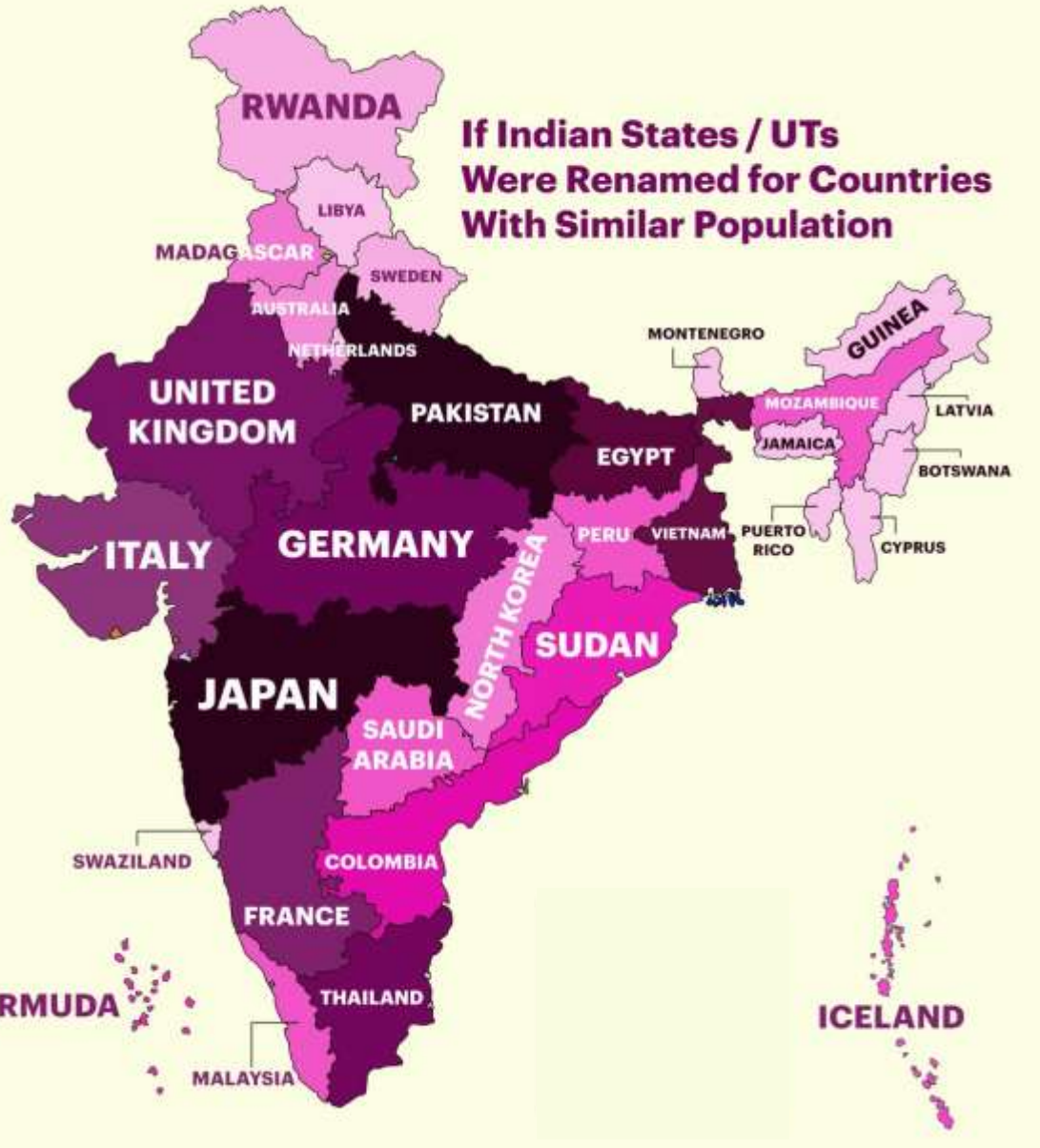


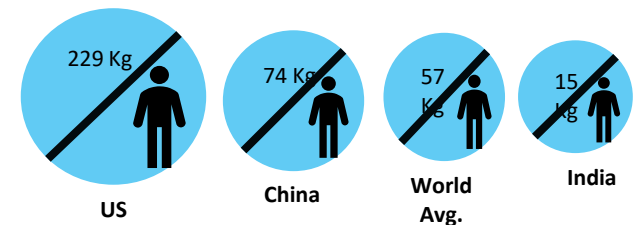


India's Pulp & Paper – A growing appetite for recovered paper

India: Population and Demography Landscape



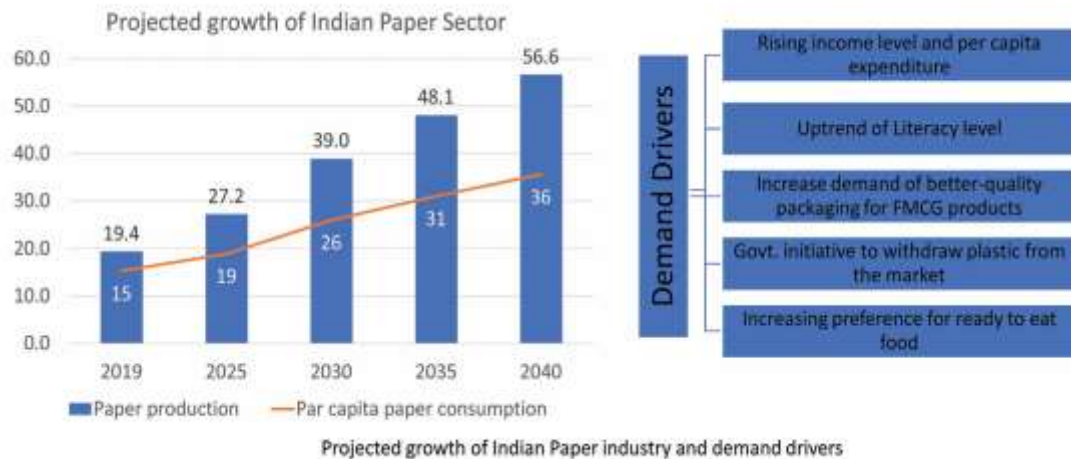
- ❑ India 2024 population is estimated at 1,450,935,791 people at mid year.
- ❑ India population is equivalent to **17.78% of the total world population**.
- ❑ Share of **India's working age population** to total population will reach its **highest level at 68.9% by 2030**.
- ❑ By the year 2030, India's **dependency ratio** is projected to reach its **lowest point at 31.2%**.
- ❑ **33.6 % of the population is urban** compared to **60% in China**.
