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AN ASSESSMENT OF FACTORS IN BUYING ENGINEERING CONSUMABLES WITH REFERENCE TO SPINNING TEXTILE INDUSTRY IN INDIA

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ABSTRACT:

The Spinning textile industry is playing vital role in the economy of India. There are various operational issues and challenges for the spinning mills. Such as raw material, manpower, power requirement etc. thosewere studied in previous studies. This study mainly focused on the size of mills and its association with the purchasing of engineering consumables. The reasonfor this study was to assess the important factors accounting for selection of engineering consumables required in spinning mills. Thus, to focus on various criteria of buying the consumables, the nationwide study was conducted for collecting the responses from spinning mills. 132 spinning mills were selected from multistage sampling method and collected the primary data with the help of structured questionnaires. The findings suggest thatquality, price, service of supplier, durability of the consumables is important set for all sizes of the spinning mills.

KEYWORDS: Industrial Buying, Spinning mills, Engineering Consumables

INTRODUCTION:

India is known as hub of cotton manufacturing.In the post-independence era, the spinning industry in India gathered a very good momentum and many spinning mills were incubated and nurtured in tier-1 and tier-2 cities of India.Textile industry experienced an annual turnover of USD 120 billion and emerged as the second largest industry in India. However, the textile industry is expected to reach a turnover of USD 230 billion by 2020. With its importance in economy, the government was announced an investment of USD 37.9 billion in the textile industry to ensure sustained growth of textile industry.

The demand of cotton in the domestic market as well as international market was effectively served by Indian textile industry. The spinning industry in India was facing various challenges like raw material availability, power, infrastructure, human resource, machinery etc.There werevarious factors that affect the buying of engineering consumables needed in the production process.Focusing on various issues related to the buying of engineering consumables, the spinning mills were expecting to establish a longer-term relationship with the suppliers. As there were many suppliers in the engineering consumables supply markets, it was hard to find the right way to select suppliers. Therefore, in this study, the prime importance was given to the quality of the supplies, price of the supplies, service of the supplier, delivery of engineering supplies and durability of the supplies as the prime factors that effect on the buying of engineering consumables in spinning mills.

REVIEW OF LITERATURE:

Engineering consumables: Engineering consumables are the goods used by the individuals and businesses that must be replaced regularly because they wear out or are used up. They can also be defined as the components of an end product used up or permanently altered in the process of manufacturing. Buying engineering consumables is a process that leads companies to select their desired quality products required for further manufacturing functions.

Porter (1985), in the value chain analysis discussed that procurement is a support activity that contributes to the competitive advantage of a business unit by adding value. The purchasing function uses various inputs to perform value-adding processes and to provide output like quality, services, materials, durability etc.

Sam Dzever, Pascale G. Quester &SlyvieChetty, (2001), in Industrial buyingbehavior,the past research of industrial purchasing behaviors havepaid attention on the factors like vendor variables, product variables and purchaser variables. The vendor variables were vendor location, dependability, service, technical ability etc.The product variables identified as price, quality and type of purchase. The purchaser variables includesize, motives, decision-making formality, risk preference,experience etc. This study mainly focused on product variables.

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Muraldiharan, Anantharaman, and Deshmukh, (2002), presented a five-step analytical hierarchy process (AHP) based model with the nine criteria like Quality, Delivery, Price, Technical capability, Financial position, Past performance attitude, Facility, Flexibility, and Service for selecting suppliers.

Weber et al. (1991),discussed in their survey that price, delivery, quality, production capacity, and localization were the most important criteria.

Bonoma, (1977), explained that, the transaction-based theory focused on few task variables like price, quantity, quality, service and delivery and support purchase decision was based on logical analysis of the task variables.

Objectives of Study:

1) To understand the Industrial buying behaviour in spinning textile industry in India.

2) To study the impact of size of spinning mill on product factors in buying engineering consumables.

Hypotheses:

H1: There is a significant relationship between size of spinning mill and the quality of engineering consumables

H2: There is a significant relationship between size of spinning mill and the price of engineering consumables

H3: There is a significant relationship between size of spinning mill and the service of supplier

H4: There is a significant relationship between size of spinning mill and the delivery of supplies with engineering consumables

H5: There is a significant relationship between size of spinning mill and the durability demanded of engineering consumables

Research Methodology:

The study lead to the analysis of various factors those impact on purchasing of the engineering consumables in the spinning mills outspread in India. The data used in the study was collected from various secondary sources like journals, books and internet. The study has used primary data through the structured questionnaire distributed online to the various spinning mills in India.

Research tools:

Research tool used for the empirical study was online structured questionnaire which included the closed ended questionsalong with 5 point Likert Scale having various options like strongly disagree/disagree/neutral/agree/strongly agree.

Sampling methods:

Multiple stage sampling was used at various levels of the study. The samples were collected from various regions of India. The quota was allotted to each region according to the spread. As 20% mills were selected from north region, 20% mill from west region and remaining 60% mills were from southern region. Thus total 150 mills were selected for the final study through a random sampling method,out of which 132 responses were received with complete filled details.

The sample size of 132 spinning mills was considered for final analysis. The responses from the plant head/purchase heads in the spinning mills were further analysed with the help of SPSS and MS Excel softweres.

Data Analysis & Discussion:

The data was analysed for the 132 samples of spinning mills in India.

The measurement of reliability was done for examine the stability and consistency of the collected data. Consistency of the questions was determined as how well the items were together as a group in measuring a construct. Cronbach‘s alpha was used to determine the coefficient alpha values Cronbach's alpha as a measure of internal consistency i.e. how closely related a set of items were as a group.

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Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.717	.718	6

As for the result of reliability test, the Cronbach alpha score (0.717) is more than 0.70 that shows a high level of internal consistency. Thus, it is treated as acceptable for further statistical analysis with satisfactory level of reliability.

