

Perceptual Difference in Brand Conformity and Brand Loyalty of Consumers – A Study with Reference to Telecommunication Services in Chennai for Sustainable Development

S. Deivayanai¹, Dr. M. Chandran²

¹Research Scholar, Department of Commerce, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai, Tamil Nadu, India-600117.

Email: deivayanaisubramani@gmail.com, <https://orcid.org/0009-0004-3691-0273>

²Head and Research Supervisor, Department of Commerce, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai, Tamil Nadu, India-600117.

Email: drmckv@gmail.com, <https://orcid.org/0000-0001-8675-9947>

ABSTRACT. *The idea of brand deformity is generally arise from the change of reputed brands of products and services from one segment to another segment in the form of brand repositioning and end with failure of newly introduced brand. In this sense several reputed brands in the financial industry, electronics industry have started venturing into telecommunication industry to increase their brand reputation. The newly introduced brands may survive or ultimately will also end in failure in the telecommunication industry. The researcher applied convenience sampling method and collected 433 responses and applied confirmatory factor analysis, k-means cluster analysis and nonparametric chi-square analysis and found that the results regarding telecommunication services with respect to the factors of brand deformity and brand loyalty. The study also revealed that the demographic variables are playing a very important vital role for the perceptual difference among the consumers regarding brand deformity as well as the brand loyalty with respect to telecommunication services.*

Key words. *Brand deformity, Brand repositioning, Brand loyalty, sustainable development, environmental*

1. INTRODUCTION.

The idea of brand deformity is generally arising from the change of reputed brands of products and services from one segment to another segment in the form of brand repositioning and end with failure of newly introduced brand. In this sense several reputed brands in the financial industry, electronics industry has started venturing into telecommunication industry to increase their brand reputation Aurier, P., & Fort, F. (2005) (1). The newly introduced brands may survive or ultimately will also end in failure in the telecommunication industry. For example, Tata Motors brand ventured into the telecommunication sector in the form of a new brand Idea ultimately vanished from the industry. Therefore, such a brand are the examples for brand deformity.

The respondents are affected by their lifestyle perception and demographic background therefore it is very essential to identify the perceptual difference in the perception of consumers and the subsequent relationship with perceptual difference in the brand loyalty. The brand loyalty and brand deformity are interrelated to each other based on the important factors responsible for brand deformity as well as the brand loyalty. There are several factors affecting the reputation of brands in the telecommunication industry ultimately gains in brand deformity namely market growth, competition in the industry, technological changes, price fluctuation, advertisement and product needs Ayerbe, C., & Audrey Missonier, A. (2007) (2).

Similarly in the telecommunication industry, the brand loyalty on the product and services can be identified through six predominant factors cheap price, regular availability, brand reputation, product performance, grievance redress system and customer relationship management of the marketers. In this sense it is imperative to verify the existence of perceptual and heterogeneous groups in the domain of

telecommunication sector over the predominant factors. Hence the present study is meticulously focusing on the determination of perceptual difference among the consumers with respect to their demographic variables and lifestyle needs. Therefore, the present study aims at analyzing the existence of heterogeneous groups with respect to factors of brand deformity and brand loyalty as well as the distribution of this perceptual difference among the consumers over their demographic background and purchase details of telecommunication services.

2. LITERATURE REVIEWS.

Bamfo, B. A., Dogbe, C.S.K. & Charles O., 2018 (3) these authors established the deep relationship between lifestyle perception of consumers, their demographic variables and their perceptual difference towards brand deformity and brand loyalty. Senanu & Narteh., 2023 (4) It is found from the study that luxurious consumers choose any type of brand to check their performance and most of them are not loyal due to their fluctuating approach in the international technology. The marketer's reputation and perceived (Mola & Antony., 2022 (5)) prestige are also found to affect the brand loyalty perception of consumers.

Gonu et al., 2023 (6) and Chovanova et al. (2015) (7), these authors in their research work identified the role of market growth and the perceptual difference prevailing among the consumers with respect to the factors of brand deformity. They also identified the deep correlation between the market growth fluctuation and technological changes in determining the brand loyalty and maintenance of brand proximity of consumers.

