



UNDERSTANDING CONSUMER PERCEPTION AND PREFERENCE ON ECO-FRIENDLY GARMENTS

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ABSTRACT

The Indian textile legacy industry has a great, which is perhaps unmatched in the history of India's industrial development. India's textile industry evolved and developed at a very early stage and was sought after for their finesse, quality and design by its best manufacturing technology. Textiles have historically formed an important component of India's export included embroidered bedspreads, Wall hanging, Quits of embroidered wild silk on cotton or jute contributing 35% to China, South East Asia, and Portuguese. It is considered as the most ecologically harmful industry in the world. The eco-problems in textile industry occur during some production processes and are carried forward right to the finished. In this subsequent we will discuss the present study, conducted to explore the extent of the impact of consumer's perception and preference towards the marketing of green products in Tirupur city. Tirupur,the heartland of the knitwear industry in India. There are number of spinners of yarn integrating forward to set up knitting plant; textile process house and then further integrating forward to become makers of garments. It is well known that every customer product has an impact on the environment. Any product, which is made, used or disposed of in a way that significantly reduces the harm it would otherwise cause to the environment, could be considered as eco-friendly product.

We have come to a time in man's history, where all around us we see large carbon footprints that our ancestors and we have left on our environment. These footprints are not only

in the form of carbon emissions, but also in the form of pollution and depletion of natural resources, etc. As more and more people come to be aware of the dire situation our environment is facing today, an increasing proportion of people are turning toward eco green living. The use of eco-friendly products like eco clothing is one aspect of eco green living. Using organic fabrics is not the only way the fashion industry is going "green", but also engaging in environmentally sustainable practices, making sure that product quality is maintained, offering business and technical expertise and opportunities for worker advancement, contributing to community development, building long-term trade relationships, and being open to public accountability". There are a variety of materials considered "environmentally-friendly" for a variety of reasons. They are:I. Fibres: Hemp, Bamboo fiber, Organic cotton, Alpaca ,Soy silk , Recycled polyester ,Jute,Milk silk , Corn fiber , Pineapple fiber, Banana leaf fiber, Lycra, Organic Wool, Organic Silk.II. Dyes: Dyeing is the important process which result in water pollution & more harmful to the environment. To avoid this Azo-free, Biodegradable, Fiber reactive dyes, Heavy metal free , Natural dyes, etc can be used.III Eco finishing: Chlorine-free bleaching, Dry-heat fixation , Dye bath reuse , Eco bleach ,Ink-jet printing , Vegetable tanning , Waste water recycling, etc., The main objective of the study is – a)To measure the green values of consumers and analyses the perception of consumers on eco-friendly garments.b)To identify the factors influences the consumer persuasion to purchase and evaluate the promotional practices involved in enhancing eco-friendly garments., analysed by means, Chi-square test,ANOVA ,Rank Correlation & regression,T-Test definitions of all utilized variables taken are presented and are categorized by preference & perception of consumers.The findings of this study could be helpful for many organizations and customers who attempt to produce and consume sustainable textiles and clothing products. It is found that the most of consumers in tirupur city are aware of environmental problems green product in market. Here is positive attitude & behavior towards green product. The main factors which avoid manufacturing & using of eco-friendly products are more expensive & lack of availability.

Introduction

The textile industry is one of the world's largest industries. The Indian textile legacy industry has a great, which is perhaps unmatched in the history of India's industrial development. India's textile industry evolved and developed at a very early stage and was sought after for their finesse, quality and design by its best manufacturing technology. Textiles have historically

formed an important component of India's export contributing 35% to China, South East Asia, and Portuguese. This export included embroidered bedspreads, Wall hanging, Quits of embroidered wild silk on cotton or jute. It is considered as the most ecologically harmful industry in the world. The eco-problems in textile industry occur during some production processes and are carried forward right to the finished. In this subsequent we will discuss the present study, conducted to explore the extent of the impact of consumer's perception and preference towards the marketing of green products in Tirupur city.

