

Consumer Perception of Label as A Source of Product Information (Personal Care Products)

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Abstract

Labeling, the act of developing product label, is one of the essential activities for a business engaged in marketing of products and performs the function of being a conveyor of message from the manufacturer through the supply chain and up to the final consumer. While labeling provides benefits such as eliminating or minimizing information asymmetries in the marketplace, past researchers has also highlighted the difficulties associated with determining the effectiveness of labeling. This study makes exploratory inquiry on how labels are perceived by consumers, with personal care products as the focus product category.

Keywords:

Labeling, Product label, Marketing communication, Quality signal.

Introduction

A label is information that the manufacturer or marketer of a product provide to the consumer at the point of sale (Hilowitz, 1997). It is usually a piece of material (paper, plastic, metal, or polymer etc.) affixed to a product or its container on which various information concerning the product is printed, sometimes labels are imprinted on the container or the product itself. Labeling nowadays is also being extensively used to showcase non-observable product attributes, for example, *experiential label*, which is usually employed in labeling of cultural products like books, audio or audio-visual products, usually carries review of the product by first-hand users or critics. Similarly *social labeling* is being popularly employed to manifest ethical qualities of a product, which are otherwise non-observable; *social label* informs consumers about the social conditions of production in order to assure them that the item or service that they are purchasing is produced under equitable working conditions (Hilowitz, 1997). Labeling also acts as a certificate of assurance on the product quality as the firm marketing a product is held accountable for the information it provides on the product label. Highlighting the importance of labels for producers, Jeddi and Zaiem (2010), noted that, for producers, a label remain a genuine tool of consumer motivation, a mirror that reflects the image of the company (in terms of ethics, respect of the environment,

etc.), and a pretext that account for the high prices of products. Their study also showed that, besides being a source of reassurance against risk perceptions, labels can provide comforting information in situations of high implication, i.e. under any purchase dimensions, be it *utilitarian*, *hedonistic* (seeking pleasure in the product), *social* (seeking belonging to a social class identified by the product consumption) or *personal* (self-achievement through the product), the stronger the implication, the stronger is the influence of label perception on the consumer's purchase intention.

According to Teisl and Roe (1998) labeling entails a significant cost outlay, comprising the cost of gathering, verifying, implementing, and monitoring the information needed for the labeling program, and pointed out that changes in the marketplace with regards to technology or consumer preferences would make it necessary to make appropriate changes in the labeling schemes, which may be greatly lagged because of institutional bureaucracies and coordination difficulties. Their study also noted that labeling policies can circumvent market inefficiencies by making the information initially held by the firm also available to the consumer. Market efficiency is eroded when the flow of information among market participants is impeded or when information becomes costly, they contended that this removal of information asymmetries or subsidization of search cost is clearly beneficial to consumers as they become more informed about product attributes and choices can be made more in line with their preferences, and uncertainties regarding product attributes are minimized.

Caswell & Mojduszka (1996) pointed out that label plays an increasingly beneficial role as attributes progress along the spectrum from *search* to *experience* to *credence*. Teisl and Roe (1998) noted that even in the case of *search* attributes when information disclosure is not standardized some *search* attribute may resemble *experience* or *credence* attribute and as such the benefit of labeling cannot be overlooked, and pointed out that standardization of label format can reduce the cognitive cost of extracting information and thus facilitate cross comparison of product attributes for consumers.

Rationale Of Study

Key functions performed by label includes information dissemination to consumers, product identification, differentiation, brand/product promotion, brand building, regulatory compliance, consumer welfare etc., which affects market participants in a variety of way, for example, findings of past researches indicates that labeling can influence the market on the demand side by, correcting information asymmetries in the market (Caswell & Mojduszka, 1996; Teisl & Roe, 1998), influencing consumer behaviour (Hilowitz, 1997; Jeddi & Zaiem, 2010), and improving

consumer welfare (Nimon & Beghins, 1999), and on the supply side by fuelling increased competition and quality improvement (Ippolito & Mathios, 1996; Levy & Stokes, 1987; Frazao & Allshouse, 1996). On the aspect of measuring the effectiveness of labels as a channel of marketing communication, Caswell and Mojduszka (1996) in their study noted that complexities arises, *first*, because labeling policies are generally implemented along with other complementary marketing programmes, it becomes difficult to separately measure the impact of labeling, *second*, difficulty arises because labeling policy may influence the market in a variety of ways, i.e. besides aiding consumers during purchase decision making, labeling may influence product design, advertising, consumer education, and consumer confidence. *Third*, difficulty also arises because the relationship between consumer information and consumer behaviour is very complex, and there can be large variation across consumers in their response towards information.