Kootenaie & Kootenaie., 2021 (8) in this innovative study the authors collected the primary data regarding demographic variables and the lifestyle perception of consumers and their perceptual difference towards technology involved in the products, price fluctuations of the brands and attractive advertisements particularly celebrities. It is found from the study that the distribution of demographic variables by Sharma et al., 2020 (9) over the perceptual difference among the consumers regarding brand deformity and loyalty are well associated.

Gaustad et al., 2018 (10) in this innovative research the authors empirically proved the role of competition prevailing in the market among the marketers and manufacturers ultimately leads to brand reputation by McManus et al., 2022 (11) and brand loyalty by Fazli-Salehi et al., 2021 (12). This sort of competition sometimes suppresses one brand and increase the reputation of another brand which ultimately leads to brand deformity.

Keller (2016) (13) these authors sharply estimated the influence of demographic variables in increasing the brand reputation, regular brand usage, maintenance of proximity with the brand on the recommendation to others. It is found from the study that the demographic variable gender, age, education, occupation and income by Piriyaikul et al., 2024 (14) can focus on the perceptual difference prevailing among the consumers regarding the brands in telecommunication services.

Kotler., 2003 (15) and Muzellec and Lambkin., (2016) (16) these authors research clearly revealed that notions of regarding changes in the brand and proximity of the brand. In the case of required relationship of dominant variables consumers perception on price fluctuation by Aakar and Moorman 2023 (17), attractive advertisements on the product needs are found to influence their satisfaction over cheap price, product performance and the brand reputation.

Nana et al., 2019 (18) and Saqib, N. (2021) (19). In another study researcher confirmed the factors of brand deformity namely market growth due to economic policies of liberalisation and globalisation followed by

heavy competition prevailing in the market. The attractive advertisements available in the marketing technology also increase the considerable size of the consumers towards the products by Pettersson & Hannelius 2021 (20). The brand reputation and brand repositioning can be easily exposed to other consumers through celebrities advertisements.

SogbossiBocco & Houessou (2018) (21) in this empirical research the authors identified six predominant factors responsible for installing loyalty of the product characters fixed in the minds of consumers. The best quality at the cheapest price is the primary predominant reason for brand loyalty and followed by marketing promotions, marketing strategies and social media strategies are found to influence the consumer's perception towards brand loyalty.

Vernette, E. (1991) (22). In another study the authors identified the existence of heterogeneous groups prevailing among the consumers regarding market growth perception as far as their knowledge in the prevailing market is concerned followed by latest technological changes without taking place at the national and international level. It is also found from the study that price fluctuations and advertisements are the major factors affecting the relationship between consumers and the brand reputation.

Zhang, S., & Sood, S. (2002) (23). These authors clearly identified the factors responsible for customer satisfaction, customer loyalty and repurchase intention. The ultimate aim on the death of the brand after a considerable time of maintenance of their reputations can be attained by Liang and Fu., 2021 (24) and Loken et al., 2023 (25). The brand deformity is due to lack of transparency, lack of availability, price fluctuations and poor performance of the products.

3. RESEARCH GAPS.

A thorough investigation of national and international literature pertaining to brand deformity and brand loyalty, brand equity, brand repositioning and brand delight clearly revealed that there is no national and international innovative research works in determining the factors responsible for brand deformity in a particular telecommunication services. The analysis over literature reviews also revealed the predominant factors market growth and competition are responsible for brand deformity whereas they did not touch the important innovative point namely technological changes, price fluctuations due to economic policies, motivation through celebrity advertisement on the self-awareness of consumers over product needs. Therefore the researcher is inclined to determine the factors exactly responsible for brand deformity perceptual difference prevailing among the consumers of telecommunication services. The literature reviews also revealed that there is no straightforward relationship between brand deformity and brand loyalty with respect to the telecommunication services offered by the reputed marketers. The identification of the predominant gap in determining the role of demographics and lifestyle social status in perceiving all the notions and factors of brand deformity can be possible. Hence the present research is interested to find conspicuous relationship in the backdrop of the demographics and lifestyle perception.

4. OBJECTIVES OF THE STUDY.

The researcher identified the following objectives are suitable to conduct the research to reach the point of culmination of innovation namely.

1. To identify the perceptual difference among the consumers pertaining to the factors of brand deformity in the study area.