Overview of Tirupur Knitwear Industry

Tirupur, the heartland of the knitwear industry in India. There are number of spinners of yarn integrating forward to set up knitting plant; textile process house and then further integrating forward to become makers of garments. In Tirupur, if the integration is not wholly owned by the exporter to become a vertical unit then the exporters buy stakes or invest into a process house to become partners to ensure preference to their orders for the textile process and maintain standard quality as desired by their buyers. In spite of the fact that the Tirupur town is reeling under acute infrastructural shortage, the Tirupur knitwear exporters are able to make a mark in the international sourcing map of the textile industry because they work as a group and help each other for a common cause. Thanks to this community thinking of the exporters, they bear the inconveniences with a positive grin and willingly finance fully or partly projects of road, culvert, drinking water supply etc. repairs or new construction carried out by the municipality and or panchayat.

There are more than 500 production units which are involved in exports of knitwear from Tirupur. It is well known that every customer product has an impact on the environment. Any product, which is made, used or disposed of in a way that significantly reduces the harm it would otherwise cause to the environment, could be considered as eco-friendly product. The textile is shared between natural fibers such as wool, silk, linen, cotton & hemp, man-made ones the most common of which are synthetic fibers from petrochemicals.

Conceptual Framework

The word 'eco' is short for ecology. Ecology is the study of the interactions between organisms and their environment. Therefore 'eco' friendly (or 'ecology friendly') is a term to refer to goods and services considered to inflict minimal or no harm on the environment.

Why Eco-clothing?-We have come to a time in man's history, where all around us we see large carbon footprints that our ancestors and we have left on our environment. These footprints are not only in the form of carbon emissions, but also in the form of pollution and depletion of natural resources, etc. As more and more people come to be aware of the dire situation our environment is facing today, an increasing proportion of people are turning toward eco green living. The use of eco-friendly products like eco clothing is one aspect of eco green living.

How can Textile industry Go Green?- Using organic fabrics is not the only way the fashion industry is going "green", but also engaging in environmentally sustainable practices, making sure that product quality is maintained, offering business and technical expertise and opportunities for worker advancement, contributing to community development, building long-term trade relationships, and being open to public accountability". Both recycling fashion and organic clothing can contribute to eco sustainable development. There are a variety of materials considered "environmentally-friendly" for a variety of reasons. They are:

I. Fibres: Hemp, Bamboo fiber, Organic cotton, Alpaca ,Soy silk , Recycled polyester ,Jute ,Tencel , Ramie ,Organic ,Fortrel Ecospun ,Milk silk , Corn fiber , Apart from the eco-friendly fibers mentioned above, here are some other eco-friendly fibers are Pineapple fiber, Banana leaf fiber, Black diamond fiber, PLA fiber, Lyocell, Lycra, Organic Wool, Organic Silk.

II. Dyes: Dying is the important process which result in water pollution & more harmful to the environment. To avoid this ,there are various Dyes introduced to reduce harmfulness, they are Azo-free, Biodegradable, Chrome-free, Fiber reactive dyes, Heavy metal free , Low-impact refers to synthetic dyes , Natural dyes, etc.,

III Eco finishing: The finishing process that is most suitable and within the norms of eco label standards is called Eco Finishing. They are Chlorine-free bleaching, Cold or low temperature dye processes , Dry-heat fixation , Dye bath reuse , Eco bleach ,Ink-jet printing , Vegetable tanning , Waste water recycling, etc.,

Researchers Views

Environment marketing is also known as green marketing, sustainable marketing and ecological marketing. The American Marketing Association (AMA)" Green marketing is

marketing of products that are presumed to be environmentally safe. It incorporates a board range of activities, including product modification, changes to the production process, packing changes, as well as modifying advertising.

Peattie (2001), described evolution of green marketing in 3 phases. First phase is termed as 'Ecological "green marketing and this period all the marketing activities are concerned to help environment problems and provide remedies for environmental problems. Second phases "Environmental" green marketing and the focus shifted on clean technology that involved designing of innovation new products, which take care of pollution and waste issues. Third phase was "sustainable" green marketing into provinces in the late 1990s and early 2000. The product that in-corporate the strategies recycling or reduce the impact on the natural environment is known as green product or Eco-friendly products.

