ISSN 2249-5630

Nirma University Journal of Business and Management Studies

Vol. 6, Nos. 1 & 2, July - December 2011

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Institute of Management

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Claims for missing issues should be made within three months of publication.

Printed and published by G. Ramachandran Nair, Dy. Registrar, IMNU on behalf of the Institute of Management, Nirma University, Sarkhej-Gandhinagar Highway, Ahmedabad 382481, Gujarat, and printed at Printquick, M/33 Madhupura Market, Shahibaug,Ahmedabad 380004 and published from Institute of Management, Nirma University, Sarkhej-Gandhinagar Highway, Ahmedabad 382481, Gujarat

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Volume 6, Nos. 1 & 2, July – December 2011

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Articles

Case Studies

Antecedents of Website Stickiness among Social Network Community Users: A Study

Sapna Choraria*
P.K. Yadav**

Society and community derive mutual benefits on the basis of shared belief, thoughts, and values among individuals. Granovetter (2005) has accentuated upon the prevailing social networks among individuals within the society that affects economic outcomes in terms of price, productivity, and innovation thereby influencing the overall growth of every individual. The emerging socio-economic structure therefore largely depends upon the information and knowledge people share among themselves which requires a volume of interaction to develop a network, which becomes a necessary basis to form competence, self-efficacy, expectations, and experiences (Savolainen, 2002). Similarly, community (both actual world and virtual world) requires a balance of strong and weak ties of social networks, which includes both business and personal relationships, for its possible sustenance and economic growth. Online communities are an extension of knowledge sharing activity among social networks. Platforms of several business and personal activities have shifted from the actual to virtual world.

Continuous improvement and innovation in the area of technology has facilitated this interaction and

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contributed to the growth of virtual communities. It has not only transformed business processes but also the way a common man interacts using various technologies. With this, society has become more dependent on technological interfaces for interaction among members of the community as well as to perform daily activities. Social network websites in their initial period were restricted to social networking activities owing to their wider reach, lower cost, and in-built efficiencies; they now encompass virtually the world.

Both individuals and business organizations are harnessing the power of community websites benefiting all stakeholders: employees, partners, suppliers, and investors. Such online business model of virtual community was explained by Hagel and Armstrong (1997) in the light of cost versus benefit potentiality. They identified the coalition of several active online users sharing personal or professional or both kinds of relationships on virtual platforms to understand the success of these community websites. This has helped the online users to grow in enormous size and hence demands a framework of competitive strategy for survival and growth. Several studies have identified "user participation" in such community websites as an important dimension of success, while a few studies have recognized user retention and long-term engagement with the community websites as a milestone of success.

Extensive studies by Rheingold (1993), Preece (2000, 2001), Bagozzi and Dholakia (2002), and Dholakia, Bagozzi, and Pearo (2004) have emphasized the importance of active social groups with respect to technological aspects of community websites as an important antecedent to retain and engage the users for longer periods of time. User participation in the virtual world has always been an area of focus among online community researchers. The construct is widely explained in terms of being an active user and is measured in terms of time spent and frequency of logging in.

Continuous user participation results in building experience, which is influenced by technological and social factors associated with the community website. Several models have been proposed by researchers to create a variety of experience in virtual and in-world (Dholakia, Singh, and Westbrook, 2010; McGuire et al., 2010; Ferguson, Pandian, and Bergeron, 2010; Nambisan and Nambisan, 2008). Since its introduction as an important factor of building customer relationships, user experience has been continuously studied and refined in terms of its important antecedents and consequences. Factors such as ambience, front-line employees, merchandising, architecture, crowd management, technology, and many such others have been identified as important influencing agents of experience (Johnston and Kong, 2011; Chen et al., 2010; Siebers et al., 2010; Henning-Thurau et al., 2004; Preece, 2000; William and Cothrel, 2000). These influencing factors can be broadly categorized into social and technological factors to explain the concept of user experience in

the virtual environment. Several studies show the importance of social group and technological aspects such as graphics and navigation through the website as important criteria that enhance positive user experience towards the community website and thereby affect their sticky behaviour towards the website.

Community website business models identify user experience as an influential dimension that helps user to stay long with the website. The literature on online community websites defines this aspect as user stickiness. User stickiness is one of the emerging concepts in the area of online marketing and has gained considerable attention from several researchers and theory builders. These studies have explained stickiness in terms of spending time with the community website (Bowden, 2009; Higgins, 2006; Davenport, 2000; Maciag, 2000). There are a few studies that indicate stickiness in terms of not only being with the website but also engaging actively with its ongoing activities like chatting, blogging, joining discussion forums, and playing and recommending games (Kumar et al., 2010; Calder and Malthouse, 2008). Stickiness seems to be influenced by the way users participate and experience during their interaction with the website and other users within the community website.

Based upon this framework, this paper identifies user participation, user experience, and user stickiness as important variables for growth and sustained revenue streams. User participation acts as a precursor of user need, user online behaviour, and their attractiveness towards the existing social group on the community website. User experience here mediates the relationship between the precursor and the outcome, and is formed of social and technological variables represented by the factors of usability and sociability. User stickiness is defined as a final outcome of sustained participation resulting in retention as well as to keep users engaged with the community website.

Conceptual Framework

Social networks reflect the bond of relationships among people, group, organization, and society as a whole established owing to interaction and depends upon the strength of existing social ties among them. Several theories explain the importance of social ties that exist among individuals, based either owing to the influence of personal or direct social groups/individuals sharing mutual beliefs and values (Tönnies, 1887). Following the importance of social ties, Granovetter (1973, 1983) focused on studying the effect of strong and weak social ties on social networks. Such ties are characterized on the basis of time, emotional intensity, and reciprocity. His work on social ties contributed in building the theory that majorly explains the strength of weak ties in building large and successful communities.

Since user stickiness denotes the bond of connectivity among users of community websites, it is regarded highly valuable to marketers as it encourages users to get involved in a deeper level, make them spend more time in browsing, and thus enhancing their loyalty towards these sites (Wu and Tsang, 2008). Brock (1997) identified user stickiness as an important factor in maintaining user's loyalty towards community websites. Paul (1999) defines stickiness as the ability of a company to keep a customer and for customers to return. He argued that a non-interesting/monotonous website that is not able to generate interest fails to engage users and thereby demotivates them to participate again. Hence providing with interesting information and continuously updating it can motivate the user's stickiness. A website can be considered sticky when a user visits the same website several times, spends more time on it, and goes deeper into it. Wu and Tsang (2008) suggested three indicators that measure website stickiness: duration, frequency, and depth.

In this study, stickiness refers not only to the retention and engagement of the user, but also indicates the importance of building user experience through motivated and sustained participation in community websites.

User Participation: The Precursor

Customer participation and their degree of involvement in service production has long been identified as a critical success factor among organizations (Dabholkar, 1990; Xie, Bagozzi, and Troye, 2008). It is defined as a behavioural construct to measure the customer scope of sharing information, make suggestions, and become involved in the decision making process (Auh et al., 2007; Chan et al., 2010). Meuter et al. (2005) argue that the process and intention of participation is influenced by the individual's motivation which depends upon the individual's traits as well as situational factors. Therefore, user need, user online behaviour, and social group attraction are identified as significant components representing the characteristics of user participation.

Buttle (1989) emphasizes that individual's need is one of the important criteria that influences the physical and mental growth and is affected by the social structure and environment. Based upon this assumption, Barnes and Pressey (2011) have identified user need as a factor affecting user's participation and involvement in community websites. On the other hand, social group is also given importance for user participation and is mainly based upon the growth of the bond between people built with the lapse of time over the web and is not affected by the group identity (Lea, Russel, and Watt, 2007; Hogg and Hains, 1996; Hogg, Hardie, and Reynolds, 1995).

User online behaviour is a psychological activity influenced by the individual's emotional level reflecting one's motive to be in a particular state of mind and remain associated with a particular activity. Fogg (2009) has identified three major factors responsible for inducing particular behaviour: motivation, ability, and a suitable trigger. Meuter et al. (2005) have also supported the importance of user's behaviour in moulding the attitude towards the community websites.

Therefore, user behaviour along with need and social group attraction together define the concept of user participation in social networking community websites. It signifies the precursor stage for building sticky behaviour among users as it is the first interactive stage between the website and users. High motivation and maintenance of social group create a long term attraction among users and thereby bind them with the community website for long.

User Experience: The Mediator

Customer experience is an individual dimension and cannot be compared; however, it is one of the most critical competitive tools used in strategy formulation by several service based organizations (Berry and Carbone, 2007; Meyer and Schwager, 2007; Prahalad and Ramaswamy, 2004). It affects customer satisfaction and customer loyalty, influences customer expectations and customer confidence, supports the brand image, and builds the emotional bond with customers (Johnston and King, 2011). However, the process of such experience building mainly depends upon the type and level of benefits an user expects to obtain during community website usage. In an online social networking website, creating experience for the user is the combined effect of social group interaction and technological interface. User experience thus consists of pragmatic, hedonic, sociability, and utility factors that influences the user's perspective by creating an experience while interacting with the website (Nambisan and Nambisan, 2008).

Preece (2000, 2001) examined the importance of usability (dialogue and social interaction support, information design, navigation, and access) and sociability (purpose, people and policies) factors that affects the individual's experience and thereby retention with the community websites. The study emphasized that both technological and social aspects of the community website affects the overall usage among users and their future intention to remain active with the community website. Several studies support the importance of these factors to create positive and influential experience among the users that help generate sticky behaviour (Ding, Verma, and Wardell, 2010; Kozinet, 1999).