2. To measure the existence of significant difference among the consumers with respect to the factors of brand loyalty. .
3. To estimate the distribution of heterogeneous groups of consumers with respect to factors of brand deformity and brand loyalty over the demographic variables.

5. HYPOTHESES.

The objectives framed from the gaps in the literature are useful to construct the following relationships in the form of hypotheses which can be tested through the primary data obtained from the consumers of the communication services in the study area namely

- 1 There is no significant difference in the perception of consumers of telecommunication services with respect to the factors of brand deformity.
- 2 There is no significant difference in the perception of consumers of telecommunication services with respect to the factors of brand loyalty.

6. METHODOLOGY.

This research is leaning upon the primary data obtained from consumers of telecommunication services regarding the existence of perceptual difference among them in the back drop of factors pertaining to brand deformity and brand loyalty. In order to obtain their responses researcher designed a questionnaire suitable for respondents' opinion. The brand deformity factors are market growth, competition, technological changes, price fluctuation, advertisement and product needs whereas the brand loyalty factors are cheap price, regular availability, brand reputation, product performance and grievance redress and customer relationship respectively.

The research is conducted in three stages namely pretesting stage, pilot study stage and main study stage respectively. In the pretesting stage the researcher interacted with subject experts, telecommunication services offered by the marketers, consumers, statistical experts to identify the nature of questionnaire framed by the researcher from literature reviews. The suggestions of these expert sources are considered very important and the statements and optional type questions are changed accordingly in order to pave the way for better understanding of respondents.

After the pretesting stage the researcher collected 105 responses regarding optional type demographic and purchase detailed questions and followed by statements in five-point Likert scale regarding the factors of brand deformity and brand loyalty. The application of Cronbach alpha on five-point Likert scale statements clearly revealed the value a conspicuous value 0.844. It implies that the statements generated for brand deformity and brand loyalty are highly reliable the main study is conducted over 15 zones of the Great metropolitan city of Chennai and able to receive only 433 usable samples. The researcher exploited convenience sampling method.

After finalising the usable 433 sample size for the research, they are coded numerically using appropriate numerical values for all the questions and statements in the questionnaire and entered them in the software to thoroughly investigate the details regarding brand deformity and brand loyalty in the backdrop of the communication services.

After entering them the researcher is able to distinguish the discrete type random variables and the total average scores representing the continuous type random variables of the research. The researcher used

confirmatory factor analysis, k-means cluster analysis and nonparametric chi-square analysis to find the perceptual difference with respect to brand deformity and brand loyalty as well as to find the distribution of these perceptual differences over demographic details and purchase details of consumers of telecommunication services in the study area.

7. ANALYSIS AND DISCUSSION.

Since the questionnaire consists of six factors of brand deformity namely market growth, competition, technological changes, price fluctuation, advertisement and product needs. Similarly the brand loyalty factors in the questionnaire are cheap prices, regular availability, brand reputation, product performance, and grievance redress and customer relations respectively. In order to confirm these factors of brand deformity and brand loyalty researcher converted all the descriptive random variables into continuous type of random variables by the additions of variables to apply the multivariate statistical techniques. In order to validate these factors the researcher applied confirmatory factor analysis for all the factors of brand deformity and brand loyalty respectively in below table 1.

Table 1: brand deformity verification of best fit.

S.NO	Required statistics	Computed statistics	Expected values
1	Chi-square	12.562	-
2	P-value	0.398	>.050
3	Goodness of fit index(GFI)	0.990	>.900
4	Comparative fit index(CFI)	0.989	>.900
5	Normed fit index(NFI)	0.987	>.900
6	Root Mean Square Error of Approximation(RMSEA)	0.08	<=0.080

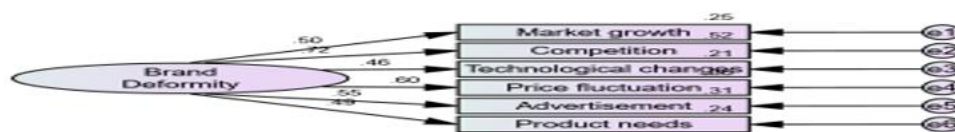


Figure 1: representing brand deformity factor.