Maloney *et al.* (1975), environmental concern refers to the degree of emotionality, level of knowledge and readiness to change behaviour. Some research studies are based on the premise that people's response to environmental appeals is increasingly linked to the belief that individuals can positively influence and contribute to the solution of environmental problems.

Assael .H (1990) points out those textile manufacturers occasionally introduce new texture, design, style and colour in order to comply with the requirements of those consumers who are sensitive to novelty and variety. This trend is very prominent among manufacturers of readymade garments like jeans, shirts, kid's wear and 'churidar'.

Patil & Agrwal.Y says that the reset development in chemical processing would enable the industries to produce Eco-friendly clothing for emerging markets. The improvement in raw material as well as chemical would ensure eco – friendly processing with minimum damage to environment. The industry should concentrate on continuous product development to complete in the market.

Michael Porter and Claas van der Linder, Environmental standards can trigger innovations that lower the cost of the product or improve its value. Such innovation will allow the companies to use a range of inputs more productively-from raw materials to energy to labor – thus offsetting the cost of improving environmental impact and hence enhanced resource productivity will make companies more competitive. Innovation will play a lead role in sustainable development for the companies to be competitive and resisting innovations will lead to loss of competitiveness in today's global economy.

Davidson et al, found that the consumers' attitude is associated with the knowledge and personal experience they possess. However inconsistencies were found among the relationship between consumers' attitude and their behavior when it comes to green consumerism.

Juwaheer, Consumers are substantially aware about green products; however applying green marketing practices in business operations is not an easy task. Due to environmental consciousness that has evolved over time, studies on green consumerism will be the main focus point in future leading to identifying the consumer attitudes, behaviors and intentions.

Braimah and Tweneboah-Koduah (2011) studied Ghanaian consumers and have found low level of awareness towards green marketing issues which affected that purchase decision of the consumers. Price of green products was also found to be one of the factor that influence the purchase of green products. However, it was found that young consumers are more likely to be influenced by green issues.

According to Joel Makower, challenges faced by green marketer also include the lack of standards and common consensus among the public about what actually constitutes "green". Companies are coming forward to showcase their commitments to reduce adverse climate impacts of their products and services. Green marketing can play an important role in sustainable development so firms must adapt innovative methods to sustain itself in the competitive environment.

Anon says that ,looking at the tremendous developments in the application of surface active agents, Ascham spa of Italy and aura specialist chemical has join venture for making bio degradable and other eco-friendly detergents which is formaldehyde free resin that improve the weaving properties of garment auscham-ahura had formed joint venture with following advantages. Indian manufactures would be able to produce eco-friendly fabrics to improve fabric quality. India to be significant market for specialty chemicals and supply quality goods to other countries.

Fliegelman (2010) & Thorgerson (2000) says that, there are three major drawbacks to eco-labeling programs. First, creating and running a government eco-labeling program has high administrative costs. Second, the large number of eco-labels available in the market is often confusing to consumers. Third in some cases, eco-labels are based on relatively loose standards with little to no environmental credibility .The abundant and non-transparent nature of eco-labels has led many consumers to be skeptical of their claims and has led to concerns about "greenwashing".

According to Vanclay et al. (2010), some evidence shows eco-labels do increase the purchasing of environmentally-preferable products. He studied the impact of carbon footprint labels on multiple grocery store products. They found that after labeling, consumers increased their purchasing of lower carbon products by four percent.

Various studies support the assertion that consumers today prefer environmentally safe products and have a positive disposition towards companies following such practices. A strong willingness is shown by consumers to favor environmentally conscious products and companies as per various opinion polls taken in US and elsewhere, however action to do so in reality are debatable

Methods and Procedures of the study

The area selected for the study is Tirupur, Tamil Nadu which is famously known as MINI JAPAN is a textile hub and this study mainly suitable and needed to Tirupur. Because of now a day the major problem in Tirupur textile industry is dyeing industry and other environment pollution. It occurs mainly on account of lack of awareness of eco friendly garments.