By examining whether consumers regard labels to be an important source of product information, and investigating how labels are perceived and used by consumers, this study attempts to assess the importance of product labeling, which is required to justify the cost involved. The study compared consumer's perception of label as a reliable source of product information against advertisement, which constitutes an important and popular channel of marketing communication. Analysis of demographic factor influences on consumer's perception was also carried out.

Objective Statement and Research Methodology

The objective of this study is stated as under:

- To assess consumer perception of label as a source of product information in terms of reliability
- To check for influence of demographic factors on consumer perception of label
- To check for relation between consumer's reliability perception of label and use of label during post-purchase product evaluation

In this study, personal care products were used as *focus product category*. While the study attempts to understand consumer perception of labels in general, the use of focus products was adopted for ease of survey administration and in order to achieve more definitive results. Closed-ended questionnaires were employed to obtain primary data from consumers. As explained to respondents of the survey through a primer page in the questionnaire, *Personal care products* covers products like facial creams, lip balms, mouthwash, cologne, body lotions etc. which people use for personal hygiene and beautification purposes.

The selection of focus product category was made on the following ground; *firstly*, there are vast array of products in the category, which is desirable for describing general consumer perception of labels. *Secondly*, products in this category have close proximity with the day-to-day life of consumers; as such, respondents are expected to have good awareness on aspects concerning products in these categories making it convenient to respond to the questionnaire.

The questionnaire used for collection of primary data in this study contained two parts, while Part-I gathered demographic information, Part-II consist of thirteen scale items of which one was a 3-point rating scale, while the rest were 5-Point Likert scale items. In the survey carried out during June and July 2014, hardcopies of the questionnaire were distributed to respondents in Delhi, particularly in and around Delhi University. Out of the total 300 questionnaires circulated a total of 123 responses were obtained, out of which 17 were found to be incomplete and unusable. Thus after sorting 106 questionnaire responses were used for the purpose of data analysis and hypotheses testing. Demographic profile of respondents in this study is shown in Table 1.

Data analysis was carried out using MS-excel and SPSS software packages. Statistical tools employed include Factor Analysis (Principal Component Analysis), Kruskal-Wallis Test, Wilcoxon Signed Ranks Test, and Spearman's

Rank Correlation Test.

The Hypotheses for statistical analyses carried out in this study are stated as follow

H1: Reliability of label as a source of product information

H_01 : : Consumers do not consider label to be a more reliable source of product information than Advertisement

H_A1 : Consumers consider label to be a more reliable source of product information than Advertisement

H2: Influence of demographic factors on consumer's label perception

H_02 : Demographic factors do not influence consumer's perception of label as a source of product information

H_A2 : Demographic factors influence consumer's perception of label as a source of product information

H3: Association between consumer perception of label as a reliable source of product information and use of label during post-purchase product evaluation

A_03 : There is no correlation between consumer's reliability perception of label as a source of product information and use of label during post-purchase product evaluation.

A_A3 : There is correlation between consumer's reliability perception of label as a source of product information and use of label during post-purchase product evaluation.

Table 1: Sample Profile

Demographics of respondents			
Demographic Factor		Frequency	Percentage
Gender	Female	40	37.7
	Male	66	62.3
Age Group	18-25 years	30	28.3
	26-35 years	26	24.5
	36-45 years	27	25.5
	46+ years	23	21.7
Total respondent		106	100%

Source: Questionnaire based survey of this study

Data Analysis

In Part-II of the survey questionnaire respondents were asked to rate two popular sources of product information viz. Advertisements, and Product Label in terms of their

reliability perception. This questionnaire item employed three-point rating scale ranging from- Little Reliable (1), Reliable (2) Very Reliable (3). The response statistics is provided in Table 2.