The researcher identified the explanatory correlation values for brand deformity from the factors market growth .50, competition .72, technological changes .46, price fluctuation .60, advertisement .55 product needs .49 respectively in above figure 1. This shows that these six factors of brand deformity are validated and they have explanatory power for brand deformity pertaining to telecommunication services in the perception of consumers. It is further confirmed through the required and limited statistical quantities.

Similarly the confirmatory factor analysis is applied on the six factors of brand loyalty and obtained the following confirmatory factor diagram and the table 2.

Table 2: Brand loyalty confirmation and verification.

S.NO	Required statistics	Computed statistics	Expected values
1	Chi-square	12.562	-
2	P-value	0.398	>.0500
3	Goodness of fit index(GFI)	0.990	>.900
4	Comparative fit index(CFI)	0.989	>.900
5	Normed fit index(NFI)	0.987	>.900
6	Root Mean Square Error of Approximation(RMSEA)	0.08	<=0.080

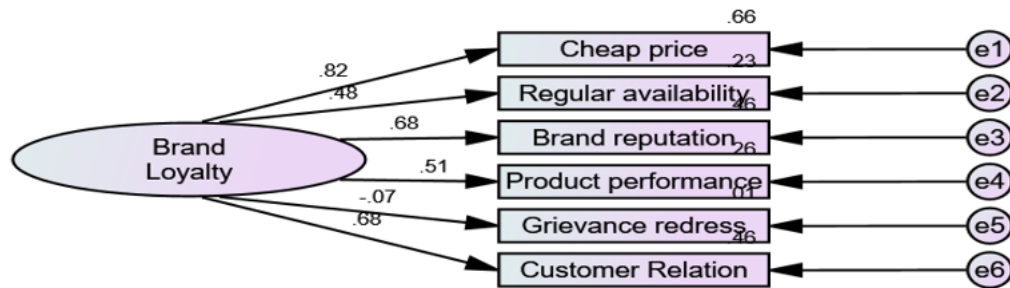


Figure 2: representing the factors of Brand loyalty.

from the above table 2 and figure 2 it is found that the underlying factors cheap price .82, regular availability .48, brand reputation .68, product performance .51, grievance redress .67 and customer relations .68, this shows that these six factors have high correlation values to explain the brand loyalty perception prevailing among the consumers of telecommunication services in the study area. These factors have their significant explanatory power.

After confirming the factors of brand deformity and brand loyalty using the continuous type of random variables computed from the total average scores for perceptual difference among the consumers of telecommunication services. Therefore the researcher applied k-means cluster analysis to identify the existence of heterogeneous groups prevailing among the consumers. The results of K-means cluster analysis is clearly presented below table 3 and figure 3.

Tale 3: Classification of consumers-Brand deformity.

	Cluster		
	1	2	3
Market growth	4.38	3.36	2.39

Competition	4.24	3.37	2.97
Technological changes	4.30	3.46	2.68
Price fluctuation	4.28	3.42	2.02
Advertisement	4.92	3.12	2.76
Product needs	4.71	3.90	2.74

Table 4: Frequency distribution of clusters of Brand deformity.

Brand deformity		Frequency	Valid Percent	Cumulative Percent
	1	133	30.7	30.7
	2	151	34.9	65.6
	3	149	34.4	100.0
	Total	433	100.0	

The respondents are classified into three heterogeneous groups with the strong agreements for factors of brand deformity, moderate agreement for the factors of brand deformity and disagreement for the factors of brand deformity respectively in table 4. Therefore the first factor is called **dynamic consumers** with the strong agreement for all the factors of brand deformity and it is followed by **“Balancers”** with moderate notions about brand deformity. The third heterogeneous group is known as **optimistic consumers** because of the disagreement for the existence of all the brand deformity factors. In fact these optimistic consumers positively think about the existence of brand reputation instead of its brand deformity. The frequency distribution of clusters of heterogeneous groups of consumers of telecommunication services with respect to brand deformity clearly revealed that the sample unit consists of 30.7% dynamic consumers, 34.9% balancers and remaining 34.4% optimistic consumers respectively. The same type of K-means cluster analysis is also applied with the consistency.

Table 5: Classification of consumers-Brand loyalty.