The means, Chi-square test, ANOVA, Rank Correlation & regression, T-Test definitions of all utilized variables taken are presented and are categorized by preference & perception of consumers.

The main objective of the study

- To measure the green values of consumers and analyses the perception of consumers on eco-friendly garments.
- To identify the factors influences the consumer persuasion to purchase and evaluate the promotional practices involved in enhancing eco-friendly garments.

Limitation of the study

The research as main challenge faced during the research work was lack of material availability studying the actual consumer responses and perception regarding eco-friendly apparel. It was covered with the existing material available in form of books, technical papers and blogs. The limited time span has been recognized as a major limitation to this study. The research finding that are based on only 150 samples & restricted to specific region of Tirupur.

The preference and perception of consumer will change day by day. Hence the result of the project may be applicable at present.

Analysis and Results

The analysis inferred that about 86% of respondents are female. Major respondents are belongs to the age group of 21-25 & 61% are married. It observed that the majority of respondents are graduates & working in private sectors .The higher income group falls between ₹10001 to ₹ 20000.

1. Sources of eco-friendly products information & Factors influencing purchase

Sources of eco-friendly products information Factors influencing purchase

<i>Components</i>	Frequency	%
Television	22	14.7
Radio	7	4.7
Internet	59	39.3
Newspapers	21	14.0
Magazines	20	13.3
School/University/Institutions	21	14.0

<i>Components</i>	Frequency	%
Product Price	35	23.3
Durability of Product	22	14.7
Awareness about Eco-friendly Products	43	28.7
Family Friends	17	11.3
Availability	21	14.0
Company Images	6	4.0
Past Experiences	6	4.0

The analysis reveals that 99% are very much interested to suggest the eco-friendly product to their friends & opined that they definitely purchase. It shows the welcome able trends towards the eco-friendly product purchase. Awareness about eco-friendly product & product price plays vital role in purchase decision. The eco-friendly information through Internet & television plays inevitable role.

2. The Components of advertisement:

The relationship among various components of advertisement is found by the Spearman rank correlation coefficient test & rank analysis

Rank Analysis

Parameters	1	2	3	4	5	Weight	Rank
Message/theme of advertisement	52	58	75	172	5	362	1
Celebrity endorsement	26	98	129	128	0	381	3
Jingle of advertisement	41	78	132	100	5	356	2
Video of advertisement	33	64	111	192	0	400	4

Spearman rank correlation coefficient

		Source of Eco-friendly product information	Message/theme of advertisement	Celebrity endorsement	Jingle of advertisement	Video of advertisement
Source of Eco-friendly product information	Correlation	1.000	-.035	-.013	.034	.067
	Sig. (2-tailed)	.	.673	.876	.681	.418
Message/theme of advertisement	Correlation		1.000	-.275**	-.436**	-.358**
	Sig. (2-tailed)		.	.001	.000	.000
Celebrity endorsement	Correlation			1.000	-.185*	-.349**
	Sig. (2-tailed)				.024	.000
Jingle of advertisement	Correlation				1.000	-.242**
	Sig. (2-tailed)				.	.003
Video of advertisement	Correlation					1.000
	Sig. (2-tailed)					.

The customer opines that message/theme of advertisement has to be considered as the primary variable so they ranked as 1. From the rank correlation table, it is observed that, except Source of Eco-friendly product information, all the other components of advertisements are significantly correlated with each other. Further it is identified that, low negative correlation between message / theme of advertisement and the other three components Celebrity

endorsement (-.275).The rank correlation reveals that all the components of advertisement except Source of Eco-friendly product information are inversely related with each other.