The profile of spinning mills is tabulated by considering the size of spinning mill.Small spinning mills (spinning mills having less than 10 carding machines) which were also a part of unorganized sector of spinning textile industry in India. Medium size spinning mills (spinning mills having more than 10 carding machines and less than 40 carding machines) which were the semi-organized sector of spinning textile industry in India. Large size spinning mills (spinning mills having more than 40 carding machines) which were mainly organized sector of spinning textile industry in India.

Size of Spinning Mill

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Small	42	31.8	31.8	31.8
	Medium	76	57.6	57.6	89.4
	Large	14	10.6	10.6	100.0
	Total	132	100.0	100.0	

The above data shows that 31.8 % spinning mills were small size mills. However, there were maximum spinning mills from medium size i.e. 57.6%. In the study, there were 10.6% spinning mills come from large size.

Hypothesis Testing:

H0: There is no significant relationship between size of spinning mill and the quality of engineering consumables

H1: There is significant relationship between size of spinning mill and the quality of engineering consumables

ANOVA

Quality of engineering consumables

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.017	2	.508	1.080	.343
Within Groups	60.703	129	.471		
Total	61.720	131			

The ANOVA table indicates that thesignificant level for quality is 0.343 hence, nullhypothesis is accepted as 0.343 significance is higher than 0.05 at 95% confidence interval. As a result, it is concluded that size of spinning mill has no significant relationship with the quality of engineering consumables.Thus, whatever be the size of spinning mill the importance of quality is desired factor.

H0: There is no significant relationship between size of spinning mill and the price of engineering consumables

H2: There is a significant relationship between size of spinning mill and the price of engineering consumables

ANOVA

Price of engineering consumables

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.833	2	1.917	2.839	.062
Within Groups	87.076	129	.675		
Total	90.909	131			

The one way ANOVA statistics shows that at the 95% level of confidence, the *p* value is 0.062 which is higher than 0.05. Hence, the result shows that there is no significant relationship between the size of spinning mills and the importance of price of engineering consumables. Thus, for all types of the spinning mill the price is important factor of selection.

H0: There is no significant relationship between size of spinning mill and the service of supplier

H3: There is a significant relationship between size of spinning mill and the service of supplier

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ANOVA

Serviceofsupplier

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.427	2	.214	.580	.561
Within Groups	47.482	129	.368		
Total	47.909	131			

From the above table, it is clear that the sig. Value (*p*) 0.561 is greater than 0.05 at the 95% confident level. Hence, the null hypothesis is accepted, as there is no significant relationship between service of the supplier and the size of spinning mill.

H0: There is no significant relationship between size of spinning mill and the delivery of supplies with engineering consumables

H4: There is a significant relationship between size of spinning mill and the delivery of supplies with engineering consumables

ANOVA

Delivery of consumables

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.103	2	1.551	3.680	.028
Within Groups	54.375	129	.422		
Total	57.477	131			

In the ANOVA table at F=3.680 the *p* value is 0.28, which is considerably less than the value 0.05 at the 95% level of confidence. This shows that the null hypothesis is rejected. It can be concluded there is significant relationship between size of spinning mill and the delivery of supplies with engineering consumables.

H0: There is no significant relationship between size of spinning mill and the durability demanded of engineering consumables

H5: There is a significant relationship between size of spinning mill and the durability demanded of engineering consumables

ANOVA

Durability of consumables

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.237	2	1.618	3.025	.052
Within Groups	69.006	129	.535		
Total	72.242	131			

The ANOVA statistics in above table shows that for the 95% level of significance the p value is 0.52 which is greater than 0.05. Hence, the null hypothesis is accepted. There is no significant relationship between size of spinning mill and the durability demanded of engineering consumables.

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CONCLUSION:

The spinning textile industry was facing various challenges in operating all over India. Besides of the other challenges, supply of engineering consumables and its purchase decisions become crucial. There were various factors those affects on the selection of consumables. In the brief study quality, price, service by supplier, delivery and durability of the engineering consumables were considered as among the major factors for buying the consumables.

Irrespective of the size of spinning mills quality, price, durability of consumables and service of the supplier remains important criteria of buying the engineering consumables. However, there found different importance of the delivery of the supplies for the different sizes of spinning mills.

FUTURE RESEARCH:

This study restricted only selected criteria of buying engineering consumables. In the coming time the study can be conducted for the different product and supplier factors. The study can also be conducted in the vendor selection for the supplies of different materials required for spinning mills functioning.

REFERENCES:

[1] Beri G. C.:"Marketing Research" published by TATA McGraw-Hill Company New Delhi
[2] Cooper Donald : Business Research Methods by Mc Graw Hill Education
[3] Kotler Philip : "Marketing management" published by Person Education Ltd. New Delhi
[4] Nair Suja: "Consumer Behavior" published by Himalaya Publication House, New Delhi.
[5] Sam Dzever, Pascale G. Quester & Sylvie Chetty (2001) Factors Affecting Industrial Procurement Decisions in the Asia-Pacific Region: A comparative study of Australia, New Zealand, Thailand and China, Journal of the Asia Pacific Economy, 6:2, 194-211
[6] Muraldiharan, C.,Anantharaman, N.,Deshmukh, S.G. (2002), A multi-criteria group decisionmaking model for supplier rating. J. Supply Chain Manag, 38, 22–35.
[7] Weber C. A., Current J. R., and Benton W. C., (1991) "Vendor selection criteria and methods," European Journal of Operational Research, vol. 50, no. 1, pp. 2–18
[8] Zaltman G., and Bonoma T.V., (1977), Organizational buying behavior: Hypotheses and directions Industrial Marketing Management Volume 6, Issue 1 Pages 53-60