However, the process of experience is initiated when the individual participates in the community website, while building the user's sticky behaviour depends upon the type of experience built during his/her interaction with the community website. This study examines the process of building user's sticky behaviour in the presence of user experience with the community website (Figure 1).

Figure 1: Framework for User Stickiness

Based upon the above discussion, the study proposes following hypotheses to examine the strength of the relationship among the variables:

- H_1: User participation affects user stickiness towards community website.
- H_2: User participation affects user experience during their interaction with community website
- H_3: User experience affects user stickiness towards community website
- H_4: User experience mediates the relationship between user participation and user experience

Methodology

The data set consisted of 800 active online community users of general purpose social networking websites who were selected on the basis of convenience sampling method. This category of social networking websites is most penetrated among Indian users and is used for personal, social, and professional activities. Therefore, to understand the factors regulating participatory and sticky behaviour towards community websites among these active users both male (n=400) and female (n=400) respondents having association with community websites for more than a year were approached. The average age of respondents was 24.5 years and the sample consisted of graduates and post-graduates. Since the sample comprised both male and female respondents with equal percentage, ANOVA was performed to assess the usability of the entire sample for the proposed hypothesis examination. The results showed that, in most of the cases, there was no significant difference.

A self-designed questionnaire was created on the basis of prior research studies, specifically by Zhou (2011), Lu and Lee (2010), Barnes and Pressey (2011), Novak, Hoffman, and Yung (2000), and Mersey et al. (2010). The questionnaire was divided into exogenous and endogenous variables such as user participation, user experience, and user stickiness. All the

constructs were measured as behaviour and perception of respondents on a five-point Likert scale (5= Strongly agree, 4= Agree, 3= Neither agree nor disagree, 2= Disagree, and 1= Strongly disagree). Cronbach's alpha confirmed the reliability (>0.5) of the items in the questionnaire. Later, confirmatory factor analysis examined the model fitness among the proposed construct variables on the basis of each item in the scale (Hair and Anderson, 2008) (see Table 1).

Multivariate analytical tools like confirmatory factor analysis and structural equation modelling were used to test the hypotheses.

Discussion

The analysis is divided into two sections: predicting the results of reliability and validity, and examining the results of structural equation modelling on the basis of regression weights for each proposed path.

Table 1: Questionnaire: Reliability and Source

Variable	Cronbach's Alpha	Source of the Scale
User Participation		
User need	0.735	Zhou (2011), Lu and
User behaviour	0.674	Lee (2010), Barnes and
Social groupattraction	0.873	Pressey (2011)
User Experience		
Social group	0.601	Novak, Hoffman, and
Technological efficiency	0.682	Yung (2000)
User Stickiness		
User retention	0.735	Lu and Lee (2010),
User engagement	0.669	Mersey et al. (2010)

Scale reliability tests indicate that all values of Cronbach's alpha are above 0.6 for every proposed variable and thus shows consistency among the scale items. In the initial stage, 46 items related to various aspects of user participation, experience, and stickiness were selected, of which 33 items were retained to achieve good fit. Thirteen items were removed on the basis of low regression weights affecting overall model fitness (Hair and Anderson, 2008).

The second stage of analysis was preceded by structural equation modelling to examine the hypothesized relationships among the proposed variables. The result of path analysis reveals that all the hypotheses are supported showing positive relationship among the variables (Table 2). The output of the structural equation modelling confirms that user participation affects individual's intention to remain associated with the community website for long hereby creating sticky behaviour towards the community website.

Table 2 : Standardized Regression Weights of the Proposed Path Analysis

Proposed Path	Standardized Regression Weights
User Participation → User Stickiness	
User need → User retention	0.13*
User need → User engagement	0.02*
User behaviour → User retention	0.17*
User behaviour → User engagement	0.16*
Group attraction → User retention	0.09*
Group attraction → User engagement	0.06*
User Participation → User Experience	
User need → System usability	0.11*
User need → Social factors	0.23*
User behaviour → System usability	0.18*
User behaviour → Social factors	0.09*
Group attraction → System usability	0.20*
Group attraction → Social factors	0.12*
User Experience → User Stickiness	
System usability → User retention	0.54*
System usability → User engagement	0.67*
Social factors → User retention	0.48*
Social factors → User engagement	0.73*

*Significant at 0.001

User participation is defined in terms of user need, user behaviour, and their attraction towards online social groups, while user stickiness is defined in terms of user retention and engagement with the community website. The results of path analysis show that all three factors of user participation significantly affect the factors of user stickiness, i.e. user retention and engagement. Therefore the first hypothesis, H_1, accepted. Also the factors of user participation show a significantly positive effect on the factors of user experience i.e. system usability and sociability, which support the second proposed hypothesis, H_2.

Since the model focuses on identifying the mediating role of user experience, the path between the factors of user experience and user stickiness is examined in the presence of the relationship between the factors of user participation and user experience. The results show that the effect of user experience does affect the factors of user stickiness positively, supporting hypothesis H_3. Also, strength of effect between the factors of user experience and user stickiness is higher compared to the factors of user participation and user stickiness. This implies that user experience mediates the relationship between user participation and user stickiness and thereby supports hypothesis H_4.

The results show that social group and technological aspects play an important role in enhancing the overall experience as well as sticky behaviour among users. Hoffman and Novak (1996) suggest that website design must provide enough challenge for users to keep them engaged longer. If the site does not provide enough challenges for action, potential users will become tired quickly and will either switch over to other websites or log off. There is also an argument in marketing research on consumer behaviour that "ease of use" itself can be taken as a way to lock in consumers (Novak, Hoffman, and Yung, 2000). In the case of user participation, the user's intention towards community websites is influenced by individual need and behaviour along with attraction towards the social group. However, user experience characterizes both social and technological interaction to lock in users for longer periods. Owing to this reason, the result reflects the mediating and influential role of user experience in building overall stickiness among users of social networking websites.

Table 3 : Measurement Invariance Test

Group	X^2/df	GFI	IFI	NFI	CFI	RMSEA	RMR
Active Online Users	1.65	0.924	0.989	0.973	0.989	0.029	0.005

The measurement fit model (Table 3) shows that all the indicators have their values in the acceptable range. The value of added value fit measurement indicators are all above 0.9 while RMSEA and RMR are within the range of acceptable fit, i.e. below 0.05. Also, the value of

X^2/df ratio is within the range of 1 and 3, showing the acceptability of the overall model fitness (Bentler, 1990; Joreskog and Sorbom, 1996; Marsh and Hocevar, 1985; Wu and Tsang, 2008). Therefore, the results obtained after consolidating the entire indicators of the overall model represent the ideal fit.

Implication

The virtual world of community websites has come up as one of the platforms providing opportunity and a medium of interaction for maintaining and enhancing personal, social, and professional activities. Based on the opportunity to make profits and gaining attractive market share, several virtual community websites provide a wide range of choice for online visitors. This has resulted in a competitive marketplace which demands consumer/member-centric strategy. The proposed framework provides a direction to compete in the virtual environment by creating a long lasting experience through sustained participation which results in user's sticky behaviour towards social networking community websites.

Limitation

This study has considered only user participation and experience as important variables that affects sticky behaviour. There may be other technological, personal, and demographic variables that might influence the relationship. Also the study is restricted to a sample of online users belonging to a general purpose social networking website. The behavioural aspects might differ on the basis of the type of community (community of purpose, community of knowledge, community of entertainment, etc.) Therefore, the proposed framework can be further examined in the presence of other indicators across the categories of demographic variables and type of community websites.

Conclusion

User participation is one of the important stages which influences the individual's intention to stay connected with the community website in an active state. Similarly positive user experience built during the user's interaction with the community website affects his/her intention to remain associated with the website in future. Therefore, both user participation and experience influence the user's stickiness with the website. However, the probability of user's sticky behaviour activity with the community website increases when motivated user participation results in positive long lasting experience during online interaction.

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Diversification into Technical Textiles: A Forward Momentum for Indian Textile Industry

Pawan Kumar Chugan*

Over several centuries the textile industry in India has grown from a cottage industry to a well organized industry. One of the oldest industries of the country, it is also the second largest employer after agriculture. It generates employment opportunities for approximately 33.17 million workers directly and 54.85 million workers indirectly. India possesses competitive advantages in production and export of textiles and clothing and it was envisaged that the end of the quota regime (phasing out the Multifibre Arrangements on January 1, 2005) will provide it several opportunities for growth.

While the end of quota-based curbs offered the Indian textile industry growth opportunities, they lasted only for a short period and the industry in the last few years has been continuously witnessing turbulent times with declining growth. The industry is losing its competitiveness to other cheaper sourcing countries. The recent global recession has further worsened the scenario resulting in loss of many jobs.

Thus, to prop up the textile and clothing industry, it is essential not only to improve the efficiency and quality of output and recapture the losing market share but

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also to look at new markets, new products, and new opportunities simultaneously. Technical textiles are a promising area of diversification for domestic and export markets. India is one of the global leaders in technical textiles and clothing (Chugan, 2011). An attempt has been made below to describe the salient features of technical textiles vis-à-vis opportunities for the Indian textile industry.

