Responses of public towards shoddy industry at Panipat

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■**ABSTRACT :** Shoddy industry at Panipat is a popular term used for recycling of rags through yarn-making. These rags are imported from western society as they change their wardrobes more frequently as compared to Indian society. The strength of these rags being higher than rags available in India, these are preferred by industrialists. A survey was done in Panipat by the investigator through a questionnaire, circulated among people living in Panipat in three different categories of academic standards that is, under matriculation, graduates and beyond graduation, as null hypothesis that "there was no significant difference between academic standards and responses towards various attributes of the industry" were tested through statistical tests. The results for the same have been analyzed and synthesized through empirical observations and statistical techniques.

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Shoddy industry at Panipat has developed as largest hub not only in India, but in the whole world. There are about 350 plus units of shoddy industry at Panipat which are engaged in recycling the rags for yarn-making and weaving blankets, shawls, lois and sweaters which are available at a low cost to the poor people who are unable to afford fresh yarn make woollen clothing which is more costly. This industry is popularly known as shoddy industry in Panipat. Various scholars have appreciated and studied this eco-friendly industry at Panipat. Geetanjali Krishnan Iyer rightly opines –

"Many people would dismiss shoddy yarn as being second hand and dirty. But when I look at shoddy, I see the near-magical transformation of torn rags into something of commercial value. Which is why I say, though its name suggests otherwise, there's indeed nothing shoddy at all about shoddy yarn". (*www.business-standard.com*).

Similarly, Norris (2012 a & b and 2005) has done a remarkable survey of the linkage between "Recycling Imported Textiles in shoddy mills at Panipat" (the area under present study) and the implications in UK trade. The observations made by Norris highlight some noteworthy aspects of shoddy industry at Panipat. As per his observations –

"Panipat, in north India, is the world's largest textile recycling hub, producing reclaimed "shoddy" wool yarns and blankets out of used clothing. The industry sources its materials from the international worn clothing market, including the UK (Much smaller recycling industries producing blankets and felt products are also located in North, South and East Africa).

Commercial recyclers in the UK export to these factories directly, with some larger firms buying up recycling grades from other UK textile recyclers. For example, Wilcox has estimated that up to 20 per cent by volume of its turnover is exported to India for recycling. The trade is not illegal, and providing the clothing is mutilated before it crosses the Indian border, provides a source of raw materials for the Indian wool industry.

However, it is an unregulated industry employing at least 70,000 people who work in poor social and environmental conditions that would not satisfy minimum ethical standards applied to the manufacture of consumer goods by responsible companies."

Further Norris has also put forward some estimates, such as –

"Upto 50 per cent of worn clothing collected is recycled rather than reused, *i.e.* they are destroyed in order to re-use the fabric or the fibres. There is little innovation in developing industrial products from recycled textiles; only 3 flocking companies remain in the UK, although there are more in Europe, and the European shoddy spinning industry virtually collapsed in the 1980s. Panipat in north India is now the world's largest textile recycling hub, with over 300 mills producing shoddy ("regenerated") yarn from recycled fibres.

This recycled yarn is woven into poor quality cloth and blankets for the domestic market (85%) and for export (15%). Panipat supplies over 90 per cent of the shoddy-wool relief blankets bought by international aid agencies for use in global disasters.

In Europe, Hawley underlined the need for recycling old clothing and termed this venture as eco-friendly one. A comprehensive research was undertaken by Nagpal (2012) on eco-friendly and sustainable aspects of shoddy industry (Nagpal, 2004)

The major objectives of present study was to find out the responses of people towards this eco-friendly venture as increasing consciousness towards environment has underlined the need for development of eco-friendly ventures and textile industry is no exception to it.

■ **RESEARCH METHODS**

The data for the present study was collected through primary sources as the shoddy industry being in an unorganized sector, no published or compiled data was available. For this purpose a questionnaire was developed having questions pertaining to various attributes of shoddy-industry (Annexure). These were circulated among people of Panipat on the basis of three broad categories of academic standards – that is, under-matric, graduates and beyond graduation on the assumption that environmental awareness is more in persons with higher academic standards. In each category 100 questionnaires were got filled, thus total N being 300. The results were analyzed through χ^2 test in which null hypothesis rejection/acceptance were evaluated. The responses to

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Appendix
Questionnaire for General survey, regarding Shoddy industry at Panipat

Name –
Age –
Occupation –
Educational Qualifications –
Please tick the Right Answer:
1. Shoddy Industry at Panipat is good for poor.
   YESS/NO
2. It has given employment to many people.
   YES/NO
3. The products of this industry are of good quality.
   YES/NO
4. The products of this industry are cheap.
   YES/NO
5. Old clothing are utilized properly in this industry.
   YES/NO
6. This industry has no negative impact on environment.
   YES/NO
7. How you dispose off discarded clothing
   - Give to maid servant
   - Give in exchange of utensils
   - Use for mopping and cleaning
8. If a pool is developed for collection of old clothing, will you contribute in that?
   YES/NO
9. Will you dispose of clothing without any return?
   YES/NO
10. This industry is a blessing for Panipat.
    YES/NO
11. Do you feel this industry at Panipat is of much utility or it has created problems? Give your views.