3. Perception of consumer on eco-friendly product

In order to study the mean difference in the perception of Consumer on eco-friendly product among consumers various Socio economic factors, Anova & t-test was performed, result was furnished below

Parameters	Anova				t-test	
	Age	Education	Occupation	Income	Age	Gender
	Sig.	Sig.	Sig.	Sig.	Sig.	Sig.
It is important to know that the product, I use do not harm the environment.	0.994	0.007*	0.070*	0.589	0.613	0.543
I consider the potential environment impact of my actions when making many decisions.	0.462	0.001*	0.037*	0.756	0.189	0.714
I would describe myself as environment responsible.	0.844	0.004*	0.390	0.409	0.661	0.077
I am concerned about wasting the resource of our planet.	0.976	0.259	0.559	0.645	0.482	0.866
I am willing to be inconvenienced in order to take actions that are more environments friendly.	0.693	0.009*	0.886	0.635	0.465	0.624
Destruction of ozone.	0.271	0.305	0.658	0.210	0.917	0.975
Industrial water pollution.	0.016*	0.221	0.584	0.632	0.833	0.030*
Industrial air pollution.	0.388	0.289	0.857	0.338	0.528	0.701
Drinking water contamination.	0.197	0.364	0.305	0.277	0.974	0.144
Destruction of rain forest.	0.046*	0.585	0.389	0.716	0.867	0.244

It is noticed from the Anova, the educational level of consumer is consider to be the major factors in determining the perception level of consumer on eco-friendly products. It is displayed from the above t-test analysis ,that expect the factor Industrial water pollution from age group, for all the other factor the perception between gender & age group customer all same. So, there is no difference in the perception of eco-friendly products.

4. Perception of consumer on Green Marketing

To study the mean difference in the perception of consumer on green marketing among various demographical factor, Anova & t-test was performed, result was furnished below

Parameters	Anova				t-test	
	Age	Education	Occupatio n	Incom e	Age	Gender
	Sig.	Sig.	Sig.	Sig.	Sig.	Sig.
Manufacturing eco-friendly products	0.922	0.001*	0.435	0.643	0.573	0.922
Manufacturing through eco-friendly process	0.594	0.000*	0.784	0.797	0.133	0.478
Promoting through eco-friendly mode of communication	0.222	0.144	0.100	0.242	0.760	0.821
Educating customer to use products in environment friendly way	0.651	0.000*	0.408	0.818	0.570	0.187
Packing of product through environmental friendly	0.344	0.019*	0.182	0.051*	0.141	0.587

Observed that among five factors taken for studying consumer perception on green marketing, packing of product through environmental friendly in monthly income & except promoting through eco-friendly mode of communication factor shows significant (<0.05). So, it reveals that same opinion belong to different age, occupation , monthly income group and clear that education qualification is considered to be the major influencing factor in determining the perception level of customers through Anova analysis. From t-test ,all the factor of perception of

consumers on green marketing between gender & age group are same. There is no difference in perception.

The association among the different Socio Economic factor of the consumers and their suggestion towards the eco-friendly products to their friends, Sources of Information chi-square test was performed with the following hypothesis and the result was presented in the tables.

Socio Economic Factor	Suggest to friends Sign	Sources of information Sign
Age	0.026*	0.024*
Gender	0.245	0.462
Marital Status	0.485	0.518
Educational Qualification	0.021*	0.059*
Occupation	0.779	0.145
Monthly Income	0.708	0.493

To examine the prevalence of the role of sources of information & suggestion to friends, several further tests are undertaken. The results are shown in above table. As anticipated, two of the six socio economic factors positively impact the sources of information & suggestion to their friends. The table displays insignificant result, nevertheless of gender, marital status, occupation & monthly income group like to suggest the eco friendly product to their friends & all customers have a chance to get the information about the eco-friendly product from all the sources.

6. Intention to Purchase & restriction on eco-friendly products

To find the relationship between the variables Intention to Purchase and restrictions on Eco-friendly products the Karl Pearson correlation coefficient test was made.