Turbulences in Indian Textile Industry

Until the recession took over, it was a doorsill of growth. The Indian textile industry, one of the world's best performing industries, is now on a downtrend. Industry analysts had predicted that by the end of April 2009, approximately half a million direct workers from textile, garment, and handicraft sectors could have lost their jobs. Considering other people who were indirectly associated with the industry, total direct and indirect job loss is expected to reach 6 million.[1]

In fact, the turbulent time for the industry had begun with the termination of the WTO agreement on textiles and clothing in 2005. With the removal of the quota regime, the industry started facing tough competition from other countries leading to slowdown in exports in subsequent years (Chugan, 2011). According to PCL (2010) after the termination of the Multifibre Arrangements (MFAs), exports of textiles and clothing took a giant leap in 2005-6 and reached US$ 17.5 billion, an increase of about 25 per cent over the previous financial year. However, this momentum could not be maintained in 2006-7 and exports managed to reach US $ 18.73 billion, registering a growth of just about 7 per cent over 2005-6, falling short of the targeted US$ 19.73 billion by about 5 per cent. According to FICCI (2008), the growth rate in textile exports which was 21 per cent in 2005-6, fell significantly in the following year to almost 6 per cent, and was 10 per cent in 2007-8. The weakening of demand in major destinations like USA and EU has led to low growth in exports. Citing the example of Ludhiana city in Punjab, Thakurta (2009) states that some of the city's major garment making companies, which had created 400,000 jobs in Ludhiana alone, had suffered more than 50 per cent loss in sales, specifically exports.

Further, smaller countries such as Vietnam, Bangladesh, and Pakistan have wrested the advantage in textile and clothing exports from India, raising their exports to markets like the US and EU in the post-quota years (2005-7). India's share in EU textile imports declined from 7.9 per cent to 7.5 per cent between 1995 and 2007. There has, however, been a

[1] "Recession Cannibalizes More Indian Textile Jobs" http://www.fibre2fashion.com/industry-article/17/1658/ recession-cannibalizes-more-indian-textile-jobs1.asp , accessed on February 4, 2011.

declining trend in growth of India's textile and clothing exports to EU since 2005. Similarly, in the US market, India's average price for textile exports declined in the post-quota period, but was still higher than China and Pakistan prices (FICCI, 2008). The situation on the export front remained poor for the next four years.[2] Exports to US declined to US $ 4430 million from US$ 4752 million. Similarly, exports to Canada declined to US$ 351 million from US$ 406 million. This change has taken place in spite of overall increase in exports from US$ 19,436 million to US$ 23,419 million. Exports to major European destination, such as UK, Germany, France, Spain, Turkey, the Netherlands, Belgium, and Denmark have declined because of recent European crisis (Chugan and Rawani, 2012). According to Mehta (2011), consumer confidence is low at this moment and retailers fear an impending slowdown. Therefore, while adopting a very cautious approach, the Indian textile industry has now started targeting countries such as Russia, Japan, Latin America, and Australia which are very strong markets for China as well.[3]

According to the *China Daily* (2009), the economic meltdown in the major export markets of Europe and US has led to a substantial fall in foreign orders and could be the final nail in the coffin for many of India's small and medium sized textile houses. Citing an example of a unit in Noida the report states that the colourful organza curtains, floor cushions, and quilt covers that were once produced in bulk are piled high on the tables.

Global Recession to Recovery vs. Textiles Industry

The impact of global recession was not felt by all industries; rather some were more badly affected than others. According to Thakurta (2009) while the Indian economy was relatively insulated from the international financial crisis, one particular sector that was badly hit was the textiles and garments manufacturing industry. At least 1.2 million workers in this industry were expected to be without jobs by the end of March 2009. Moreover, the economic stimulus package announced by the government in 2008 also failed to cheer the industry, since it did not address all the major issues.

According to Assocham (2010), while the Indian economy may be showing signs of recovery in some sectors such as cement and steel, the textile sector continues to be in the doldrums with millions of workers jobless, and export orders not picking up as demand continues to be

[2] Official India Textile Statistics 2009-10, bttp://www.txcindia.com/html/comp%20table%20pdf%202009-10/T 120%20EXPORT%20OF%20ALL%20TEXTILE%20ITEMS%20IN%20VALUE%20TRMS%20MAJOR%20COUNTRIES.pdf, accessed on October 1, 2011.

[3] Chinese penetration in Australian and Japanese markets is 90%, yet India knows it needs to take a plunge. (Mehta, 2011).

low in US and developed markets. This sector, which is the second major employer in India after agriculture, providing employment to 91 million people and contributing about 13 per cent in export earnings and 4 per cent in India's GDP, is still suffering the heat of global slowdown as indicated by declining exports and massive layoffs. According to FMAG (2009) the credit quality of Indian textile companies has weakened considerably since the beginning of the financial year 2009, spurring rating actions ranging from outlook revisions to multiple-notch downgrades. According to a new report by Fitch Ratings, the Indian textile sector remains highly vulnerable to global recession owing to its huge dependence on exports.

In this scenario of dwindling exports, technical textiles are an important area which has great potential for diversification and upgradation of the industry because conventional textiles and clothing have reached saturation levels in terms of product development, diversification, value addition, etc. and are subject to severe global competition. Technical textiles, on the other hand, offer great opportunities not only in different parts of the world, but in the domestic market as well. In the quota free regime, it is becoming extremely difficult to compete in the world and grab a higher share in consumer textiles, garments; now is the right time to look into the diversification of value added textile products (technical textiles) (Chugan, 2007).

Technical Textiles: Definition and History

Broadly speaking, the textile industry may be classified into tradition textiles and technical textiles. In general, the textile industry provides textile materials primarily for apparels. This segment is known as traditional textiles as it fulfills the basic needs of human beings. As a result of ever increasing human demand, the textile industry has also moulded itself with new technological developments for more specific needs and the newer materials are used in many more areas such as medicine, sports, defence, construction, agriculture, home decoration, industry, transport, electrical and electronics, etc. The newer materials are now more popularly known as technical textiles. Further with better research and development, technical textiles have been given an aesthetic appeal as well.

Technical textiles came into the peak as soon as the manmade fibre was discovered around 1900. Simultaneously new technologies such as special weaving processes, nonwoven techniques, etc. were developed to manufacture technical textiles. The world has observed

fast growth in fibre production having very distinguishing characteristics such as high resistance to temperature, stable under stress and strain, strong enough to absorb impact of highly reactive chemicals, etc. All these efforts have led to widespread use and growth of technical textiles.[4] Technical textiles are classified into twelve categories as shown in Table 2.

Technical textiles are often considered nonwovens. However, as Sheshadri (2009), points out, not all technical textiles are nonwovens. Nonwoven technology is a manufacturing process of developing fabrics directly from fibres by skipping intermediary processes such as spinning, winding, weaving, etc. Technical textiles can be manufactured using conventional manufacturing processes such as weaving, braiding, and knitting as well as nonwoven technologies. As of today, nonwovens have penetrated highly into disposable sectors where aesthetic aspects are not of primary importance. The value addition to nonwovens and technical textiles comes from the functional properties they provide such as body fluid absorbency in the case of diapers, fluid repulsion in the case of medical garments, and softness and resiliency in the case of high-loft upholstery products. Depending on the type of end-use requirements and economics, different available nonwoven and conventional technologies are selected to develop particular technical textile products. A good example is the use of spunlacing technology to develop lightweight disposable wipes. Sheshadri (2011) feels that the categorization of nascent Indian technical textiles into 12 segments as in Table 2 is premature and will cause confusion. There are several products that can fit well in many segments and such a categorization for an emerging market may not be suitable. In order to have an easier and useful segmentation from the point of view of marketing, he has proposed a three way classification:

- Consumer Products
- Institutional Products
- Government Procurement Products

ICRA (2009) is of the opinion that technical textiles could be classified as core technical and non-core technical textiles. Core technical textiles should comprise specially designed and engineered textiles that are used in high-tech products and processes and require advanced manufacturing technology.

[4] Technical Textiles Overview, http://www.technicaltextile.net/about-technical-textile.aspx, accessed on March 21,2011

Diversification into Technical Textiles

The industry and the government have recognized the potential of technical textiles as the growth engine. This is one of the very few sectors of the textile industry that is growing at a very fast pace, especially in the Asian region. However, in India, investments in this sector continue to remain low (Mital, Swaminathan, and Dogra 2005). Indian has a potential to garner up to a 10 per cent share of the global market in the area of technical textiles, provided substantial investments are made (Chugan, 2005, 2006).

Traditional textiles today are unable to cope with the cost of production for various reasons like fast technological obsolescence, high cost of modernization, power, etc. The present product mix of traditional textiles is not remunerative and, therefore, more and more ideas of value addition to textile products are gaining momentum. Technical textiles, in this context, are just perfect (Arup, Hira, and Gangopadhyay, 2007). Further, it has been well established that the consumption pattern of technical textiles is positively and directly related with the growth of per capita income. India's technical textiles sector will grow at rate of over 13 per cent. Since, the target of India's textile industry is set about $150 billion by 2015, technical textiles are set to reach $ 15 billion assuming that they account for at least 10 per cent of the textile industry's share.

Unlike the conventional textiles industry which is highly export oriented, technical textiles, in general, are import intensive as many of the products such as baby diapers, adult diapers, polypropylene spunbond fabrics for disposables, wipes, protective clothing, hoses, webbings for seat belts, etc. are imported. There is vast scope for manufacturing many of these products in the country. According to Ghosal (2010) India imports technical textiles worth Rs. 4000 crore predominantly from China, Malaysia, Hong Kong, Thailand, Germany, and Italy. ICRA (2009) states that core technical textiles are fairly import intensive with around 26 per cent of the domestic demand being met by imports. Some of the products like technical textile component of baby diapers, incontinence diapers, high altitude clothing, etc. are majorly imported with imports accounting for over 90 per cent of domestic consumption. In the case of technology intensive products such as incontinence diapers, high altitude clothing, artificial turf, etc. lack of manufacturing technology for these products and lack of availability of raw materials are the primary reasons for the high level of imports.

