

Technical Textile-Packtech Industry Status & Consumption Pattern in Reference of Rajasthan

Dr. Shikha Sharma, Professor, Amity Business School, India. ssharma2@jpr.amity.edu

Bindu Sharma, Ph.D. Scholar, Amity Business School, India. bindushid@gmail.com

Abstract - Technical Textile have versatile phenomena in reference of application and their special performance that is the major reason to boom some Technical Textile at greater extend, while some of still struggling for market in developing country. In India Packtech Industry is the largest segment of domestic consumption. The research paper has been reveal the Packtech Industry status and consumption pattern by sub-industry in reference of Rajasthan, Jaipur district in concern of manufacturing HDPE/LDPE /PP Bags, lay-flats and woven sacks, organized sector and unorganized sector their growth and consumption pattern by sub-industry. This research is based on primary and secondary data which collect from Packtech industry under the aegis of Rajasthan Plastic Association.

Key words- *Technical Textile, Packtech Industry, Organized Sector and Unorganized Sector, Consumption Pattern.*

I. TECHNICAL TEXTILE

Ministry of Textile has been revealed that Packtech segment of Technical Textile growing at a rate of 22% to US\$ 11,782 million by 2016-17 which is highest among other segments of Technical Textile like Hometech, Indutech and Mobiltech etc. Growth is not a component which motivates the research in this segment, consumption also highest in Packtech segment (based on 2013-2014). Among all categories, Packtech forms the largest segment and holds 42% of the market share. This is followed by Indutech, Mobiltech and Hometech (Trade, 2017).

Table1. Technical Textile market share and market growth(2013-2014)

S.no	Technical Textile Industry Segmentation	Consumption		Market Size(in crore)		Growth in %	
		Global	Domestic	Global	Domestic	Global	Domestic
1	Agrotech	7.00%	1.00%	8,079	826	8.47	6.78
2	Buildtech	9.00%	4.00%	9,325	2,514	16.91	14.42
3	Clothtech	7.00%	8.00%	8,306	4,835	14.98	18.58
4	Geotech	2.00%	0.30%	1,203	683	7.33	3.98
5	Hometech	13.00%	9.00%	18,778	6,249	6.90	23.72
6	Indutech	13.00%	10.50%	3,257	6,625	6.53	18.57
7	Meditech	8.00%	5.00%	8,238	3,321	14.50	28.76
8	Mobiltech	16.00%	11.00%	12,338	5,607	9.01	23.76
9	Oekotech	2.00%	0.20%	860	120	5.41	1.02
10	Packtech	15.00%	42.00%	36,857	28,020	24.41	42.00
11	Protech	1.00%	3.00%	6,630	1,988	16.76	14.78
12	Sportech	6.00%	7.00%	11,382	4,132	14.98	11.46

Source: Wazir Advisors. (2014). Enabling Framework for Accelerating Growth and Investments in Technical Textiles in India: Knowledge

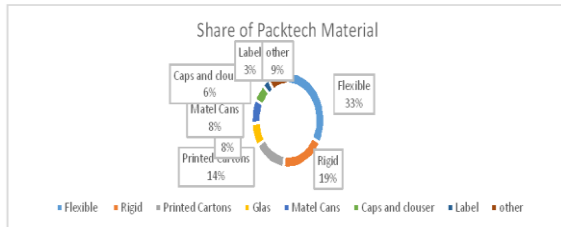
This data shows that Indian Packtech industry have highest growth sector 42% among all the Technical Textile. The growth of this sector is more than twice time of cloth sector; however this sector especially flexible Packtech industry facing waste management problem for their long lasting product life which may be cause of landfill pollution.

II. PACKTECH INDUSTRY

Indian Packtech Industry is highest growth industry among 12 Technical Textile industries. This industry is consisted packaging product which is manufactured for packaging and safety. The purpose for fulfill the requirement of packaging is called as pack tech (Bilagi, 2017). Packtech Industry further divided in 5 major categories based on material-flexible, rigid, metal, Glass and other (cap/closer/printed material etc.) As per the market share of

Packtech material, highest share denote for flexible Packtech while the rigid Packtech (Metal and glass) have only 19% which tend to convert in flexible packaging due to commercial ease of retail and logistic. Table shows the Packtech share material wise.