- ❑ With a relatively younger population (median age of 28.4 years), Approximately
 1. **30% of the population is below 18 years** and
 2. **~63% is between the age of 18 to 64 years** and
 3. **7% above the age of 65**.
- ❑ In contrast, the population over **65 years in US is ~17%** and **Europe is over ~21%**.
- ❑ India not only gets a competitive advantage in terms of workforce but also an opportunity to **unleash the consumption power of young population**.
- ❑ Number of **Wholesalers : 4,500+**
- ❑ **Printers : 250,000+**
- ❑ Number of **Schools: 1.6 million**
- ❑ **Universities : 850+**



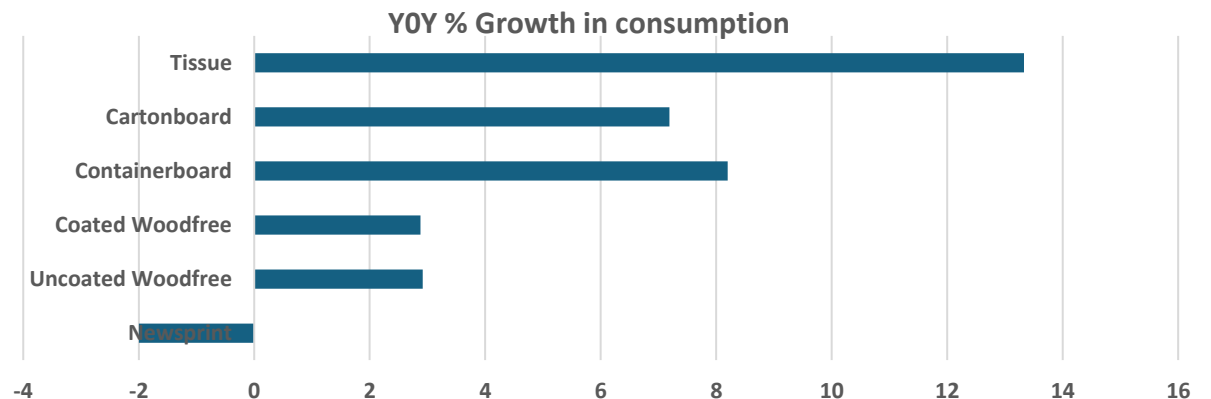
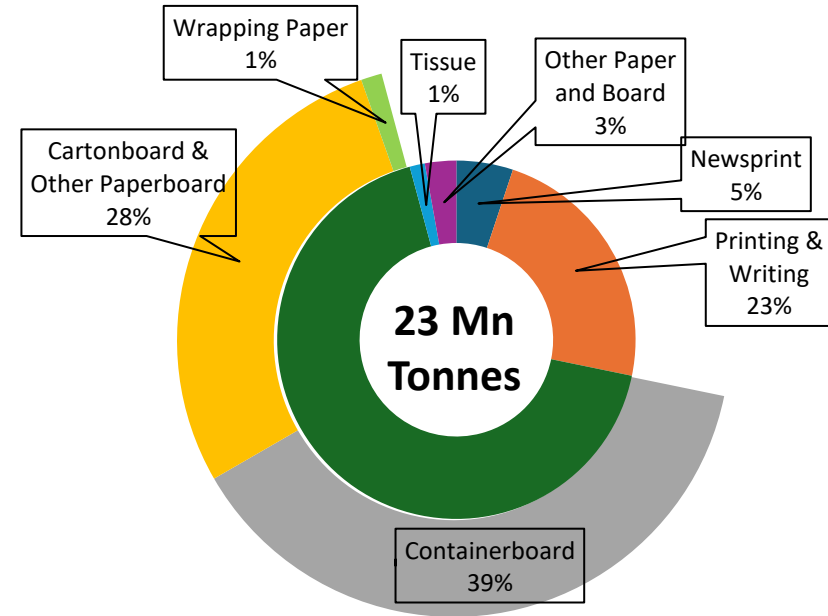
India: Paper Manufacturing & Consumption Landscape