Table 2: Response statistics

Source of product information	Rating	Observed Frequency
Label	Little Reliable	13
	Reliable	83
	Very Reliable	10
Advertisement	Little Reliable	76
	Reliable	24
	Very Reliable	6

Source: Questionnaire based survey of this study

The Wilcoxon Matched Pair Signed Rank Test which is considered as the non-parametric alternative to pair sample

t-test was used to test the first hypothesis of this study (H1). The result of analysis is given in Table 3.

Table 3: Wilcoxon Matched Pair Signed Rank Test

Ranks		N	Mean Rank	Sum of Ranks
Advertisement – Label	Negative Ranks	66 ^a	38.05	2511.00
	Positive Ranks	8 ^b	33.00	264.00
	Ties	32 ^c		
	Total	106		

a. Advertisement < Label
b. Advertisement > Label
c. Advertisement = Label

Test Statistics ^b	
	Advertisement – Label
Z	-6.629 ^b
Sig.	.000

a. Based on positive ranks.
b. Wilcoxon Signed Ranks Test

Source: Questionnaire based survey of this study

As the test result as shown in Table 3 is significant (at 5% level of significance), we can conclude that for products in the personal care category, consumers regard product label to be a more reliable source of product information than advertisement. Thus for Hypothesis H1, the Null Hypothesis is rejected.

Out of the thirteen questionnaire items in Part-II, twelve were five-point likert scale items that ranged as: Strongly

Disagree (-2), Disagree (-1), Neither Agree Nor Disagree (0), Agree (+1), and Strongly Agree (+2). These items were developed on the basis of secondary data analysis (literature review) for assessing consumer perception of label as a source of product information. Principal Component Analysis was applied on these 12 items in order to determine key components and group the items under suitable heads. Result of KMO and Bartlett's Test for sample adequacy and sphericity for this purpose is given in Table 4.

Table 4: KMO and Bartlett's test for sampling adequacy

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.739
Bartlett's Test of Sphericity	Approx. Chi-Square	753.114
	Df	66
	Sig.	.000

Source: Questionnaire based survey of this study

As favourable measure of sampling adequacy is obtained in the KMO Bartlett's Test (>0.7), Principal Component Analysis using varimax rotation was carried out, which reduced the twelve items into four-factor structure that explained 81.219% of variation in the scale. As shown in Table 5, based on the constituent factor items, the four

factors were organized as 'Reliability', 'Quality Signal', 'Company Image', and 'Post-purchase evaluation'. Descriptive statistics of the responses to the 12 five-point likert scale items is provided in Table 6. The cronbach alpha value for reliability scores of the items in each of the four factor components are provided therein.

Table 5: Factor Analysis

Factor	Factor Items	Factor Loading		% Variance
C1 Reliability	Labels provide reliable information	0.878		
	I read label before making purchase	0.921	0.873	21.173
	Labels are important source of product information	0.842		
C2 Quality Signal	A well designed label is indication of product quality	0.89		
	Good quality products have informative labels	0.886	0.861	20.527
	I doubt the quality of a product with unattractive label	0.777		
C3 Company Image	Good companies provide informative label	0.916		
	Label on product is a part of company's image	0.915		19.958
	Presentation of information indicate company's diligence	0.819	0.885	
C4 Post-purchase evaluation	Refer back to label after use to assess quality	0.86		
	Labels are useful for referencing even after purchase	0.891		19.561
	Labels are helpful for product evaluation after use	0.873	0.855	

Source: Questionnaire based survey of this study

Table 6: Descriptive Statistics

Descriptive Statistics		
Scale Items	Mean	Std. Deviation
Labels provide reliable information	0.651	0.618
I read label before making purchase	0.670	0.597
Labels are important source of product information	0.575	0.632
A well designed label is indication of product quality	0.538	0.692
Good quality products have informative labels	0.651	0.756
I doubt the quality of a product with unattractive label	0.736	0.747
Good companies provide informative label	0.877	0.700
Label on product is a part of company's image	0.943	0.659
Presentation of information indicate company's diligence	0.868	0.618
Refer back to label after use to assess quality	0.915	0.863
Labels are useful for referencing even after purchase	0.887	0.797
Labels are helpful for product evaluation after use	0.858	0.844

Source: Questionnaire based survey of this study

To check for the influence of demographic factor on consumer's perception of label on personal care products (Hypothesis 2: H2), Kruskal-Wallis test, which is considered the non-parametric equivalent of one-way ANOVA was carried out on the sample data. Hypothesis testing in this regard was carried out for the demographic

variables Gender and Age-group, the result of the analysis is provided in Table 7 and Table 8 respectively. As the reliability test using cronbach's alpha showed that the scale items were internally consistent for all the four factor components, the summed scale were used in the analysis for each of the factor components.