Sheshadri and Appachi (2010) have made estimates of consumption of nonwoven textiles with reference to the growth in GDP per capita for the period 2005 to 2050 (see Table I). India's nonwoven and technical textile industry will grow twice as fast as the growth of the current developed markets during its growth phase. Although India's industry base is

extremely small currently with an annual production of 60,000 tonnes, the next two decades are set to change the nature of the Indian technical textile industry and provide ample growth opportunities.

Table 1: Consumption of Nonwovens in India vs. GDP Per Capita

	GDP per capita (US$)*	Consumption of Nonwovens (kg)
2005	733	0.08
2010	1375	0.21
2015	2564	0.40
2020	4780	0.75
2025	8913	1.39
2030	16618	2.59
2035	30985	4.79
2040	57773	8.90
2045	107720	16.57
2050	200850	36.14

*Assuming an increase of 13.27 per cent in per capita every year per capita GDP

Source: World Bank

Not only in developed countries of the world such as US, European Union, Japan, and Australia, but also in many developing countries of Asia there is great potential for technical textiles. According to ICRA (2009) the technical textile industry has immense potential in developing countries. Asia is now emerging as a powerhouse of both production and end-use consumption of technical textiles. China, Japan, Korea, Taiwan, and other developing countries, particularly India, have great potential to make an impact in this industry in the coming decade. The demand for technical textiles will be boosted by the changing economic scenario in these countries. Considering its highly skilled and scientific/technical manpower and abundant availability of raw materials, India can emerge as a key player in the technical textiles industry.

Opportunities in Technical Textiles

The global market for technical textiles is presently about US$160 billion whereas India's share of consumption is about US$ 6 billion only.

India's GDP is set to grow in a range of 8 to 9 per cent. As the consumption of technical textiles is positively correlated with rising income, demand will increase considerably in the years to come. It is estimated (Sheshadri, 2008) that the Indian economy may exceed that of Europe and Japan by 2030 and of the United States by 2045, because of the increase in household income and the predicted growth in agriculture, manufacturing, and services sectors. The economy has been receiving boost because of a growing middle class and young and educated population. These are the vital factors for the growth of nonwoven and technical textiles in the country. India's per capita consumption of nonwovens and technical textiles would double that of US when the country reaches a per capita GDP of US$ 45, 028.

The scope for growth is tremendous as the current per capita consumption is quite low at 0.3 kg as against of 7-10 kg in the developed world. China's per capita consumption is 1.7 kg. Even among the overall textile industry, the share of technical textiles in India at 5 per cent does not compare well with the corresponding figure of 30 per cent as reported in the developed world (Kannan, 2008). Hence, there exists huge untapped potential.

There exists good scope for diversification in all the 12 categories of technical textiles. The data compiled by ICRA for domestic consumption and market size for the year 2007-8 and projections for 2012-13 are given in Table 2.

India's infrastructure development story is well known. This sector which was neglected after independence is now the cynosure of all eyes and huge investments have been planned. This is expected to result in the growth of geotech and buildtech, i.e. application of textiles in construction activities such as roads, airports, dams, railways, logistics/supply chain, sea erosion control, and solid waste management systems. Some of the products under the buildtech category are hoardings and signage, scaffolding nets, awnings and canopies, tarpaulins, architectural membranes, roofing materials, etc.

Indigenization of technical textiles (import substitution) will not only contain imports and achieve strategic self-sufficiency in sensitive and emerging areas of applications like defence, aerospace, waste management, etc. but also provide new avenues for value added exports. Promoting technical textiles as a tool of value addition for survival and revival of the Indian textile industry holds a high potential of success (Arup, Hira, and Gangopadhyay, 2007).

Table 2: Domestic Consumption and Market Size of Technical Textiles

	Domestic Consumption (Rs crore)		Market Size (Rs crore)	
	2007-08 (E)	2012-13 (P)	2007-08 (E)	2012-13 (P)
Agrotech	487	709	553	811
Meditech	1,514	2,263	1,669	2,490
Mobiltech	3,161	5,137	3,183	5,166
Packtech	14,067	25,913	14,630	26,753
Sportech	2,632	4,358	2,851	4,761
Buildtech	1,726	2,655	2,157	3,232
Clothtech	6,570	9,665	6,908	10,225
Hometech	4,791	8,420	5,025	8,748
Protech	1,259	2,021	1,302	2,075
Geotech	185	326	272	454
Oekotech*	68	160	68	160
Indutech	2,443	4,255	3,206	5,437
Total	38,835	65,722	41,756	70,151

Market size includes domestic consumption and exports.
*Oekotech size has been included as a part of Geotech.
Source: ICRA, 2009.

The defence segment is one of the largest consumers of protech clothing such as bullet-proof jackets and high altitude clothing. Further, protective textiles also include garment and accessories to protect people from dangerous or hazardous materials and process during their job as well as leisure activities. Sleeping systems, parachutes, weapon rolls, army tents, blankets, fabrics with waterproof and breathable membrane, mountain safety ropes, special jackets for fire/bullet protection, disposable garments and gears against harmful chemicals, gases and pesticides, etc. are included in this category.

Modernization of Indian agriculture is taking place with the use of advanced techniques of production and technologies with due attention to productivity, quality improvement, preservation of food stocks, packaging, etc. Thus, agrotech is another area which has great potential. It includes products such as shade-nets, mulchmats, crop-covers, anti-hail nets, bird protection nets, and fishing nets.

The Indian automobile industry is getting modernized and application of textiles in areas of shipbuilding, aerospace, rail vehicles, motorcycles bikes, airbags, tyres, etc. has gone up

substantially. Today, a car utilizes at least 15 kg. of textile materials. Thus mobiltech with special features such as sound absorbency, UV resistance, bursting resistance, degradation resistance, etc. have huge potential for both domestic and export markets.

The meditech segment includes products such as diapers, sanitary napkins, surgical dressings, artificial implants, and other miscellaneous products of hygiene, health, and personal care which are available in woven, nonwoven, and knitted forms. Further, with the government laying emphasis on promoting rural healthcare, this area offers tremendous scope.

With the growing awareness for environment protection, application of textiles in areas such as waste disposal and recycling is opening up new opportunities. Some of the products manufactured under this segment are soil seals, textile drainage systems, mobile containers, textile noise barrier systems, landfill textiles, erosion prevention systems, etc. Thus, eco-textiles categorized as oekotech offer steady and growing opportunities for diversification.

The revolutionary new textiles used in the sports and leisure industry are popularly known as sportech. Today's sports demand high performance equipment and apparel. The light weight and safety features of sportech have become important in their substitution for other materials. These high-functional and smart textiles are increasingly adding value to the sports and leisure industry by combining utilitarian functions with wearing comfort that leads to achieving high level of performance (BCH, 2011). This segment includes products such as sports composites, parachute fabrics, sports shoe components, swim wear, etc. Further, artificial turf, a substitute for natural grass, is being used extensively in stadiums and has special characteristics such as pile fibres which are non-harsh and soft to feel, backing clothing, shock absorbing foam, and supporting base. According to technical textiles.net[5] in India the market size for it has increased by 20 per cent to account for usage in landscaping. Demand for artificial turfs / synthetic tracks is likely to double in the next five years as a result of government focus on developing the sports infrastructure. The Indian artificial turf market size is expected to increase from 140 mt (Rs. 26 crore) in 2007-8 to around 280 mt (Rs.52 crore) by 2012-13.

Packtech is the largest segment amongst technical textiles with market size estimated to touch Rs. 26,753 crore in 2012-13. As the demand for packaging and packing material is directly related to production and overall economic growth vis-à-vis growing movement of goods for domestic and international trade, this segment has a very promising market.

[5] For more details, see "Artificial Turf the New Face of Sports Textiles," http://www.technicaltextile.net /articles/ajax/printarticle.asp?article_id=3236&page, accessed on March 25, 2011.

Further, with the growing concern of environmental protection the need for reusable packages and containers is opening new opportunities for textile products in this market. Packtech includes heavyweight, dense woven fabrics (used for bags, sacks, flexible intermediate bulk carriers, and wrappings for textile bales and carpets), lightweight nonwovens used as durable papers, tea bags, and other food and industrial product wrappings. The use of textile materials in consumer packaging is exhibited in products like FIBC big bags (Flexible Intermediate Bulk Containers) for powdered and granular materials; laundry bags and other bulk packaging products; sacks for storage etc.; twine and string for tying packages, etc (excludes agricultural applications); non-paper tea bags and coffee filters; food soaker pads; net packaging for storing, packing, transporting, retailing, foodstuffs, and toys; woven fibre strapping, lightweight mailbags; soft luggage, etc.

Industrialization and growing production of sophisticated products are throwing up new markets for technical textiles. Technical textile items known as indutech have diverse applications in almost all industries. Some of the popular applications include filtration (filters), conveying (conveyor belts), cleaning with special absorption capacities, polishing cloths, sealing cords for tunnel oven dollies, coated/laminated fabrics, heat resistant fibres/yarns, etc.