No. of mills	900 (Approx.)
Total Installed Capacity (million tons)	27.43
Operating Installed Capacity (million tons)	24.15
Production of paper, paperboard, newsprint (million tons)	22.005
Capacity utilization %	91%
No. of running units	526
No. of Mills Closed	374
Idle installed capacity (million tons)	5.12
Consumption (million tons)	23.039
Per capita consumption (Kgs)	15.63 (approx.)
Global Share (%)	5
Import (Million tons)	2.6
Export (million tons)	1.56

Contribution (million tons)			
	Wood based	Agro-based	Recycled fibre based
Production (million tons)	4.0	1.5	16.5
No. of mills	around 30	60	750 (approx.)



- India's Paper Industry accounts for about 5% of the world's production of paper.
- The estimated turnover of the industry is over \$10 Billion and its contribution to the exchequer is around \$600 Million.
- The industry provides direct employment to 500,000 persons, and indirectly to around 1.5 million.



Growth Drivers: Paper Consumption in India

Rising Income

- The per capita income has increased by 100% in last 8-9 years.
- This has facilitated in extra disposable income & spending power.
- 191 Million household will be earning more than \$10k by 2031 vs 76 Million household in 2021.

Demand for hygiene & sustainable Paper

- Market shift towards sustainable and environment-friendly packaging.
- Increase in consumption of toilet paper, wipes, tissues, and paper towels.

Regulations

- Single use plastic ban.

Consumerism

- It is shaping the industrial production shifting beyond need based products. More comforts for better living standards. Now not limited to metropolitan cities.
- Changing retail industry structure (unorganized vs organized).
- E- Commerce is expected to cross \$325 Bn in GMV by 2030.
- Online retailing, 10 minutes delivery,
- Packaged food are gaining traction, Shift to n-the-go consumption

Demography

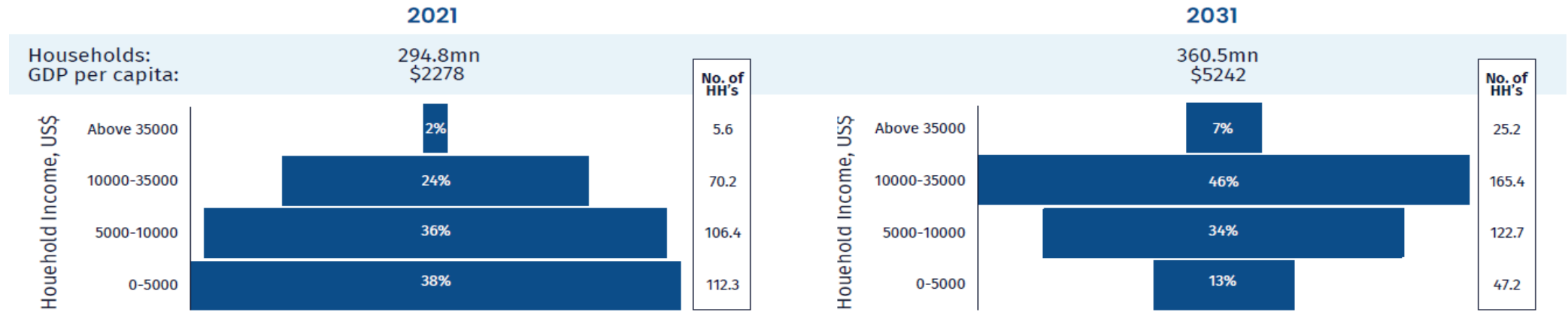
- Youngest population in the world. median age of 28.4 years. Young workforce and consumption pattern.
- Urbanization – 33% of population lives in urban compared to 60% in China.
- Rising number of working women.
- Increasing Nuclear families.
- Literacy rate: 78%

Government Policies

- New Education Policy.
- New Logistics Policy.
- Atmanirbhar Bharat (Self-reliant India)
- Make in India Campaign, Production Linked Policy.
- Swachh Bharat (Clean India) Campaign



Rising Income Levels & E-Commerce



Source: Morgan Stanley Research; Household income is on real basis at 2021 prices

Increased smartphone adoption: 700 million
Rising affluence, and affordable data prices, all fueling the growth of e-retail.

India's internet penetration:
As of Mar. 2023, exceeded 880 million users, while the number of telecom subscribers has surpassed 1,172 million.

India's e-commerce sector:
Expected to reach \$123 billion in 2024, with an annual growth rate of 11.45% to reach \$325 billion by 2030.

Online shoppers in India:
Expected to reach ~500 million in 2030 from 300 million in 2023.