Table 8: Kruskal-Wallis test (Gender Analysis)

	Reliability	Quality Signal	Company Image	Post-purchase Evaluation
N (106)	Female = 40 Male = 66	Female = 40 Male = 66	Female = 40 Male = 66	Female = 40 Male = 66
Rank	Female = 65.26 Male = 46.37	Female = 58.42 Male = 50.52	Female = 50.32 Male = 55.42	Female = 63.75 Male = 47.29
Chi Square	10.367	1.819	0.801	9.278
df	1	1	1	1
Sig.	0.001	0.177	0.371	0.002

Source: Questionnaire based survey of this study

Table 8: Kruskal-Wallis Test (Age -group Analysis)

	Importance	Quality Signal	Company Image	Post-purchase evaluation
Age	18-25 years = 30	18-25 years = 30	18-25 years = 30	18-25 years = 30
Groups	26-35 years = 26	26-35 years = 26	26-35 years = 26	26-35 years = 26
N (106)	36-45 years = 27	36-45 years = 27	36-45 years = 27	36-45 years = 27
	46+ years = 23	46+ years = 23	46+ years = 23	46+ years = 23
Rank	18-25 years = 38.92 26-35 years = 68.65 36-45 years = 61.20 46+ years = 48.92	18-25 years = 46.94 26-35 years = 55.23 36-45 years = 58.74 46+ years = 52.50	18-25 years = 48.28 26-35 years = 59.10 36-45 years = 55.43 46+ years = 51.72	18-25 years = 42.98 26-35 years = 55.56 36-45 years = 55.48 46+ years = 62.47
Chi Square	16.524	2.303	2.367	6.076
Df	2	2	2	2
Sig	0.001	0.512	0.5	0.108

Source: Questionnaire based survey of this study

From Table 7, it is seen that for personal care products significant results (at 5% level of significance) are obtained for influence of gender on consumer's perception of label as a reliable source of product information, and use of label for post-purchase evaluation. Thus conclusive evidence is obtained for these two components that gender as a demographic factor influence consumer's perception, and the null hypothesis for Hypothesis 2 (H2) is rejected for consumer's reliability perception of label and use of label during post-purchase evaluation of product. In both the cases, women registered higher ranks as compared to male consumers. For analyses regarding perception of label as product Quality Signal, and Company Image, the results obtained were insignificant.

In case of Age-group analysis as shown in Table 8, it is seen that consumers in the higher age-groups have a more positive perception of labels as a reliable source of product information as compared with consumers in the younger age-group i.e. 18-25 years. Based on the results (at 5% level of significance) obtained in this analysis, the Null Hypothesis for H3 is rejected for Reliability perception of labels. As the results obtained are insignificant for the other three components, there is no evidence to suggest that age-group demographic factor influences consumer's perception of quality and company image based on label and use of label for post-purchase evaluation.

Further analysis for better understanding of consumer's perception-behaviour continuum, was carried out by

undertaking a rank correlation test on consumer's reliability perception of label and tendency to use label during post-purchase evaluation. The object is to determine whether consumers who perceive label to be a reliable source of product information are more likely to use label during their

post-purchase product evaluation, or whether those who consider it to be unreliable source of product information are less likely to use it during post-purchase evaluation. The result of the analysis is given in Table 9.