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various questions in terms of percentage were clubbed in ten attributes of the industry which have been explained in Results and Discussion.

■ RESEARCH FINDINGS AND DISCUSSION

As per statistical analysis of various attributes and testing of significance level through χ^2, reveals the following results which has been compiled in the Table 1. Analysis of attributes has been discussed and detailed in following heads:

Orientation :

The attribute on orientation was tested through the data generated by survey done regarding shoddy industry through a questionnaire mentioned earlier. As already mentioned in Chapter II, Review of Literature, the shoddy industry at Panipat has been reported as poor-oriented by various previous researchers. But to test this hypothesis in an objective and quantitative manner an analysis of responses was made based upon the question asked in questionnaire, whether shoddy industry at Panipat was good for poor? About 79 per cent of the respondents agreed with the statement, while 11 per cent disagreed and another 10 per cent were undecided on the issue. However, the null hypothesis was that, 'there is no association between academic standards and responses towards orientation attribute', had been tested through 3×3 contingency table, the null hypothesis was rejected at 5 per cent level of significance, which means that there is a good reasons to believe that two attributes are dependent on each other, as persons with higher education standards tend to be more aware about economic and ecological aspects of the industry. However, the percentages of responses, as revealed in results that even persons with medium and low academic standards, also had a larger share of agreed responses like person with higher academic standards. Therefore, scientific and logical inferences regarding association between the two attributes under study had been derived. One may safely infer from analysis of this attribute that shoddy industry is poor oriented. Moreover, demand for products of shoddy yarn also substantiates the hypothesis which has been discussed in detail in utilitarian attribute, which is to follow in this paper.

Employability :

The attribute pertaining to employability of shoddy-industry was derived through a question in questionnaire that 'shoddy industry has given employment to people. As apparent from about 62 per cent of the respondents agreed with the statement while 25 per cent disagreed and another 13 per cent were undecided on the issue. However, to find-out the association between employability and academic standards 3×3 contingency was analyzed which showed χ^2 value of 16.46 which was found to be significant at 1 per cent level as per table values of χ^2. In other words one may say that the null hypothesis 'there is no association between employability and academic standards' had been rejected at 1 per cent level of significance. Therefore, there is a good reason to believe that there was a strong association between attribute of employability and responses as per academic standards of the respondents. However, empirical observations and interviews with industrialists revealed many practical problems of employability which have been discussed in detail in next chapter, where the problems of the industry have been analyzed. Most of the labour working in this industry got carried out by contractual labour which could not be taken as permanent employees of shoddy- industry, though the earnings of the labour depend on the particular industry. Therefore, quantitative analysis is also to be verified empirically, so that rational and realistic conclusions may be drawn, otherwise dry statistical tables may mislead the investigator. This is why' both were incorporated in the present study. Thus, it can be derived that shoddy industry at Panipat has given employment to quite a significant number of population, as well as, business opportunities to dealers dealing in shoddy yarn products. The benefits of employability lead to betterment of the economy in general, and labour class in particular.

Quality :

The attribute of quality is another significant parameter which was required for purposeful derivations. For this purpose, question asked in questionnaire was that, 'the products of shoddy industry was of good quality', in which about 61 per cent of the respondents disagreed while only 34 per cent agreed with the statement. Another 5 per cent were undecided over the issue. Although, products are cheap as already mentioned in preceding discussion that shoddy-industry is poor oriented, but the quality of the products made from new Yarn. The reliability of responses may be

deemed good as the null hypothesis that 'there is no association between attribute of quality and levels of academic standards of the respondents' was rejected at 5 per cent level of significance. Thus, there is a strong reason to believe that a strong association is there between quality and academic standards of respondents as χ^2 values of 3×3 contingency 12.88 as apparent from the Table 1 given and null hypothesis had been rejected at 5 per cent level of significance. Hence, the attribute of quality of the products is not that good, yet cost factor dominates over attribute of quality in terms of preferences. Thus, it can be analyzed that though the quality of products is not that good yet demand is there as the products being less costly.