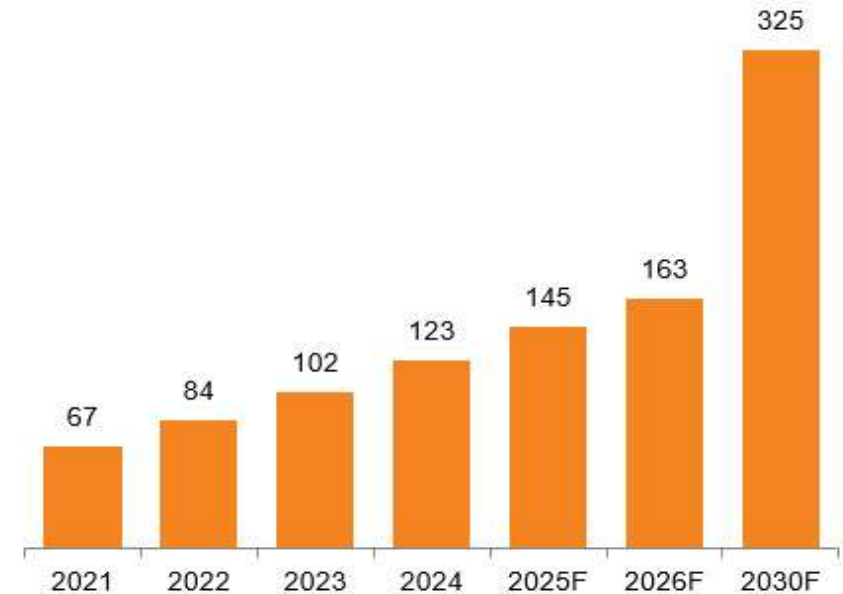
The UPI transactions:
Touched \$2.19 trillion in 2023, with a user base 800 million.

India e-commerce packaging:
Generated a revenue of USD 3,030.0 million in 2023 and is expected to reach USD 15,844.2 million by 2030.

Indian E-Commerce packaging market:
Expected to grow at a CAGR of 26.7% from 2024 to 2030.

Growth in Corrugated:
In terms of segment, corrugated boxes was the largest revenue generating product in 2023.

Indian E-commerce Market (US\$ billion)



Source: News articles, F- Forecasted

Consumerism: Retail Industry - Packaging growth in food, pharma and cosmetics

Indian Retail Industry:

Projected to grow at 9% over 2019-2030, from US\$ 779 billion in 2019 to US\$ 1,407 billion by 2026

Changing Indian Retail Industry:

Only 25% retail market in India is organized. Increase in online retailing and omnichannel presence.

Growth of rural consumption:

Rural per capita consumption will grow 4.3 times by 2030, compared to 3.5 times in urban areas

Young millennial households:

By 2030, India will add nearly 90 Mn new households headed by millennials.

Rising demand for innovative and sustainable packaging:

Packaged food are gaining traction, shift to on-the-go consumption

Higher Packaging Demand:

Mainly in Consumer Durables, pharma, Automobile, food and beverage packaging.

FOOD INDUSTRY

Share of the Indian packaging market:

14%

Contribution of the food-processing industry to manufacturing GDP

205 m
tonnes fruit and vegetables each year



No.2
agricultural producer in the world

Indian Government has made the expansion of food processing a priority. In the last ahead, around US\$ 960 m are to be invested in this industry. Food & beverage packaging industry in India is US\$ 31.75 Billion in 2022. It is expected to reach US\$ 86 Billion by 2029 registering 15% CAGR.

PHARMACEUTICALS INDUSTRY

Share of the Indian packaging market:

No.1

fastest growing market for pharmaceuticals packagings by 2019



Driven by an ageing and growing population and improved medical care, the Indian pharma packaging market will grow by 5.5% per year to US\$ 3.2 Bn by 2032.

COSMETIC INDUSTRY

Share of the Indian packaging market:

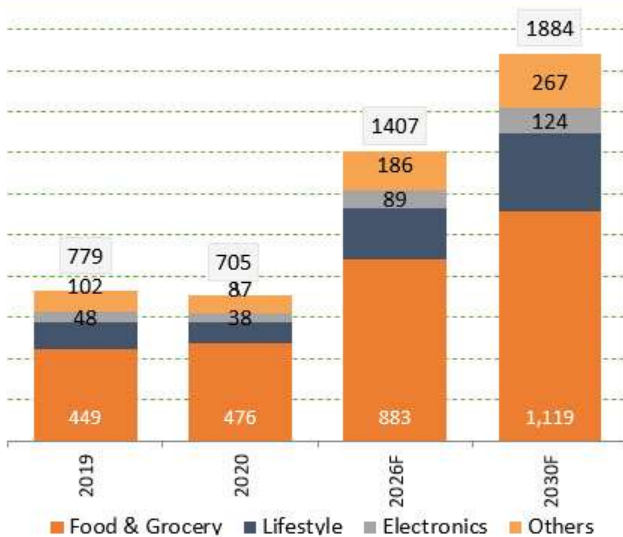
6%

annual growth cosmetic packaging industry



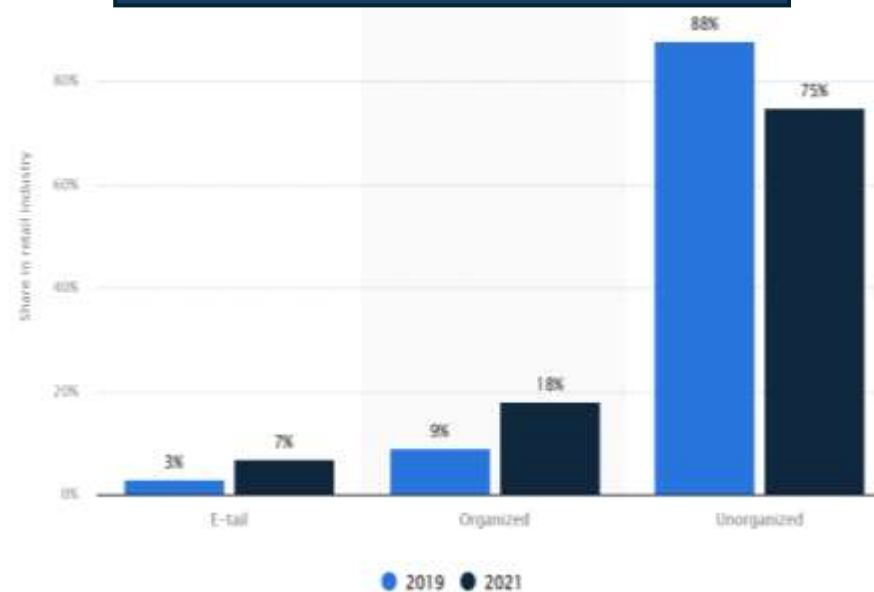
The Indian cosmetic is growing strongly. Every year Indian players, such as Hindustan Unilever Ltd, Colgate-Palmolive India Ltd and Dabur India Ltd, are launching new products in the market and are making them with constantly rising advertising expenditure. (Around \$1.7 Bn in 2024)

Retail market size (US\$ billion)



Note: F- Forecast

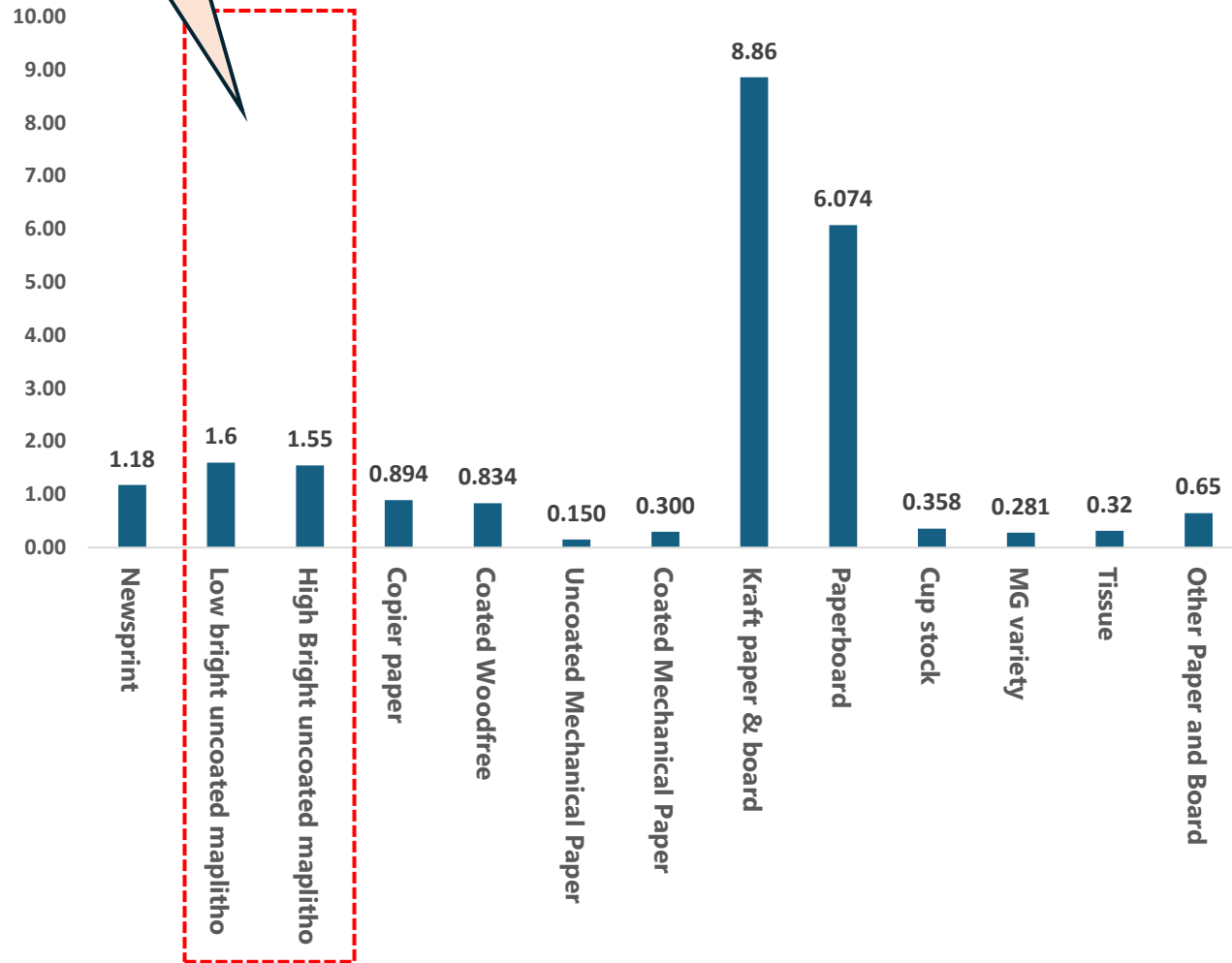
Organized vs unorganized retail in India in %