With growing per capita disposable income and the desire of the middle income group to live more lavishly, demand for sophisticated home textiles is growing in India and abroad. In fact this is one the largest textiles markets and comprises products made of both natural and synthetic fibres. Some of the products having great potential in this category include woven and knit wipes, such as cleaning wipes for domestic or commercial establishments; nonwoven wipes, viz. floor mops; tickings for filled items like cushions, duvets, pillows; skirt linings and other fabrics generally used for upholstery furniture and beddings; carpet and floor mats backings, dust cloths; sewing threads for different applications, etc.

Yet another important segment known as clothtech includes textile components and accessories used in manufacturing garments and other textile containing products. Items such as insulation materials, interlinings, sewing threads for various applications, labels, fasteners (zip and velcro), shoe laces, hooks and loop fasteners, etc. are in good demand.

There have been some recent developments in the area of technical textiles. Some of these are: breathable artificial fabrics, thin and light reflective fabrics, three dimensional (3-D) structured fabrics, metallic textiles, sports shoes, wearable computer jackets, warning vests, photonic textiles for innovative lighting solutions, wearable E-health systems, global

positioning system (GPS) jackets, etc. These are likely to be popular in near future and offer new opportunities for product diversification.

Industry Specific Actions

The industry should offer best services to its existing clients, and look for new clients abroad, particularly in India's major markets in the EU and USA.

It is high time for the industry to relook at the product and service mix. Technical textiles are one area to be looked into for product diversification for both local and international markets.

The industry should follow up on business leads that are close to translating into deals, and if required, re-negotiate terms. This may require more frequent visits abroad for export promotion and materialization of export orders. Therefore, focus is needed on marketing efforts by participating in international trade fairs, exhibitions, and export promotion tours.

It is necessary to reduce or eliminate all non-value adding activities and re-engineer core processes to achieve cost efficiencies.

The industry should initiate research on new innovative products and services with higher perceptional value. Technical textiles offer new opportunities for innovations. Developing relationships with research institutions dealing with textiles is recommended.

The industry should go for fresh investments for technological upgradation to get economies of scale and avail of the technology upgradation fund scheme (TUFS) introduced by the government of India.

Conclusion

In spite of having historical comparative advantage, the Indian textile industry has been passing through turbulent times. Although it was envisaged that with the phasing out of MFAs, the country could become globally competitive, the gains could not be sustained. Further, global recession has added to existing crisis and million of jobs have been lost in this sector. For the industry's survival and revival, diversification into technical textiles can provide a forward momentum towards sustainable recovery because this segment will be about US$ 15 billion in next two to three years and will account for about 10 per cent of

global value. This will not only reduce the import of core technical textiles items into the country but will also boost significantly exports.

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Towards a Comprehensive Framework for Service Recovery: An Empirical Investigation of Recovery Strategies

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All service companies promise flawless services to their customers. Yet, there are instances where service failures are inevitable owing to the intangible nature of services, simultaneous production and consumption, and human involvement (Gronroos, 1988; Goodwin and Ross, 1992; Boshoff and Leong, 1998). Service firms undertake various actions in order to rectify service failures (Gronroos, 1988; Maxham and Netemeyer, 2002). Literature on service recovery has focused on the role of perceived justice in the service recovery framework. When encountered with service failure, customers expect that the company will attempt to restore fairness to the existing relationship (Gilly, 1987; Sparks and McColl-Kennedy, 2001). Outcomes, procedures, and ways of communication together create a sense of justice (Writz and Mattila, 2004). Yet, a comprehensive service recovery programme needs to be formulated for effective and efficient resolution of service failures (Davidow, 2000; Boshoff, 2005). This study endeavours to elucidate the role of and relationships among various recovery strategies, justice dimensions, and recovery satisfaction.

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Theoretical Background

Service recovery refers to all the actions that an organization may take in order to rectify service failure (Andreassen, 2001). According to Zemke and Bell (1990), service recovery is an attempt for returning an aggrieved customer to a state of satisfaction after a service breakdown. Service recovery is a cornerstone of customer satisfaction strategy and service firms need to develop a comprehensive service recovery system (Tax and Brown, 1998). Smith, Bolton, and Wagner (1999) state that service recovery is a "bundle of resources" that an organization employs in response to a failure. However, from the customer's point of view service recovery is "resources gained".

Smith, Bolton, and Wagner (1999) discuss four dimensions of service recovery: compensation, apology, promptness, and recovery initiation. Davidow (2000) studied six organizational responses whereas Karatepe (2006) focused on seven service recovery strategies. Boshoff (1999) designed an instrument RECOVSTAT to identify problem areas that could hamper a successful long term relationship. Yet, prior research studies have not able to explain a substantial amount of variance in recovery satisfaction (Maxham and Netemeyer, 2002; Davidow, 2000; Karatepe, 2006; Kim, Kim, and Kim, 2009). Boshoff (2005) reports that there is scope for improvement in recovery satisfaction. The focus of this study is on the refinement of a comprehensive service recovery framework.

Recovery Strategies

On the basis of literature review, this study has considered eight recovery strategies: redress, apology, promptness, voice, facilitation, attentiveness, effort, and explanation.

Redress

Redress relates to the outcome which a complainant receives from the company as a response after a failure. "Complainants evaluate response based on the actual outcomes received relative to the problems encountered" (Davidow, 2000). Tax, Brown, and Chandrashekaran (1998) report repair or replacement (following refund) as the major categories of distributive justice. Other studies have reported redress as an important dimension associated with distributive justice (Bowen, Gilliland, and Folger, 1999; Karatepe, 2006).

Apology

Apology is the most cost-effective recovery strategy. A sincere apology can indicate an understanding of the dissatisfaction felt by the complainant without admitting guilt (Davidow, 2003). Apologies are instrumental in reducing punishment and increasing liking (Folkes, 1984). Apologies contribute to outcome fairness for being inconvenienced (Tax and Brown, 1998). Tax, Brown, and Chandrashekharan (1998) report that complainants needed apology as compensation for being treated unfairly. For Boshoff (1999), apologies are a firm's response to restore psychological equity.

Facilitation

Facilitation means the policies, procedures, and tools that a firm uses to endorse customer complaints (Davidow, 2003). It represents clear guidelines and simplified procedures (Karatepe, 2006), accessibility and approachability for customers to lodge complaints (Boshoff, 1999), and accessible convenience (Bowen, Gilliland, and Folger, 1999). It has a significant positive effect on customer's perception of procedural justice (Karatepe, 2006).

Timeliness

Timeliness in service recovery implies a fast response, i.e. time taken to respond and resolve a complaint (Davidow, 2003). Fast response is fundamental to service recovery (Johnston and Fern, 1999). Customers dislike delays and favour a quick response (process and decision) recovery (Tax, Brown, and Chandrashekharan, 1998). Time taken to deal with complaint resolution is related to procedural fairness (Smith, Bolton, and Wagner, 1999; Blodgett, Hill, and Tax, 1997).

Recovery Voice

Recovery voice refers to the provision of an opportunity to express customers' views or provide input to decisions (Tax, Brown, and Chandrashekharan, 1998); Sparks and McColl Kennedy, 2001; Au, Hui and Leung, 2001; Karande, Magnini and Tam, 2007). It is a participatory presentation of information (Goodwin and Ross, 1992). Karande, Magnini, and Tam (2007) operationalized voice as customers' input in resolving the situation - service provider asks the customer what the firm can do to rectify the problem. This operationalization is similar to what Tax (1993) discusses as decision control. Providing process and decision control to customers enhances their feelings of procedural fairness (Tax, Brown, and Chandrashekharan, 1998).

Explanation

Explanation refers to whether the service provider explains to the customer why the problem occurred in a clear and concise manner. Offering explanations is an effort to increase customer understanding of the problem or to diffuse customer anger (Sparks and Callan, 1996). It is a simple and cost-effective tool and eliminates a worst-case reading of the service provider's motives and intentions (Mattila, 2006). The explanation helps the customer to understand the service failure and affects their feelings of interpersonal fairness (Zemke and Bell, 1990; Tax, Brown, and Chandrashekharan, 1998; Mattila, 2006).

Attentiveness

Davidow (2003) defines attentiveness as the care and attention that a customer gets either from the organization or its representatives. Attentiveness includes provision of caring, individual attention (Blodgett, Wakefield, and Barnes, 1997), well mannered, courteous behaviour (Goodwin and Ross, 1992), and knowledgeable and considerate behaviour (Tax, Brown, and Chandrashekharan, 1998). A polite, courteous, empathetic, and considerate behaviour from the service provider affects the fairness of interactional treatment (Bowen, Gilliland, and Folger, 1999; Tax, Brown, and Chandrashekharan, 1998).

Effort

Effort is defined as the energy put into a behaviour or series of behaviours (Mohr, 1991). Effort refers to the force, energy, or activity by which work is accomplished (Brown and Peterson, 1994). According to Tax, Brown, and Chandrashekharan, (1998) frontline employees take it upon themselves to investigate the complaint and promptly resolve the problem. In order to receive a fair interpersonal treatment, customers expect frontline employees to put a great deal of effort into resolving their complaints (Karatepe, 2006).

Perceived Justice

There has been a growing stream of research on the application of justice theories to service encounters and the customer complaint process (Goodwin and Ross, 1992; Conlon and Murray, 1996; Tax, Brown, and Chandrashekharan, 1998). Justice is an evaluative judgment about the appropriateness of a person's behaviour by others (Furby, 1986). Justice perceptions are very critical in service recovery. Customer's responses to unfair or unjust service experiences are generally stronger than experiences perceived as just or fair (Maxham and Netemeyer, 2002). Perceived justice represents a cognitive appraisal dimension and an

effective way of conceptualizing consumers' responses to a recovery experience (Schoefer and Ennew, 2005).