Table 9: Spearman's Rank Correlation

			Reliability	Post-purchase Evaluation
Spearman's rho	C1	Correlation Coefficient	1.000	.140
		Sig. (2-tailed)	.	.152
		N	106	106
	C4	Correlation Coefficient	.140	1.000
		Sig. (2-tailed)	.152	.
		N	106	106

Source: Questionnaire based survey of this study

The results obtained in this analysis as provided in Table 9 is insignificant (at 5% level of significance), thus the Null Hypothesis of H3 is not rejected as there is no evidence to suggest that consumer's reliability perception of label influence the use of label during post-purchase product evaluation. This statistics obtained from this study suggest that consumers are in general likely to use label during post-purchase product evaluation irrespective of their perception of label reliability as a source of product information, as the sample responses as given in Table 6 indicate ubiquitous use of label during post-purchase product evaluation.

Conclusion

The proximity of label to the consumer and the product at the marketplace makes it an important tool for marketers to transmit information, which is a significant function as consumers rely on available information to aid their purchase decisions. With increasing competition in the marketplace the role of product label has evolved from being a mere identifier of a seller's product to a tool for tackling complex issues such as ethical concerns, quality signaling, differentiation, and other aspects of consumer welfare.

While the study used personal care products as the focus product category, it did not deal with issues that are unique to product in this category, but being exploratory in nature it rather dwelt on general dimensions of labeling. Nonetheless the findings cannot be generalized for other product categories without further inquiry and research in the area, earlier studies have shown that category of product also influence the effectiveness of labels as a channel of marketing communication (Caswell & Mojduszka, 1996; Bushman, 1998).

On the aspect of consumer's perception of label as a reliable source of product information, the study found that consumers consider product label to be more reliable than

advertisements. The result underscores the importance of label as tool of marketing communication, and is consistent with the findings of Jeddi and Zaiem (2010) that label represent an important concept in the field of marketing and constitute a reliable certificate of product quality. Factor analysis (Principal Component Analysis) reduced the twelve items scales to a four factor structure that explained 81.219% variance. These four factors were designated as Reliability Perception, Quality Signal, Company Image, and Post-Purchase Evaluation, based on the component factor items. Analyses carried out to check whether demographic factors viz. gender and age influence consumer's perception of label shows demographic factor influence for certain dimensions. Consumers were found to differ on the basis of gender in their reliability perception of labels, women were found to be more likely to consider it reliable as compared against men, and also more likely to use label for post-purchase evaluation than men. Demographic factor influence was also noticed in age-groups analysis for the dimension of reliability perception. The results are consistent with findings of past researches (Bushman, 1998; Hammond et al, 2003), which documented demographic variations in consumer perception of label and the influence of labeling on consumer behavior. Analysis of the study also showed that while consumers are likely to use labels during post-purchase product evaluation, there is no evidence to suggest that it is influenced by the consumer's reliability perception of label as a source of product information. Summary of Hypotheses testing carried out in this study is given in Table 10.

Major limitations of this study include:

- In view of the lack of adequate previous researches on the subject, this study is mainly of exploratory nature; as such the results obtained needs further validation

- through the use of advanced analytical tools.
- The study was not able to give much attention to consumer's perception of the various kinds of labels such as grade label, brand label, information label, etc. and further research is required to assess their role and impact.
 - Demographic factor analysis were restricted to just two demographic factors viz. gender and age
 - The study used convenience sampling and was limited to certain areas in Delhi. As such the results cannot be generalized for the whole of India also researcher's arbitrary choice of focus product category.
 - Conclusions drawn from the study are based on cross-sectional data. Use of longitudinal study may allow comparison between different time periods which would take into account the effects of changes in the marketplace.

Table10: Summary of Hypotheses Testing

Alternate Hypothesis Statement	Result
H _{A1} : Consumers consider label to be a more reliable source of product information than Advertisement	Confirmed
H _{A2(reliability)} : Demographic factors influence consumer's perception of label as a source of product information	Confirmed for demographic factor: gender, and age-group
H _{A2(quality signal)} : Demographic factors influence consumer's perception of label as a source of product information	Not confirmed
H _{A2(company image)} : Demographic factors influence consumer's perception of label as a source of product information	Not confirmed
H _{A2(post-purchase evaluation)} : Demographic factors influence consumer's perception of label as a source of product information	Confirmed for demographic factor: gender
H _{A3} : There is correlation between consumer's reliability perception of label as a source of product information and use of label during post-purchase product evaluation.	Not confirmed

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