CONSUMER DEMOGRAPHICS AND REVERSE LOGISTICS

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ABSTRACT

India is emerging economy in the world today. The demography of Indian population is favorable for most of the businesses as large portion of population is comprised of young people. These young customers have high spending power compared to other age category customers. Usage of internet is also increasing day by day and number of internet users is very high and it is predicted that India will soon be among the one of the most Internet Users in the world. Therefore adaptability to online shopping has become easy for urban population. Online shopping in cities like Pune is not a new thing. This research work aims to study reverse logistics of the etailers in the Pune City. The Study found out that preference to online shopping (e-retailing) than conventional mortar and brick store shopping is increasing. The study also found that all demographic characteristics are significantly related with the preference to online shopping and the results confirmed that Number of returns made by a consumer is significantly related with his/ her demographic characteristics.

Keywords – Demography, Reverse Logistics, Indian Economy, Consumers

Introduction

Online shopping is becoming routine for most of the citizens. A decade ago only few e-commerce platforms were present for online shopping. Today the competition is very tough for e-commerce platforms (websites/ mobile application). The number of players has risen significantly. The preference to e-retailing is increasing rapidly. However e-retailers should not overlook returns from the consumers, because returns affect not only the revenue but also consumer loyalty. As revenue of e-retailer is increasing, the reverse of products is also increasing. Every return is accompanied with the probability of lost customers. In online- retailing since the consumer cannot touch and feel the product, there are high chances that consumer end up buying wrong products. Therefore returns to e-retailers are such a thing which cannot be reduced to zero. Returns will always be there in e-retailing in existing business environment. Therefore it is a big challenge for e-retailers to bring the number of returns to the lowest. For this reason they must take care of their product return business process. This returning process must be user friendly and acceptable by consumers. Otherwise if consumer is dissatisfied with the returning process he may not buy products again from those particular e-retailers

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for the fear of less transparent, unreliable and hectic returning process. Therefore the time has come when e-retailers have to look after their return processes and make sure that the process is simple, transparent, reliable and user friendly.Considering the business process of e-tailers Reverse logistics has been defined as:

[. . .] the process of planning, implementing, and controlling the efficient, cost effective flow of raw materials, in-process inventory, finished goods, and related information from the point of consumption to the point of origin for the purpose of recapturing or creating value or proper disposal (Rogers and Tibben-Lembke, 1999)[1].

In a retail context, reverse logistics involves the process of handling and the eventual disposition of goods returned from customers (Horvath et al., 2005)[5]. As retail margins become narrower, reverse logistics has become a major concern for retail managers due to the costs of storage, loss of current sales, potential recoverable product value, and the importance of both customer and channel partner relations (Daugherty et al., 2005)[6].

Literature Review

In the early nineties, a formal definition of Reverse Logistics was put together by the Council of Logistics Management, stressing the recovery aspects of reverse logistics (Stock, 1992)[7]:

"...*the term often used to refer to the role of logistics in recycling, wastedisposal, and management of hazardous materials; a broader perspective includesall issues relating to logistics activities to be carried out in source reduction, recycling, substitution, reuse of materials and disposal.*"

The European Working Group on Reverse Logistics, puts forward the following definition, which is used in this thesis:

"*The process of planning, implementing and controlling backward flows of raw materials, in-process inventory, packaging and finished goods, from a manufacturing, distribution or use point, to a point of recovery or point of proper disposal*".

Wang et al. (2017)[8] discussed how RL is an important component of the SCM process and over the years the RL field have shown a tremendous progress. RL as a system includes numerous processes, including source reduction, product returns, reuse, recycle, disposal, repair, remanufacturing and resale. The scope of RL has expanded and continues to expand more. In their research work, the researchers have conducted an extensive bibliometric analysis of published academic articles on RL for the period of 1992-2015. Specifically, the CiteSpacesoftware is utilized to conduct document co-citation analysis and burst detection analysis on 912 selected RL articles and their 22,642 references. Their work identifies the most influential RL research publications/citations in each of the five periods and their research contribution. Using co-citation analysis, they were able to identify and illustrate major research themes, knowledge groups, and future research opportunities in the RL field. The major findings of the research work states that there is a high cost involved in structuring and handling the RL which always results in prohibiting the implementation of the system in e-commerce businesses. Lack of systematisation of the RL process affects the flow of goods from the customer to the manufacturer. And sometimes due