Diagram 1. Packtech Material



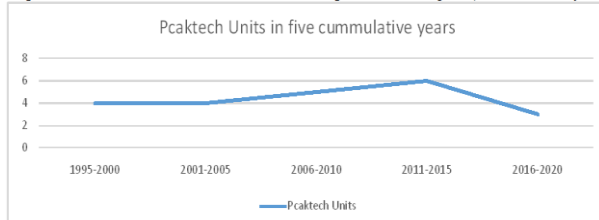
Source- FICCI, Ministry of Textile

Packaging is ranging from soft and flexible paper to polymer and rigid metal and glass. In current scenario when logistic boundaries blurred due to e-business Flexible Packaging is the best option not only for product safety and logistics even it is use as brand symbol. In Rajasthan, Jaipur District is major hub for flexible packaging total 52 units are registered in Rajasthan plastic association which are engaged for LDPE/HDPE/PP Bags, Lay flats and woven sacks related activities which is the major categories of Packtech industry. Among 52 units of Jaipur district, 22 units are working for production of LDPE/HDPE/PP Bags, Lay flats and woven sacks.

2.1 Packtech Industry Status

In Jaipur total 22 industries are working in Packtech sector among them 18 are presently engaged in manufacturing activities 1 unit closed and 3 have modified their production in fabric and designer bags and pouches. Primary and secondary research revealed industry status on the basis of establishment year and number of workers and consumption of HDPE/LDPE/PP and woven sacks.

Diagram2. Establishment of Packtech Manufacturing Units in Jaipur (Cumulative 5 years)



Source: - Plastic Association letter – PMAR/JPR/2019-20/72

This line diagram shows 1995 to 2005 the growth of establishment of Packtech industry in Jaipur is same while from 2006 to 2015 its shown growth, in this decade the Packtech industry establishment increases till 6 units. While 2015 onwards the establishment of units was lesser than starting era of Packtech industry. Indian institute

Packaging 700 units are working in India while in Rajasthan have total 92 units are working in which 22 manufacturing units are in Jaipur district.

III. ORGANISED AND UNORGANIZED SECTOR

The Sum of organized and unorganized organization consist the whole industry, these both terms are used interchangeably with formal/ informal and as such they are consistent with the international definition as recommended by the ILO. 1.10 = define the unorganised sector in the following way: "The unorganised sector consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers". (NCEUS, 2007)

3.1 Packtech Industry- Worker's Status

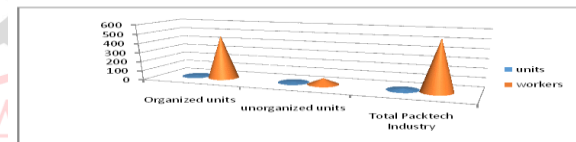
Packtech industry is technology centric industry thus automation process create less intensity of worker in manufacturing units. In this industry extrusion machine, two layer blown machine, ceiling and cutting machine are used which may be fully automatic and semi-automatic depend on packaging manufacturing units.

Table2. Analysis of Packtech Industry & work force

Packtech Industry	Frequency of manufacturing units	Percentage	Work force	Percentage
Organized / formal manufacturing units	8	44	471	88
Unorganized/ un formal manufacturing units	10	56	66	12
Total	18	100	537	100

Source Plastic Association List – PMAR/JPR/2019-20/72

Diagram 3. Analysis of Packtech industry & work force



Source Plastic Association List – PMAR/JPR/2019-20/72

This table shows the industry status in reference of organized and unorganized units based on NCEUS 2007. Total 18 manufacturing units are working in Jaipur, in which 8 units have more than 10 workers while 10 units have less than 10 workers. Majority of unorganized units has been sought with 56 % while organized units are consist only 44%. As per the Reponses provided by respondent the majority of workforce was worked in organized units that 88% while unorganized units have thin workforce.

IV. CONSUMPTION

LDPE/HDPE/PP/WOVEN SACKS

Table3. Analysis of Material used by industry

Material	Organized Industry used	%	Unorganized Industry used	%	Total Industry used	%
HDPE	8	44	10	56	18	100%
LDPE	2	11	5	28	7	39%
PP	5	28	4	22	9	50%

This table shows the Material used status in reference of HDPE, LDPE and PP based on detail provided by Rajasthan Plastic Association (Annexure -3). HDPE has versatile material which used all manufacturing units while LDPE material used only 39% manufacturing units in which only 11 % LDPE used by organized units and 28% used by Unorganized units. PP material used 28% by organized units while 22% used by unorganized units and total 50% pp material used by the industry level.