Government Policy: New Education Policy

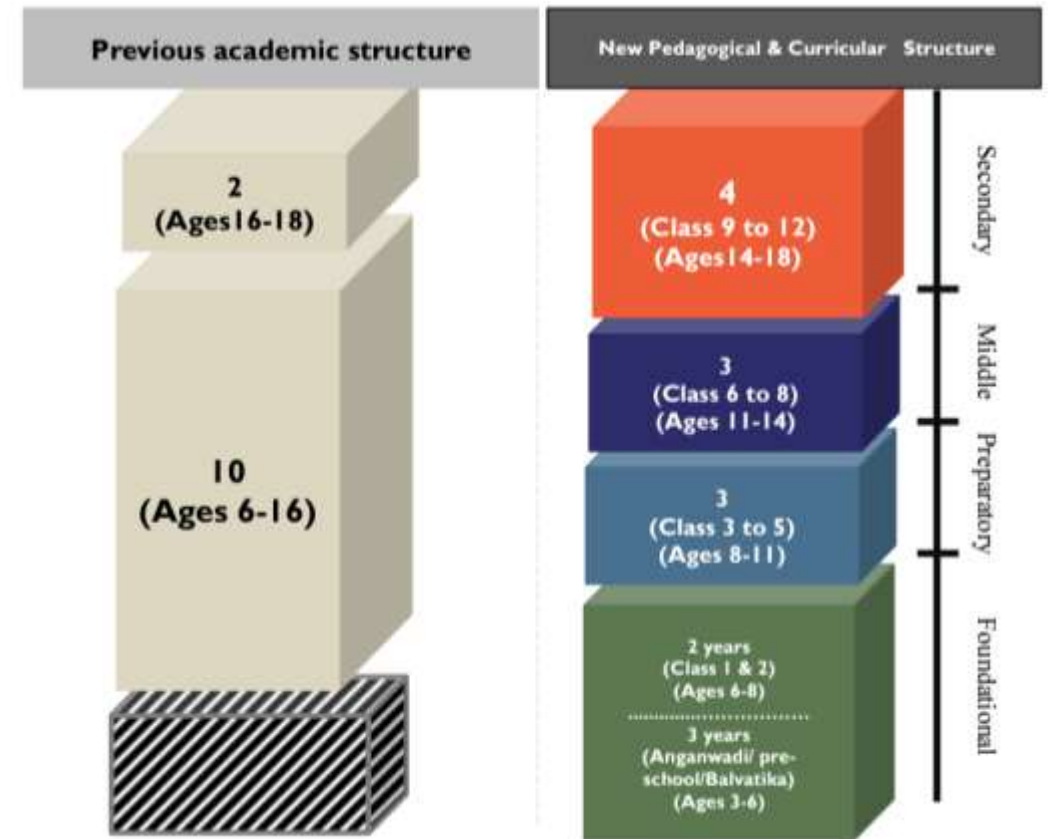
Paper used in textbook printing.

Grade wise consumption in Mn tons per year



New Education Policy will boost the consumption of writing and printing paper.

Since the New Curriculum is being developed after a gap of 15 years, it would eliminate sale of second-hand or old printed books and would lead to strong growth for at least 2-3 years.



Industry Structure: Fibre Combination in India

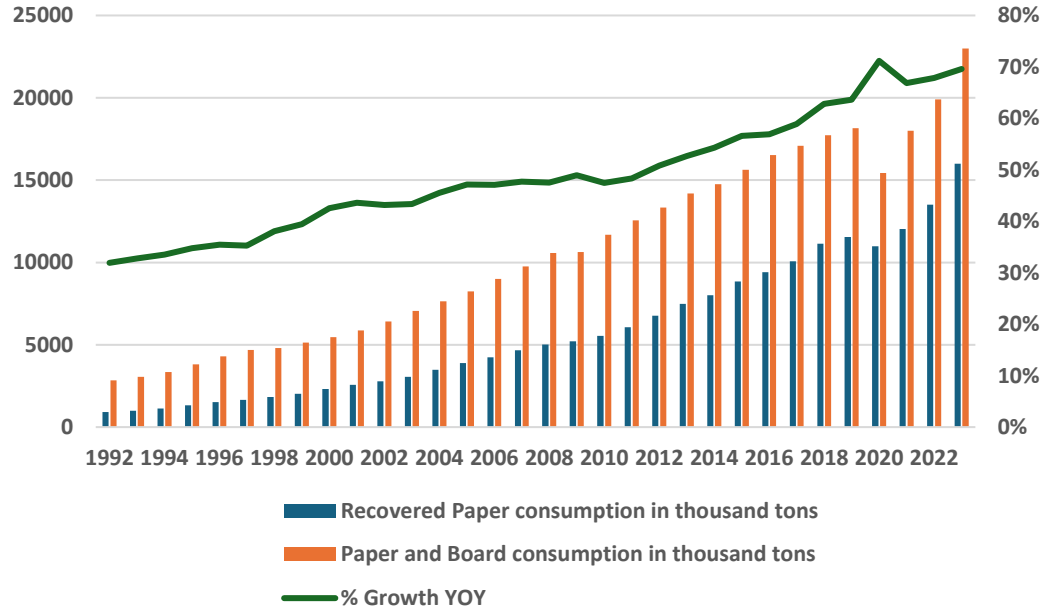
Size	Grades	Raw Material
Small (50 – 150 TPD)	Packaging	Recovered Paper (OCC, ONP, Mixed Paper)
	Printing & Writing	Agro-Based Pulp
	Tissue	Recovered Paper
Medium (150 – 300 TPD)	Packaging	Recovered Paper
	Printing & Writing	Wood Pulp
	Newsprint	Recovered Paper
	Specialty Paper	Agro-Based Pulp
Large (Above 300 TPD)	Packaging	Recovered Paper, Wood Pulp
	Printing & Writing	Recovered Paper, Wood Pulp
	Tissue	Recovered Paper, Wood Pulp
	Newsprint	Recovered Paper
	Specialty Paper	Recovered Paper, Wood Pulp