Cost-effectiveness :

The attribute related to cost-effectiveness signifies that consumers' preferences had more orientation towards cost factor as compared to quality factor. For this purpose, the question asked in the questionnaire was that 'the products of shoddy industry are cheap. In response to this question 70 per cent respondents agreed with the statement, while only 22 per cent disagreed and another 8 per cent were undecided over the issue. However, a 3×3 contingency was applied to find out the association between cost-effectiveness and level of academic standards, in which null hypothesis is that there is no association between attribute of cost-effectiveness and academic standards of the respondents' was rejected at 5 per cent level of significance as the value of χ^2 was 11.57. Hence, there is a strong reason to accept the association between attribute of cost-effectiveness and academic standards. Similar viewpoint conforms in another attribute orientation which has already been discussed under the sub-head, orientation. Therefore, it is strongly established that shoddy industry is cost-effective as it provides the consumer with cheaper options and, that is why this industry is poor-oriented. However, in present times this industry is facing a tough competition with Chinese products as noticed during interviews with industrial producers.

Utility :

The attribute of utility was another significant indicator of the shoddy industries' success story. For evaluation of this attribute the question asked in the questionnaire was that 'Old clothing is utilized properly

in this industry'. A strong response accounting to 82 per cent of the respondents agreed while only 85 disagreed and another 10 per cent were undecided. The 3×3 contingency depicts a χ^2 value of 27.98 which was significant at 1 per cent level of significance. Therefore, the null hypothesis that 'there is no association between utility attribute and academic standards of the respondents' was rejected at 1 per cent level of significance. That led to the conclusion that a strong association persists between utility attribute and levels of academic standards of the respondents.

The objective of studying utilitarian aspects of shoddy yarn was attained through interviews with industrialists engaged in manufacturing products out of shoddy yarn and traders dealing in these products. The weaving units engaged in making products out of shoddy yarn and traders informed that in Panipat 95 per cent of the yarn produced is being utilized in making blankets of various types. The characteristic features of major types of blankets woven in Panipat are as under-

– Shoddy blankets
– Relief blankets
– Hospital blankets
– Railway blankets
– Barrack blankets

– The blankets are manufactured as per the bulk orders received from Government or Private agencies. The blankets are classified as per their weight, which are available between 1 kg to 3 kg of weight in different colours and textures, as per requirement of orders. Texture, finishing, weight and yarn content are variable from purpose to purpose.

– Shoddy blankets are manufactured for various purposes. These are mainly – Relief blankets, Hospital blankets, Railway blankets and Shoddy blankets for BPL Population.

– Besides blankets Army Lois (Locally known as pattu) are also weaved at Panipat.

– The quality of blankets varies with the content of wool in yarn. The good quality blankets have more than 75 per cent wool content, while the average quality has 50 per cent wool content. Blankets having less than 50 per cent wool content are of poor quality.

– The rates of blankets are determined by quality and weight, which vary from Rs. 100/- per blanket from Rs. 800/- per blanket.

The bulk orders for various types of blankets are

supplied from Panipat to various relief agencies in international domain, as well as, to Railways, Hospitals and Disaster Management Agencies.

Eco-friendly :

The data regarding eco-friendly attribute was derived on the basis of a question in the questionnaire that 'the shoddy industry has no negative impact on the environment'. In response to this statement 73 per cent of the respondents agreed with the premise, while 22 per cent disagreed and another 5 per cent were undecided to reach any conclusion. However, an analysis on the basis of 3×3 Contingency was applied on the basis of null hypothesis that, 'there was no association between eco-friendly attribute and academic standards of the respondents'. The null hypothesis was rejected at 5 per cent level of significance while the value of χ^2 was 11.09 (Table 1). Therefore, the conclusion arrived at was that there was a strong association between attribute of eco-friendliness of the industry and academic standards of the respondents. The primary data collected from the city of Panipat was more near to reality as the respondents had a first-hand information being residents were living in immediate vicinity of the industrial units which have developed mainly in outskirts of the city. The empirical observation regarding eco-friendly facets of the industry, collected through interviews and interactions have been discussed in next chapter, where major finding have been explained.

Disposability :

The attribute of disposability is significant as this attribute is also related to previous attributes, *i.e.* receptivity. However, as per Table 1 only 17 per cent of the respondents agreed to dispose old clothing without any return, while 68 per cent disagree with the proposal. Therefore, unlike western society, where people are ready to pay for the environmental cause while in Indian society, even disposal of waste clothing is also expected to give some return. Here lack of environmental awareness among masses seems to be the cause of low receptivity of new innovations, as well as, lower tendency for disposability. The 3×3 contingency revealed that null hypothesis – 'there is no significant relationship between academic standards and disposability' was rejected at 1 per cent level of significance, which means that academically advanced people have a concern for environment and therefore strong relationship seems to exist. However, about 15 per cent of the respondents revealed an undecided response, which again shows lack of concern. Thus, association between low receptivity and low disposability shows a general lack of concern for environment.