to the low awareness about the RL system among the consumers hinders any improvement in the RL. Gungor and Gupta (1999)[9] presented an exhaustive review of more than 300 articles or books on environmentally conscious manufacturing and product recovery. The authors observe many other factors are involved in implementing RL. Though RL can serve as a distinguishing advantage to the e-tailers because of low operating cost, many e-tailers are yet to realise the advantage. Certain factors such as sustainability, consumer protection laws, obsolesces of the product style, lower product life cycle, consumer requirements heavily influence the reverse logistics of organization. In today's condition the environmental issues are becoming popular among society, governments and industry. In addition, they identify the need to develop both qualitative and quantitative tools to support proper environmental conscious manufacturing decision-making. So the E-tailers should have better and proper RL proficiency system within the business to achieve better business performance and reduced operating costs.

Research Objectives

The research objectives are as follows-

1. To study the preference of consumer to e-shopping against conventional shopping practice.

2. To study the awareness level about returning the product to e-retailer from which it was bought.

3. To study the relationship between Product returning process experience and e-retailer to which the return is being made.

Research Methodology

Descriptive research design is used for this study. The study is mainly based on primary data; however secondary data is also collected for literature review and to form strong theoretical base for the study. Personal interview technique was used to collect primary data. 430 responses were considered for analysis. Statistical test were used in SPSS to test hypotheses and explore relationships between study variables. This research is based on both primary and secondary data. The research is conducted for e-retailers in India only. E-retailers which provide services were not the part of this study as only product returning process was the focus point. The study is conducted in Pune region (India) and included respondents who had experience of returning products to e-retailers at least once in last six months. To develop questionnaire researcher reviewed existing body of knowledge and literature. In addition to this, experts in business research and e-retail logistics were consulted to design a good questionnaire. In this way a first draft of questionnaire was designed. It was containing 46 items. But after Pilot Study, the final draft so developed contained 36 close ended questions. A reliability test was carried on the questionnaire.The result of reliability test is given in table below.

Reliability Statistics

Cronbach's alpha	N of items
.850	36

Data Analysis

➢ Preference to online shopping

Statement	N	Minimum	Maximum	Mean	Std. Deviation
I get to choose from wide range / variety of products	430	1	5	**3.69**	1.204707
It saves travel time	430	1	5	3.66	1.128923
E-retailers have made gifting easy. I can get the gift delivered to the person I wish to gift, which is very convenient.	430	1	5	3.63	1.059912
I can compare different products which helps me to make informed and well researched decision	430	1	5	3.62	1.093754
E- Retailers provide exclusive discounts and offers on their Mobile applications more often.	430	1	5	3.57	1.137829
I get the product at reasonable price as compared to physical/ brick and mortar store.	430	1	5	3.48	1.043781
I can shop almost any time and from anywhere unlike physical stores.	430	1	5	3.48	1.076758
Some products are exclusively available through e-retailers only.	430	1	5	3.46	1.259837
It saves time as I don't have to wait in queue for billing	430	1	5	3.40	1.245224
E- Retailers give me more discount coupons on frequent buying.	430	1	5	3.38	1.112769
Online shopping leads to fewer expenses (if I visit offline store, I also tend to spend on eating out, impulsive purchase, travelling etc.	430	1	5	3.36	1.155555
Returning the product (if required) is hassle free	430	1	5	3.35	1.25925
E-Retailers provide special offers/ cash back when I shop using my credit/ debit card.	430	1	5	**3.32**	1.216966
Overall Mean				**3.49**	

The overall mean value of subscale- preference to online shopping is 3.49 on a scale of 5 Likert points. This indicated that preference to online shopping over conventional shopping is moderately high in Pune region.

➢ **Descriptive Statistics- Awareness about return policies of e-retailers**

Statement	N	Minimum	Maximum	Mean	Std. Deviation
I prefer to buy only from those sites which have clearly stated return policies for the product I am purchasing.	430	1	5	**3.98**	1.135167
I generally don't buy if the return policy/ rules don't satisfy me	430	1	5	3.89	1.139885
I am aware about the policies regarding return policies of e -retailers.	430	1	5	**3.57**	1.218797
Overall Mean	430			**3.81**	

Descriptive statistics of subscale 'Awareness about return policies of e-retailers' shows that the consumers in Pune region are moderately aware about product return policies.