Variety	Agro Based	Wood Based	RCF Based	Total
Newsprint Paper	0	0	667,726	667,726
Tissue	0	178,493	85,170	263,663
Kraft Paper	317,461	565,385	10,802,226	11,685,072
Duplex Paper/Board	0	873,797	2,766,259	3,640,056
Writing & Printing Paper	844,482	2,188,042	1,761,748	4,794,272
Others	350,000	202,443	413,610	966,053
Total	1,531,943	4,008,160	16,496,739	22,016,842
	7%	18%	75%	100%

- ❑ The dual challenge of ever-expanding population & paper consumption and environmental issues can be converted into an opportunity only through recycling approach.
- ❑ **Increase in Recycled Fiber Usage:** The use of recycled fiber in the Indian paper industry has grown rapidly. In 2014, around 50 - 55% of the total fiber used was from recycled sources. By 2024, this figure has risen to around 75%, driven by both economic and sustainability considerations.
- ❑ **Shortage of wood fiber in India:** The domestic demand for paper & paperboard is met with using Recycled Fiber.
- ❑ **Domestic recovered fibre collection** is only 30-35%.
- ❑ **Fibre balance:** RCP local collection: 7 – 8 million tons, RCP Import: 7-8 million tons.
- ❑ **US & Europe** has **75-80%** share in total recovered paper imported in India.
- ❑ The increasing dependency on imports reflects the **growing demand**, but it also highlights a need to improve domestic collection systems.
- ❑ An estimate suggests that an incremental of 1% recovery rate of wastepaper will result in
 1. **Saving 0.2 million tons raw material,**
 2. **0.16 million tons coal,**
 3. **2750 Mega Watt power and**
 4. **7.7 million m3 water,**
 5. **Reduce 0.02 million tons of greenhouse emission and**
 6. **Lower the import bills by \$25 million.**

Shifting Fibre Combination in India

Shifting fibre combination



Changing Dynamics in Consumption
Decline in Graphic Paper demand due to digitalization and online media. Transition in consumer behaviour (newspapers, books, and office papers)

Industrial growth
The Current demand of Kraft Paper is in line with the industrial growth in FY 2023-24 was 9.5%.

Increasing Demand for packaging
for Consumer Durables, Agri & Food Packaging, Pharma Industry., Electronics and Automobile Sector.

Cost efficiency
Recycled fiber is often cheaper than virgin fiber, and India has increased its domestic collection and imports of recovered paper.

Sustainability and Circular Economy
The shift toward sustainable practices and circular economy principles. Demand for such grade has created a favorable environment for paper manufacturers to invest in paperboard and packaging paper..

E-Commerce Boom
The rapid growth of e-commerce has fuelled demand for packaging materials, which are primarily produced from recycled fibers.

Technology
Advance de-inking technology improves the quality of recycled graphic paper.

Consumer awareness
for recycled/recyclable products & Anti-plastic

Growth in packaging
Corrugation, Food & Beverage packaging, Innovative packaging to meet the desired standards of Omni-channel.