Intention to Purchase	Restrictions on Eco-friendly Product choice				Total
	Eco-Friendly Assurance	Expensive	Not Easy to get	Others	
Definitely Not Purchase	1	2	2	2	7
Probably Not Purchase	3	4	1	0	8
Not Sure	5	8	6	1	20
Probably Purchase	7	17	7	4	35
Definitely Purchase	10	27	37	6	80
Total	26	58	53	13	150

Intention to Purchase * Restrictions on Eco-friendly Product choice

		Intention to Purchase	Restrictions on Eco-friendly Product choice
Intention to Purchase	Pearson Correlation	1	.124
	Sig. (2-tailed)		.131
Restrictions on Eco-friendly Product choice	Pearson Correlation	.124	1
	Sig. (2-tailed)	.131	

The correlation table shows & was concluded that there is low positive correlation between the variables Intention to Purchase and restrictions on Eco-friendly products.

7. The impact of green marketing practices on Intention to purchase

The impact of green marketing practices on Intention to purchase, the regression analysis was made. All the variables concerned to the green marketing practices are entered as independent variable in order to calculate its impact on the determination of intention to purchase the eco-friendly products.

4.6.1 (c) Coefficients of impact of green marketing practices on Intention to purchase

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.735	.497		3.493	.001
	Manufacturing eco-friendly products	.216	.105	.203	2.068	.040
	Manufacturing through eco-friendly process	.212	.134	.174	1.583	.116
	Promoting through eco-friendly mode of communication	.099	.101	.084	.974	.332
	Educating customer to use products in environment friendly way	.182	.127	.142	1.427	.156
	Packing of product through environmental friendly	-.083	.104	-.069	-.799	.426

From the coefficient table it is inferred that, manufacturing eco-friendly products having more impact on determining the intention to purchase green products followed by Manufacturing through eco-friendly process stands at the second place on its impact. Further Packing of product through environmental friendly is having negative impact on the intention to purchase eco-friendly products.

Conclusion

The textile and apparel industries are notorious for their excessive contribution of waste and pollution to our environment. The unsustainable practice trends of poor designing, raw material selection, processing, manufacturing, and disposing of apparel products are the major

contributing factors to this problem. The purpose of this study was to evaluate the perception and preference eco-friendly material and manufacturing environmental sustainability. The findings of this study could be helpful for many organizations and customers who attempt to produce and consume sustainable textiles and clothing products. It is found that the most of consumers in Tirupur city are aware of environmental problems green product in market. There is positive attitude & behavior towards green product. The main factor which avoids manufacturing & using of eco-friendly products is more expensive & lack of availability. If we overcome from these factors, the green consumerism gains momentum in Tirupur city.

References

- Electronic Green Journal, Issue 36, 2013, ISSN: 1076-7975
- Indian Journal of Fiber and Textiles Research, Vol-26, March -June 2001, Page no 61-63.
- International Journal of Science Technology & Management, Vol-04, issued-1, February 2015, Page no 569-571.
- Clothing and Textiles Research Journal, Vol-2, issued 24, 2003, Page no 248-261.
- Apparel. Journal of Sustainable Textiles Material, Vol-23, issued 46, 2009, Page no 29-34.
- Intercontinental Journal Of Marketing Research Review Issn: 2321-0346 - Online Issn: 2347-1670, Vol-4, Issue 2, Feb 2016.
- Textile Trends, Vol-6, feb-2008 Page no 27-32.
- Indian Journal of fiber & textile research, Vol-34, issued 42, 2007, Page no 30-33.
- Sustainable and Environmental friendly fibers in textile fashion-A study on organic cotton and bamboo fiber”, report no 2010.9.14, Vol-5, 2013.
- Journal of Cleaner Production, Vol-15, issued 13, September 2007, Page no 1259-1264.
- Prof. S.R. Eklahare, ”Eco-Friendly Chemical Processing Of Textiles & Environmental Management” Page no 6 -10
- Kothari C.R, “Research Methodology” Himalaya Publications, 2008
- S.P. Gupta “Statistical Methods” Sulthan Chand & son
- Fuad-Luke, Alastair: EcoDesign. San Francisco: Chronicle Books LLC, 2006