Table4. Analysis Cumulative sector wise Consumption based on 2018 in Amount (in Crore) and Quantity (in metric tons)

Packtech Industry	Consumption in Amount	%	Consumption in quantity	%
Organized /formal manufacturing units	198.17	95	30,606	95
Unorganized/ un formal manufacturing units	10.33	5	1,730	5
Total	208.5	100	32,336	100

This table shows the Packtech raw material consumption by Packtech industries (based on 2018) data provided by the account section of each respondent manufacturing unit. Organized manufacturing units have major consumption of raw material in both amount and quantity .It consist 95% of total consumption of organized Packtech Industry while unorganized sector have lesser consumption only 5% due to plant capacity.

4.1 Consumption Pattern

The consumption of Packtech material is consist on sub-industry Packaging requirement, researcher identified potential industry on the basis of pilot study of two organization (1 organized and 1 unorganized) This industry coded in A to G as mention particular industry-

- Food & grain Industries
- Cloth & Accessories Industries
- Building & Accessories industries
- Medical & cosmetic industries
- Automobile industries
- Domestic vender & E-marketing vender
- Other

To identify the consumption pattern in Jaipur district Packtech industry, researcher collected the data in form of Packtech consumption preference rank for sub industry. In the questionnaire 1- 7 ranked in ascending manner 1 is used for highest consumer sub-industry while 7 is for lowest consumer industry.

Table 5 Analysis of Consumption Pattern

Ranking order	A	Wt	B	Wt	C	Wt	D	Wt	E	Wt	F	Wt	G	Wt
1	13	13	1	1	1	1	1	1	1	1	0	0	1	1
2	1	2	4	8	6	12	3	6	1	12	1	2	2	4
3	0	0	4	8	5	15	2	6	5	15	2	6	0	0
4	1	4	3	12	2	8	2	8	3	12	5	20	2	8
5	0	0	3	15	1	5	3	15	2	10	4	20	4	20
6	0	0	3	18	1	6	3	18	5	30	6	36	1	6
7	3	21	0	0	2	14	4	21	1	7	0	0	8	56
Total	18	40	18	62	18	61	18	75	18	87	18	84	18	95

Note –Wt = no. of units X given rank by units (Total wt 18 x 7 = 126)

Frequency Analysis Wt interval

18-45 maximum

46-80 Average

81—126 less consumption

Table 6 Sub-industry Consumption Pattern

Wt. Interval	18-45	46-80	81-126
Sub-Industry consumption Pattern	Food industry	Building Accessories industries Cloth & Accessories Industries Medical & cosmetic industries	Automobile industries Domestic vender & E-marketing vender Other

The table shows that food industry is major consumer for Jaipur Packtech Industry while Building, cloth and medical industry have average consumption of Packtech. Auto mobile, domestic vender and other industry have less consumption of Packtech.

V. CONCLUSION

Packtech industry growth is depended on demand of other industry products, In Rajasthan 2011-12 and 2018-19, Gross State Domestic Product (GSDP) expanded at a Compound Annual Growth Rate (CAGR) of 11.37 per cent (in rupee terms) to US\$ 128.10 billion whereas the Net State Domestic Product (NSDP) expanded at a CAGR of 11.19 per cent (in rupee terms) to US\$ 115.13 billion (foundation, 2019). Packtech industry growth indicate the industrial growth as well as life style but the major barrier of this industry is landfill , recovery of used material and recycle for sustainable development particular industry.

REFERENCE

- [1] Rajasthan Plastic Association(2019)/ PMAR/JPR/2019-20/72 primary source
(Association, 2019)

- [2] Bilagi, D. (2017, may 22). <https://www.textilemates.com/technical-textiles/>. Retrieved from [www.textilemates.com: https://www.textilemates.com/privacy-policy-2/](https://www.textilemates.com/privacy-policy-2/)
- [3] Foundation, I. B. (2019). Industrial Development & Economic Growth In Rajasthan. Rajastahn: IBEF.
- [4] NCEUS, N. c. (2007). Report on conditions of work and promotion of livelihood in the unorganised sector. new delhi: Dolphin Printo Graphic.
- [5] Trade, D. f. (2017). www.makeinindia.com/article/-/v/technical-textiles-a-bright-future. Retrieved from [www.makeinindia.com: http://www.makeinindia.com/article/-/v/technical-textiles-a-bright-future](http://www.makeinindia.com/article/-/v/technical-textiles-a-bright-future)