Service firm's response to a service failure is evaluated on three dimensions: distributive, procedural, and interactional (Goodwin and Ross, 1992; Tax, Brown, and Chandrashekharan, 1998; Smith, Bolton, and Wagner, 1999; Bove and Roberston, 2005). Distributive justice refers to the perceived fairness of the outcome (Goodwin and Ross, 1992). An annoyed customer would expect a "fair fix" for the problem, while a consumer who feels "victimised" as a result of service failure may expect some value-added atonement (Bell and Ridge, 1992). Writz and Mattila (2004) opine that this dimension of perceived justice is driven by compensation. However, Tax, Brown, and Chandrashekharan, (1998) found compensation, reparation, and apology as principal components of distributive justice. Zemke and Bell (1990) and Boshoff (1997) have discussed three forms of atonement including apology, apology plus compensation, and apology plus compensation plus additional tangible outcome (free ticket, gift, coupon, etc). In a service recovery attempt, compensating a customer will lead to higher perceptions of distributive justice (redress fairness), which in turn will lead to higher consumer satisfaction (Hocutt, Bowers, and Donavan, 2006).

Blodgett, Wakefiled, and Barnes (1997) have defined perceived justice as the perceived fairness of policies, procedures, and criteria used by decision makers in arriving at the outcome of a dispute or negotiation. According to Goodwin and Ross (1992), "procedural fairness represents a standard that can be applied to processes used to settle conflicts". Procedural justice encourages productive relationship between the disputants (Tax, Brown, and Chandrashekharan, 1998). Procedural fairness considers the speed of resolving a conflict (Blodgett, Wakefield, and Barnes, 1997; Tax, Brown, and Chandrashekharan, 1998; Smith et al., 1999), easy access (Huang and Chang, 2008), facilitation (Davidow, 2000; Davidow, 2003), provision of control and flexibility (Tax et al., 1998), and voice (Goodwin and Ross, 1992). Karande, Magnini, and Tam (2007) suggest that granting voice (process and decision control) to customers results in higher perception of procedural justice and satisfaction.

Interactional justice refers to the extent to which customers feel they have been treated fairly by the service provider. Interactional justice is the fair interpersonal treatment which a customer receives during the course of action (Tax, Brown, and Chandrashekharan, 1998). The service provider's ability to communicate effectively with the customer is a vital component in customer evaluation (Sparks and Callan, 1996). Elements of interactional justice include explanation, honesty, politeness, effort, and empathy (Tax, Brown, and Chandrashekharan, 1998; Maxham and Netemeyer, 2002). A fair settlement implies a refund

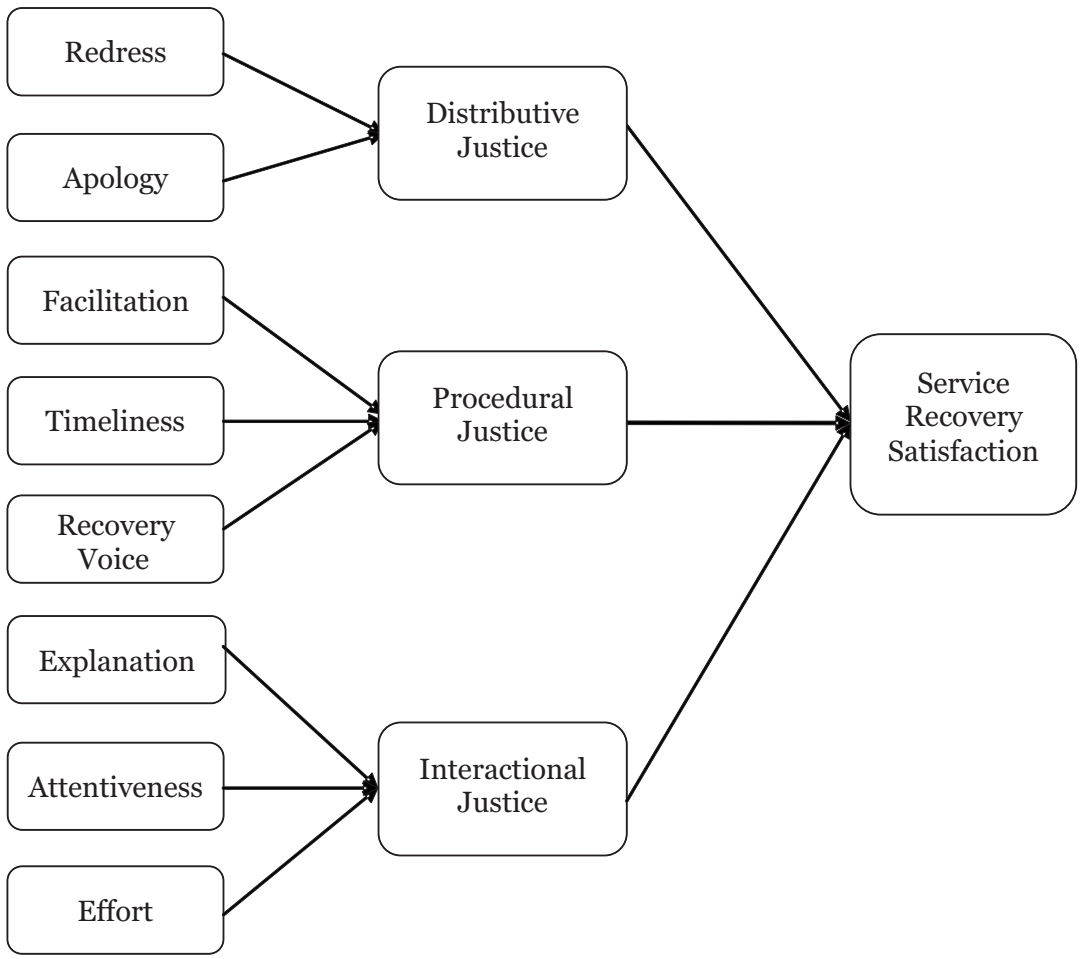
or exchange, and treating customers with courtesy and respect (Blodgett, Wakefields, and Barnes, 1995).

Service Recovery Satisfaction

Satisfaction is a fulfillment process (Oliver, 1997). Satisfaction with service recovery is a function of initial disconfirmation and recovery disconfirmation (Oliver, 1997; Boshoff, 1997; McCollough, Berry, and Yadav, 2000). Service recovery satisfaction is the degree to which a customer is satisfied with a service firm's transaction-specific service recovery efforts following a service failure (Boshoff, 1999). According to Kim, Kim, and Kim, (2009), "customer satisfaction with service recovery means a positive status of emotion perceived by customers in the process and result of recovering the failed service". Customers constantly revise their satisfaction and repatronage intentions considering prior assessments and new information (Smith and Bolton, 1998). Satisfactory experience positively affects future intentions (Zeithamal, Berry, and Parasuraman, 1996; Johnston and Mehra, 2002).

In recent works on service recovery, elements of perceived justice are hypothesized to act as direct cognitive antecedents to satisfaction (Tax, Brown, and Chandrashekharan, 1998; Smith and Bolton, 1998; Maxham and Netemeyer, 2002; Schoefer and Ennew, 2005). However, a few studies have explained the relationship between perceived justice, recovery satisfaction, and behavioural outcomes (Kim et al., 2009). The conceptual framework of this study is presented in Figure 1.

Figure1: Conceptual Framework



Methodology

The purpose of this study is to measure the role of different recovery strategies, perceived justice, and service recovery satisfaction. A cross-sectional approach has been used for this purpose. Data were collected via a self-reported questionnaire from post-graduate students of a management institute in Pune, Maharashtra. A student sample was found appropriate for this research because students are a major segment of users of services such as telecommunication, restaurants, banks, etc. Respondents were asked to report on their most recent dissatisfying experience (occurred within last six months) regarding a service encounter.

In all 480 questionnaires were distributed and, after deletion of incomplete and inconsistent responses, 353 questionnaires having a response rate of 73.54 per cent were used for the study.

Measurement Instruments

Established scales for all the variables were taken for the study. The proposed model consists of eight recovery strategies, three justice dimensions, and service recovery satisfaction. A few of the items were negatively worded in order to minimize halo effects and other response biases. Recovery strategies namely redress, apology, promptness, facilitation, attentiveness, and explanation were measured by taking three items each from Davidow (2000). Recovery voice was measured by using four items from Tax (1993). Items for voice were selected to measure process and decision control provided to the customer. Effort was measured by using four items from Tax (1993). Distributive justice was measured by adapting four items from Maxham and Netemeyer (2002). For measuring procedural justice, two items were taken from Karande, Magnini, and Tam (2007), and three items were adapted from Maxham and Netemeyer (2002). To measure interactional justice, four items were taken from Smith, Bolton, and Walgner (1999). Recovery satisfaction was measured with three items from Maxham and Netemeyer (2002). All items were measured on a seven point Likert scale ranging from "1=strongly disagree" to "7=strongly agree".

Results

Of 353 respondents, 67.1 per cent were males and 32.9 per cent were females. Services spanned across industries such as telecommunication, hospitality, banks, travel, and Internet. Majority of complaints were for telecommunication services representing 41 per cent of the sample, followed by hospitality services representing 22 per cent of the sample. Failures were reported for restaurants and hotels under hospitality services. Failures reported for auto repair services represented 15 per cent of the sample. Complaints for banking services represented 11 per cent of the sample, followed by Internet services (6 per cent), travel (3 per cent), and medical services (1 per cent). Retail, and packers and movers represented less than 1 per cent.