Receptivity :

The attribute of receptivity as apparent from the table given, only 37 per cent of the respondents were in favour of developing a local pool for collection of old clothing while 46 per cent of the respondents disagree with the proposal for developing a local pool, while 17 per cent of the respondents were undecided over the issue. The reasons for low receptivity to this proposal varied from individual to individual, as well as, mill owners were also not much receptive to it. The major reasons that sprang up from the responses are as under:

– There is a lot of difference between Indian clothing and clothing of western society. The people in effluent western countries change their clothes more frequently while in Indian society the use of apparel is

Table 1 : Analysis of attributes of the respondents					
Attributes	Agree	Disagree	Undecided	χ^2 Value	
Orientation	79	11	10	12.23	Significant at 5% level
Employability	62	25	13	16.46	Significant at 1% level
Quality	34	61	5	12.88	Significant at 5% level
Cost-effectiveness	70	22	8	11.57	Significant at 5% level
Utility	82	8	10	27.98	Significant at 1% level
Eco-friendly	73	22	5	11.09	Significant at 5% level
Disposability	17	68	15	39.5	Significant at1% level
Receptivity	37	46	17	41.9	Significant at 1% level
Acceptability	67	23	9	37.46	Significant at 1% level
Productivity	60	30	10	04.33	Not significant

much higher. As per mill owners, western rags available through import are generally preferable, as they have been utilized 20 to 30 per cent of the strength of the fabric while in Indian clothing it is utilized up to 70 to 80 per cent of the strength of the fabric. This is why, rags from western countries are better for yarn-making as compared to clothing to be collected through local pools.

– Generally people are not prepared to part with their old clothing without any return, which was further augmented by the responses by respondents in question 8 of questionnaire II. This is why, development of local pool for collection of rags is not encouraging.

– Lack of environmental awareness among masses is another factor which discourages development of local pool.

– Some respondents consider as development of local pool an unwanted botheration, while lots of good quality rags are available through imports.

However, when 3×3 contingency χ^2 test was applied to this attribute, the null hypothesis was rejected at 1 per cent level of significance, which means there is a strong association between academic standards and receptivity regarding development of local pool. The persons with higher educational standards and who are having concern about the environment and its problems advocate for recycling and development of local pool for clothing but as discussed earlier, in Indian society reuse of old clothing is more important than recycling which utilizes the garment strength to its fullest use. Therefore, if development of local pool for recycling is not developed that does not mean the defeat of purpose, rather it suggests that reuse of garments in Indian society is already prevalent which in itself is an eco-friendly tendency.

Acceptability :

The attribute of acceptability for shoddy industry at Panipat is also significant at 1 per cent level of significance. About 67 per cent of the respondents agree to the premise that this industry is a boon for Panipat, while 23 per cent disagree and another 9 per cent are undecided. Although, in previous two attributes receptivity and disposability the respondents who agreed to the proposals were lower as compared to respondents who disagreed with developing a local pool for rag collection and disposing old clothing for no return, yet as far acceptability is concerned, here respondents are of the view that shoddy industry is good for Panipat and has also got international recognition. Moreover, a 3x3 contingency suggests that as per χ^2 test the null hypothesis is rejected at 1 per cent level of significance.

Productivity :

The attribute of productivity is the only attribute, where χ^2 values have not been able to refute the null hypothesis, that there is no significant relationship between academic standards and responses regarding productivity of yarn at Panipat. However, in response to question number 11 of the questionnaire about 60 per cent of the respondents agreed with the premise that yarn production of shoddy industry is good for clothing, while 30 per cent of the respondents disagreed to test the level of significance, then no significant relationship emerged between academic standards and responses regarding productivity of the shoddy industry.

Conclusion:

It is evident from above discussion that various attributes related with shoddy industry are significant at various levels of significance which make the industry important for Panipat. However, the attribute of receptivity which is clearly related with academic levels of population clearly shows that receptivity will increase when the environmental awareness increases. At present receptivity of the industry is not that high as in western society due to lack of awareness regarding eco-friendly ventures. Moreover, shoddy industry is on the decline due to tough competition with Chinese market. For this purpose, government policies and administrative reinforcement is required to save this industry from downtrend. Being an eco-friendly industry, shoddy industry is required to flourish for proper recycling of rags not only from imported rags from western society rather rags from Indian society should also be recycled to decrease pressure on fresh raw materials and to provide garments to economically weaker sections at affordable prices which is the basic aim of this eco-friendly and sustainable industry.

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