Brand loyalty	Cluster		
	1	2	3
Cheap price	4.41	3.84	2.84
Regular availability	4.83	3.07	2.67
Brand reputation	4.30	3.75	2.69

Product performance	4.22	3.89	2.36
Grievance redress	4.10	3.23	2.80
Customer Relation	4.29	3.71	2.54

Table 6: Frequency distribution of clusters of Brand loyalty.

Brand loyalty		Frequency	Valid Percent	Cumulative Percent
	1	162	37.4	37.4
	2	130	30.0	67.4
	3	141	32.6	100.0
	Total	433	100.0	

From the above table 5 and table 6 it is found that the first cluster consumers strongly agree for the loyalty towards the brands of telecommunication services therefore there called **“Gratified consumers”**. The second group of consumers moderately agreed for loyalty and they are called **fragile consumers** and they are loyal to the brand (or) they may switch over to other brand. The third cluster of consumers disagreed with brand loyalty therefore they are called **“Brand switchers “**. They always switch over to other brand they will never be loyal to all factors leading to loyalty. Similarly the frequency distribution of heterogeneous groups regarding brand loyalty factors revealed that 37.4% of the sample unit is gratified consumers, 30% fragile consumers and 32.6% of consumers are brand switchers. Hence the two hypotheses generated by the researcher from the literature reviews rejected the derived two hypotheses on telecommunication services with respect to the factors of brand deformity and brand loyalty.

After obtaining these heterogeneous groups of consumers with respect to brand deformity and brand loyalty of consumers towards the telecommunication services the researcher intended to identify the distribution over demographics of consumers using non parametric chi square analysis

Table 7: Association between demographic variables and brand deformity and Brand loyalty.

Dominant Clusters	Demographic variables	Chi-square	P-value
Dynamic consumers	Gender	10.542	0.000
Balancers	Age	3.390	0.000
Optimistic consumers	Education	11.895	0.000

Gratified consumers	Income	7.358	0.000
Fragile consumers	Occupation	12.369	0.000
Brand switchers	Marital status	10.365	0.000
Dynamic consumers	Type of residence	8.350	0.000

The segmentation of consumers towards the factors of brand deformity and brand loyalty respectively as shown in the chi-square table 7 are notable and significant. Therefore, it can be identified that there is a deep association between perceptual difference prevailing among consumers regarding brand deformity and brand loyalty and their demographic background.

8. FINDINGS AND CONCLUSION.

Brand deformity with respect to consumers perception towards telecommunication services in the study area is a combination of six important factors namely market growth in the telecommunication services and the competition prevailing in the industry. It is further deduced that their technological augmentation and changes along with price fluctuation also leads to the brand deformity particularly in telecommunication services. The attractive advertisement and product needs motivate the consumers of telecommunication services to expect technological innovations in brands otherwise they make the deformity of brands in the form of failure. Similarly the existence of brand loyalty is a psychological phenomenon prevailing among the consumers based on the cheapest prices offered by the telecommunication services and their regular availability. The brand reputation status and best performance in the form of connectivity and immediate grievance redress system and maintenance of smooth customer relationship management motivate the consumers to have the loyalty towards the brands and also useful to protect them from brand deformity. It is also concluded from the study that there are three heterogeneous groups prevailing among the consumers with respect to brand deformity namely the dynamic consumers, balancers and optimistic consumers. Similarly as far as the loyalty towards telecommunication services is concerned there are three heterogeneous groups prevailing among the consumer's namely gratified consumers, fragile consumers and brands switchers respectively. The study also concludes that the demographic variables are playing a very important vital role for the perceptual difference among the consumers regarding brand deformity as well as the brand loyalty with respect to telecommunication services.

SUGGESTIONS.

The findings of the study revealed the following suggestions. The study identified the existence of three heterogeneous groups and the perceptual difference with respect to brand deformity therefore it is suggested to the telecommunication services with different types of brands should employ different marketing strategies in the form of offers and discounts for the consumers to increase the brand survival and also to increase loyalty perception among the consumers. As far as the brand loyalty is concerned cheapest price is the predominant factor therefore the telecommunication services must focus on their technological augmentation to offer the best services to the consumers at the cheapest price with high technological innovations.

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