Measurement Model

Confirmatory factor analysis (CFA) was used to confirm that the indicators sorted themselves into factors corresponding to how the researcher linked the indicators to the latent variables. CFA statistics tells us how well our specification of the factors matches reality (the actual data). Thus, CFA confirms or rejects preconceived theory (Hair et al., 2008).

Tables 1 and 2 show the results of the confirmatory factor analysis of twelve factors (factor and construct terms are used interchangeably), and correlations and squared correlations among the latent constructs. The statistics of chi square: df (normed chi square) ratio of 3:1 or less, higher values for GFI and AGFI, values between .05 and .08 for RMSEA with values lying in between the upper and lower bound at 90 per cent confidence interval, and NNFI and CFI values of .90 or more are associated with better fitting model (Browne and Cudeck, 1993; Hair et al., 2008). The results of the confirmatory factor analysis demonstrates a reasonable fit on a number of fit indexes: Chi square = 1526.71, df = 753, Normed Chi square = 2.02, CFI = 0.98, GFI = 0.83, AGFI = 0.80, NNFI = 0.97 and RMSEA = 0.052 (90 per cent confidence interval for RMSEA = 0.048; 0.056).

As shown in Table 1, the reliability estimates for all the variables exceed 0.7 and the variance-extracted estimates exceed 0.7, which support the convergent validity of the measurement model. All variance-extracted estimates (Table 1) are greater than the corresponding inter-construct squared correlation estimates (Table 2). Therefore, the discriminant validity of the measurement model is supported.

Table 1: Scale items, Reliabilities, and Confirmatory Factor Analysis Results

Scale items	Standardized loadings	Average variance	α
Redress (RED)			
After receiving the company response, I am in the same shape or better than I was before the complaint.	0.73		
The company response left me in a similar or improved position to where I was before the problem.	0.71	0.71	0.75
The outcome that I received from the company returned me to a situation equal to or greater than before the complaint	0.69		
Apology (APO)			
I received a sincere "I'm sorry" from the company.	0.71		
The company gave me a genuine apology.	0.88	0.74	0.79
I did not receive any form of apology from the company.	0.64		

Facilitation (FAC)			
It was easy to determine where to lodge my complaint.	0.81		
Company policies made it clear how to complain.	0.91	0.87	0.90
It was difficult to find out where to complain in this company.	0.90		
Timeliness (TIM)			
It took longer than necessary to react to my complaint.	0.70		
They were very slow in responding to the problem.	0.88	0.79	0.84
The complaint was not taken care of as quickly as it could have been.	0.81		
Recovery Voice (VOC)			
The final decision was jointly shared by me and the firm.	0.57		
I got a chance to tell them the details of my problem.			
I was not given an opportunity to tell my side of the story	0.73	0.68	0.78
They listened to my entire complain	0.60		
	0.83		
Explanation (EXP)			
The company did not give me any explanation at all.	0.66		
I did not believe the company explanation of why the problem occurred.	0.84	0.78	0.83
The company explanation of the problem was not very convincing.	0.86		

Attentiveness (ATT)			
The representative treated me with respect.	0.84	0.82	0.86
The representative paid attention to my problem.	0.85		
The representative was quite pleasant to deal with	0.77		
Effort (EFF)			
They tried hard to resolve the problem.	0.84	0.71	0.81
They put little effort into solving the complaint problem.	0.61		
They put a lot of positive energy into handling my problem.	0.84		
They were not very persistent in trying to solve my problem.	0.55		
Distributive Justice (DISJUST)			
Although this event caused me problems, service provider's effort to fix it resulted in a very positive outcome for me.	0.77	0.81	0.88
The final outcome I received from the service provider was fair.	0.88		
Given the inconvenience caused by the problem, the outcome I received from service provider was fair.	0.88		
The outcome that I received in response to the problem was more than fair.	0.73		
Procedural Justice (PROJUST)			
Despite the hassle caused by the problem, service provider responded fairly and quickly.	0.60	0.70	0.83
I feel service provider responded in an appropriate time to the problem.	0.67		
I believe service provider has fair policies and practices to handle problems.	0.68		
The procedures used gave me more control over how well the service problem or failure was solved.	0.81		
I was able to express my views and feelings in this situation.	0.75		

Interactional Justice (INTJUST)			
The employees were really concerned about my problem.	0.79		
The employees did not put the proper effort into resolving my problem.	0.49	0.66	0.76
The employees' communications with me were appropriate.	0.67		
The employees did not give me the courtesy I was due	0.70		
Service Recovery Satisfaction (RECSAT)			
In my opinion, service provider provided a satisfactory solution to my problem on this particular event.	0.72		
Regarding this particular problem, I am satisfied with the service provider.	0.86	0.82	0.86
Regarding this particular problem, I am satisfied with the service	0.90		

Table 2: Correlations and Squared Correlations among the Latent Constructs

	Red	Apo	Fac	Tim	Voc	Exp	Att	Eff	DJ	PJ	IJ	RS
Red	1	0.09	0.20	0.08	0.06	0.05	0.12	0.12	0.20	0.18	0.20	0.12
Apo	0.30	1	0.25	0.14	0.04	0.19	0.18	0.28	0.30	0.32	0.33	0.26
Fac	0.45	0.50	1	0.18	0.10	0.17	0.26	0.34	0.47	0.38	0.47	0.49
Tim	0.29	0.38	0.43	1	0.02	0.28	0.10	0.30	0.27	0.26	0.25	0.31
Voc	0.26	0.22	0.32	0.17	1	0.01	0.44	0.16	0.12	0.18	0.23	0.11
Exp	0.23	0.44	0.42	0.53	0.14	1	0.03	0.25	0.17	0.19	0.20	0.16
Att	0.35	0.43	0.51	0.32	0.67	0.19	1	0.34	0.21	0.28	0.44	0.26
Eff	0.35	0.53	0.59	0.55	0.41	0.50	0.59	1	0.53	0.54	0.53	0.49
DJ	0.45	0.55	0.69	0.52	0.36	0.42	0.46	0.73	1	0.64	0.47	0.70
PJ	0.43	0.57	0.62	0.51	0.43	0.44	0.53	0.74	0.80	1	0.72	0.54
IJ	0.45	0.58	0.69	0.50	0.48	0.45	0.67	0.73	0.69	0.85	1	0.53
RS	0.36	0.51	0.70	0.56	0.34	0.40	0.51	0.70	0.84	0.74	0.73	1
Mean	**3.9**	**4.1**	**4.3**	**4.7**	**3.1**	**4.4**	**3.2**	**4.2**	**4.3**	**4.1**	**4.0**	**4.4**
Std. Dev.	**1.3**	**1.8**	**1.6**	**1.6**	**1.3**	**1.5**	**1.5**	**1.3**	**1.4**	**1.2**	**1.2**	**1.7**

Note. Red = redress, Apo = apology, Fac = facilitation, Tim = timeliness, Voc = recovery voice, Exp = explanation, Att = attentiveness, Eff = effort, DJ = distributive justice, PJ = procedural justice, IJ = interactional justice, RS = recovery satisfaction. Values above the diagonal are squared correlations. Values below the diagonal are correlation estimates. Values in the end row are mean and standard deviation estimates. All values are significant at $p<.05$

Structural Model

Structural equation modelling (SEM) is a series of statistical methods that allows complex relationships between one or more independent variables and one or more dependent variables. SEM can tell whether the proposed model is adequate or not. SEM also depicts the amount of variance in dependent variables (DVs) accounted for by independent variables (IVs). Thus, for this study structural equation modelling with latent variables was used to evaluate the fit of the proposed model. Models were estimated with LISREL 8.54.

In the base model the relationships between the eight recover strategies and justice dimensions, justice dimensions, and service recovery satisfaction have been estimated. The fit indexes for the base structural model [Chi square = 1852.83, df = 780, Normed Chi square = 2.37, CFI = 0.97, GFI = 0.81, AGFI = 0.78, NNFI = 0.97 and RMSEA = 0.60 (90 per cent confidence interval for RMSEA = 0.057; 0.064)] shows a good model fit. Table 3 shows the hypothesized relationships for the base structural model.

Redress, apology, and distributive justice: The path estimates of redress and apology to distributive justice are significant and positive. Redress and apology collectively explain 55 per cent variance in distributive justice.

Facilitation, timeliness, recovery voice, and procedural justice: The results showed a significant and positive association between facilitation, timeliness, recovery voice, and procedural justice. The three variables account for 50 per cent variance in procedural justice.

Explanation, attentiveness, effort and interactional justice : The path analysis shows that explanation, attentiveness, and effort are significantly and positively related to interactional justice. Explanation, attentiveness, and effort together explain 70 per cent variance in interactional justice.