➢ **Descriptive Statistics- Product returning experience**

Statement	N	Minimum	Maximum	Mean	Std. Deviation
Website was user-friendly	430	1	5	**3.61**	0.965508
Got quick notification and assistance	430	1	5	3.56	1.005865
Executive came on time to collect the product	430	1	5	3.53	0.99552
Got notification by email/SMS after registering for return	430	1	5	3.53	1.061254
Terms and conditions were clearly stated	430	1	5	3.48	0.983865

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The duration for the entire process is acceptable	430	1	5	3.47	0.952211
Overall experience was very good	430	1	5	3.34	1.095722
Quick replacement / refund	430	1	5	3.32	1.109097
Registering for return process was hassle free	430	1	5	**3.30**	1.036727
Overall Mean				**3.46**	

Overall mean value of 3.46 for the subscale indicated that consumers are moderately satisfied with the product returning processes of e-retailers. The high S.D. values signify that the high means does not have enough explanatory power.

Hypothesis Testing

H1- Number of returns made by a consumer is significantly related with his/ her demographic characteristics. To test this hypothesis one way ANOVA was thought to be appropriate as variable 'number of returns made' is parametric (interval scale) and other demographic factors are either parametric (age, income, education) or nominal (gender/ occupation).

ANOVA- Demographic characteristics and Number of returns made

		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	9.998	2	4.999	4.787	**.009**
	Within Groups	445.918	427	1.044		
	Total	455.916	429			
Income	Between Groups	23.486	2	11.743	4.644	**.010**
	Within Groups	1079.726	427	2.529		
	Total	1103.212	429			
Education	Between Groups	14.172	2	7.086	5.524	**.004**
	Within Groups	547.725	427	1.283		
	Total	561.898	429			

Gender	Between Groups	8.475	1	8.475	15.093	.000
	Within Groups	240.336	428	.562		
	Total	248.812	429			
Occupation	Between Groups	15.717	4	3.929	7.164	.000
	Within Groups	233.095	425	.548		
	Total	248.812	429			

From results shown in table we failed to accept the null hypothesis and thus accepted the alternate hypotheses- 'H1- Number of returns made by a consumer is significantly related with his/ her demographic characteristics'.

H2- Repurchase intention from particular e-retailer and product return process experience of that e-retailer are significantly correlated.

To test this hypothesis Pearson Correlations test is used. The result is shown in following table.

Pearson's Correlation- Repurchase intention from particular e-retailer and product return process experience

		I am most likely to buy again from the same e-retailer to which i returned product lately	Mean of Overall returning process experience
I am most likely to buy again from the same e-retailer to which i returned product lately	Pearson Correlation	1	**.319(**)**
	Sig. (2-tailed)		**.000**
	N	430	430
Mean of overall returning process experience	Pearson Correlation	.319(**)	1
	Sig. (2-tailed)	.000	
	N	430	430

**Correlation is significant at the 0.01 level (2-tailed).

The value of Pearson Correlation test is .319 (r=.319) (Table No. 4.71).This can be interpreted as if product return experience is good then the consumer is most likely to buy things from that particular e-retailer again in future. Since the p-value of Pearson correlation test is less than .05 ($p < .05$), it can be said that the correlation is significant. As r=.319 it indicates that the variables are directly related and the strength of this relationship is moderate.

Conclusion

Electronic products and Apparels were found to have highest return rates as compared with other product categories. The reasons for returning these products were damaged products and/ or products were of different size/ colour. To avoid such type of returning from consumers, e-retailers must provide full information about size charts which would give complete idea about the dimensions of the product and its suitability for the use. Tough many e-retailers already have started this practice as on date, many of the e-retailers still could not literate consumers about the dimensions of the product. E-retailers also need to tie-up with only highly rated and reliable vendors. Vendors which do not supply as per specifications should be punished for wrong shipment. The cost of reverse logistics should be bared by such vendors. There should be clearly stated policies and rules and regulations for vendors to avoid shipment of substandard products. There should be random quality checking from e-retailers for the products of low rated vendors. E-retailers can't refrain today's consumers from returning products they did not like. Therefore returns may not be avoided completely.

Conclusively, preference to online shopping (e-retailing) than conventional mortar and brick store shopping is increasing. There is huge potential in Indian market for e-retailers. People are also getting more aware about the product return policies, terms and conditions of e-retailers. This increased awareness, has led to increased returns from the consumers. Therefore it is now beyond e-retailers control to reduce return rate. In fact e-retailers should make their return policies competitive. The fastest and easy return mechanism will definitely increase the turnover of e-retailers. This increase turnover will subsequently increase the profit margin of e-retailers which otherwise seems difficult.

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