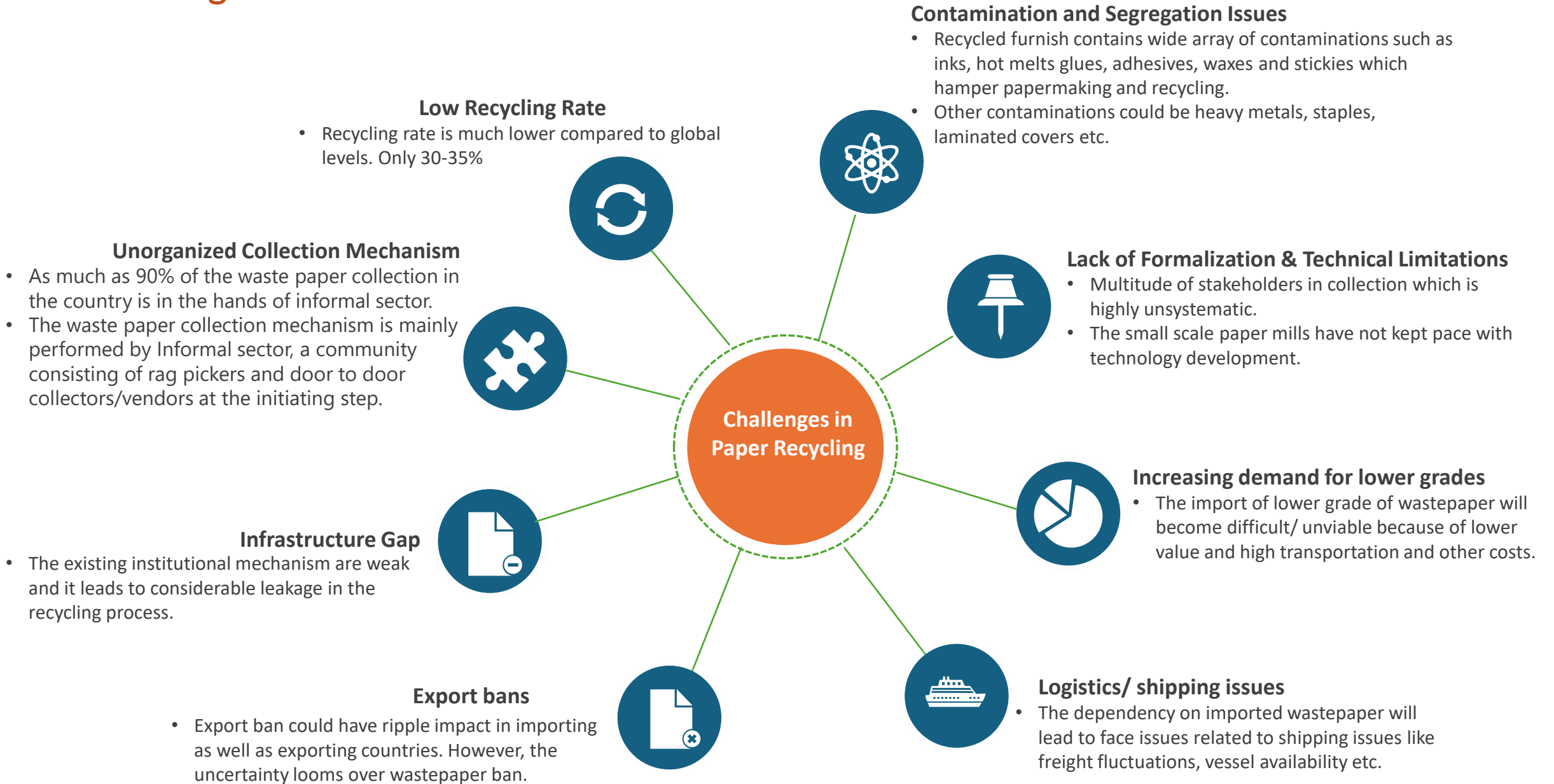
Key trends observed in the last 5 years:



Light-weight Packaging
Lowers pulp & paper expenses, reduces CO2 emissions, and slashes shipping costs.

Government Initiatives
Govt. procurement policy, National Green Tribunal and Environmental Regulations, Promotion of waste segregation and Collection, Support for Green Certification & Eco- Labeling, Extended Producers Responsibility, Tax exemption, financial assistance etc.

RCP: Challenges in India



RCP: Future Prospects in India

Increased Awareness

- Public awareness: will improve segregation thereby improve the collection system and enhance the quality of wastepaper.



Technological Advancement

- State of art tech & innovations for improve efficiency and quality of recycled paper. Advanced de-inking technology.
- Tactical moves that involved leveraging capabilities to meet the changing needs in the market.



Govt. initiatives and protocols

- Mandatory recycling targets for industries.
- Extended Producer Responsibility manufacturers & distributors.
- Green Certification Standards (Eco-Mark).
- Research grants & infrastructure investment
- Taxation Policies and Import regulations.
- Resource efficiency policy.



AI, Robotics and Digital Transformation

- Better quality control, sorting etc. using robotics.
- AI assisted optical segregators.
- Traceability in supply chain.



Circular Economy Integration

- Integration of sustainability concept with technology enabled, quality assured collaborative supply chain for recycled paper.



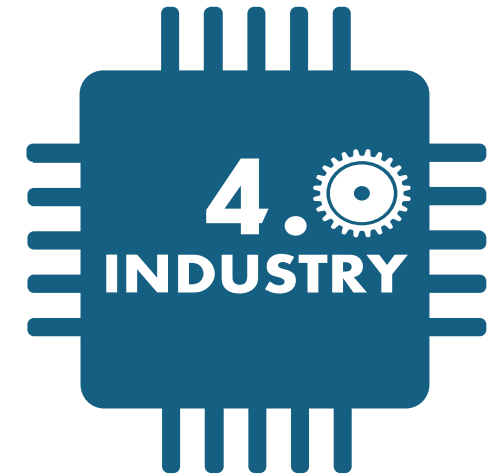
Carbon Credit System

- To generate Carbon Credits for forestation and recycling to trade and offset carbon.
- Recently launched by Ministry of Environment: Green Carbon Credit in India.



Consolidation in Market

- Highly fragmented recycled based small-scaled mills operating with Inefficiency and low-profit will be closed-down.
- Consolidating production into larger capacities optimizes resources and enhances efficiency, providing a competitive edge in the market.





Thank you!

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