Distributive justice, procedural justice, interactional justice, and service recovery satisfaction: The results show that distributive justice, procedural justice, and interactional justice are positively associated with service recovery satisfaction and collectively explain 73 per cent variance in service recovery satisfaction

Table 3 : Base Structural Model Results

Hypothesized relationships	SPE (ML)	*t*-values	R square
Distributive Justice			
Redress → DJ	0.38	6.70	0.55
Apology → DJ	0.53	9.11	
Procedural Justice			
Facilitation → PJ	0.41	5.90	
Timeliness → PJ	0.33	4.82	0.57
Recovery Voice → PJ	0.26	4.77	
Interactional Justice			
Explanation → IJ	0.16	2.81	
Attentiveness → IJ	0.39	6.11	0.70
Effort → IJ	0.46	6.09	
Service Recovery Satisfaction			
DJ → SRS	0.63	9.98	
PJ → SRS	0.10*	1.92	0.73
IJ → SRS	0.30	5.31	
Model fit statistics			
Chi Square	1852.83		
df	780		
Normed Chi Square	2.37		
CFI	0.97		
RMSEA	0.060		
90 Percent Confidence Interval for RMSEA	0.057; 0.064		
NNFI	0.97		
GFI	0.81		
AGFI	0.78		

Note: DJ = Distributive Justice, PJ = Procedural Justice, IJ = Interactional Justice, SRS = Service Recovery Satisfaction, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error Approximation, NNFI = Non-normed Fit Index, GFI = Goodness Fit Index, AGFI = Adjusted Goodness Fit Index, SPE (ML) = Standardized parameter estimates (Maximum Likelihood). All values are significant at $p<.01$, $*p<.05$

Discussion

This paper has studied the relationship between various recovery strategies, justice dimensions, and service recovery satisfaction. The path estimates of the base structural model show that apology is a more important component in restoration of distributive justice. This finding is inconsistent with those of Smith, Bolton, and Wagner (1999), Mattila and Cranage (2005) and Karatepe (2006). Service firms offering sincere and genuine apologies can restore customers' psychological equity in a service recovery encounter. The path estimates suggest that the effect of redress is comparatively lower to apology on distributive justice. In order to reinstate outcome fairness feelings, it is not only essential to compensate customer for a service failure but to apologize as well for the inconvenience.

For results of procedural justice, the path estimates indicate the stronger effect of facilitation on procedural justice compared to timeliness and recovery voice. Assisting customers or making easier for customers to complain against any mistake or failure seems to enhance the perception of procedural fairness. The results also advocate the stronger effect of recovery voice in restoring procedural fairness. This finding is supported by the previous research of Tax, Brown, and Chandrashekharan (1998) and Karande, Magnini, and Tam (2007). The significant and positive effect of recovery voice on procedural justice provides an extension to the research of Karatepe (2006). Consonant with the findings of Blodgett, Wakefield, and Barnes (1997) and Smith, Bolton, and Wagner (1999), this study has found timeliness as a constituent of procedural justice.

Explanation, attentiveness, and effort have been found to be positively related to complainants' perception of interactional justice (Tax, Brown, and Chandrashekharan, 1998; Bowen, Gilliland, and Folger, 1999; Karatepe, 2006). Of the three elements of interactional justice, effort seems to exert the strongest effect compared to attentiveness and explanation. The amount of energy put into by frontline employees for recovering from failures plays a key role in shaping the complainant's interactional fairness perception. Attentiveness has the second stronger effect. Explanation is the least important dimension.

The effects of distributive, procedural, and interactional justice on service recovery satisfaction are significant and positive. The variance explained by distributive, procedural, and interactional justice shows a substantial improvement over the prior studies. The findings of Maxham and Netemeyer (2002) explained 36 per cent to 44 per cent variance in service recovery satisfaction, while Karatepe (2006) reported 62 per cent, Kim, Kim, and Kim (2009) 43 per cent to 47 per cent. Thus, the inclusion of recovery voice has made substantial improvement in the service recovery framework.

Managerial Implications

The paper provides some insights to an effective and efficient recovery framework. The significance of apology is noticeable. Apology might be an effective recovery strategy for services such as telecommunications, Internet and broadband, entertainment, retailing, etc. Recovery voice occupies a significant place on perception of procedural fairness. When a customer provides inputs to resolve a service failure she may perceive more fairness on account of outcomes and interactions. Information and proper communication about failure also influence customer fairness perception. In addition, this study suggests that service firms should train their personnel to be empathetic and courteous. Managers interested to build long term relationships with customers should provide a fair treatment to their customers. The results suggest that fairness in the context of service recovery is vital. Managers should design recovery frameworks considering the fairness of outcomes, procedures, and interactions.

The study shows that satisfaction with service recovery is a function of various recovery options. However, the data we have collected may not measure specific differences in recovery approaches of service industries of different nature. Service industries differ from high-contact to low-contact services and the frequency of service encounters also differs. Thus, a future study should provide a better understanding of service industry specific differences in recovery options.

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Consumer Behaviour in Retailing: Shopping Malls in Vadodara

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The retail sector has witnessed immense growth in the last few years. Key factors responsible for this boom have been the change in consumer profile and demographics, increase in the number of international brands available in the Indian market, economic policies of the government, increasing urbanization, credit availability, improvement in infrastructure, and increasing investments in technology and real estate in building a world class shopping environment for consumers.

The Associated Chambers of Commerce and Industry of India (ASSOCHAM) predicts the overall retail market to grow by 36 per cent. The organized sector is expected to register growth amounting to Rs 150 billion by 2008. The total size of the market is also expected to increase to Rs 14,790 billion from the current Rs 5,880 billion.

Retail is amongst the fastest growing sectors in the country and India ranks first, ahead of Russia, in terms of emerging market potential in retail. The reasons for this are:

- rising incomes and improvements in infrastructure that have helped in enlarging consumer markets and accelerating the convergence of consumer tastes

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- liberalization of the Indian economy
- increase in spending
- advent of dual income families
- shift in consumer demand to foreign brands
- consumer preference for shopping in new environs
- the Internet revolution in making the Indian consumer more accessible to the growing influences of domestic and foreign retail chains
- rises in India's population under the age of 20; this young population, which is technology-savvy, has the highest propensity to spend
- availability of quality real estate and mall management practices
- foreign companies' attraction to India's the billion-plus population (Namratha and Hasan, 2006).

Objectives

The objectives of this paper are as follows:

- to study and analyse the reasons for preference of shopping malls in Vadodara
- to study various attributes of shopping malls in Vadodara that consumers prefer
- to study consumer behaviour for shopping in malls in terms of their perception, motivation, and other socio-economic factors
- to study levels of consumer satisfaction in the retail sector with special reference to shopping malls in Vadodara.

Vadodara has many malls. We selected Spencer Mall (Type 1), Central Mall (Type 2), and More Megastore (Type 3) malls for our study. Type 1 mall format provides a wide range of quality products to discerning young customers. Type 2 mall's vision is to deliver everything, everywhere, everytime to every Indian customer in the most profitable manner. Type 3 mall provides customers a wide choice of products under its own labels.

We chose 250 respondents who did shopping in these malls. One hundred respondents shopped at Type 1 mall, 100 shopped at Type 2 mall, and 50 shopped at Type 3 mall.

Methodology

Primary data were collected through structured questionnaires. To support primary data, we also collected secondary data from journals, books, and websites. Respondents were contacted personally to collect feedback (see Table 1 for respondent profile).

Hypotheses

Following hypotheses will be tested using the data:

H_1 Means of overall perception regarding different reasons across the malls are equal.

H_2 Means of different factors across the malls are equal.

H_3 For each attribute mean scores across the malls are equal.

H_4 Overall perception regarding various attributes across the homogenous group based on perception, motivation, sales person service and behaviour, and problems about mall culture is same.

Table 1: Distribution of Sample Respondents

Demographic		*Type 1 mall group*		*Type 2 mall group*		*Type 3 mall group*	
		N	*%*	*N*	*%*	*N*	*%*
Gender	Male	69	69	56	56	28	55
	Female	31	31	44	44	22	44
Age (years)	<26	28	28	29	29	20	40
	26-35	31	31	34	34	14	28
	36-45	19	19	20	20	9	18
	>45	22	22	17	17	7	14
Education	Up to primary	0	0	0	0	1	2
	Up to S.S.C.	3	3	0	0	5	10
	Up to H.S.C.	15	15	14	14	12	24
	Graduate	57	57	41	41	23	46
	Post-graduate	19	19	28	28	7	14
	Postgraduate and above	6	6	17	17	2	4
Occupation	Student	22	22	31	31	14	28
	Service	36	36	12	12	20	40
	Business	24	24	25	25	12	24
	Professional	18	18	32	32	4	8
Marital status	Single	35	35	36	36	25	50
	Married	65	65	64	64	25	50
Income (Rs)	Up to 5000	1	1	0	0	3	6
	5001 to 10000	9	9	2	2	3	6
	10001 to 15000	9	9	0	0	16	32
	15001 to 20000	24	24	10	10	8	16
	20001 to 25000	31	31	35	35	6	12
	>25001	26	26	53	53	14	28
Family size	1-4 members	63	63	58	58	32	64
	>4 members	37	37	42	42	18	36
Family types	Joint	38	38	42	42	21	42
	Nuclear	62	62	58	58	29	58

Reasons for Shopping at Malls

Primary data were collected from respondents to know the reasons for visiting a shopping mall. For this purpose, respondents were provided statements highlighting reasons for visiting shopping mall (see Annex Table 1). They were asked to provide their agreement or disagreement for each statement on a five- point scale with 1 as Strongly Disagree and 5 as Strongly Agree. This five-point Likert scale was converted into three categories: 'Strongly Disagree', 'Neutral' and 'Agree'. Agree was given numerical value 1, Neutral was given numerical value 2, and Disagree was given numerical value 3. Cronbach's alpha was 0.64.

From the data collected, following observations were:

In Type 1 malls store layout was easier for consumers to find what they needed. They preferred these malls because they had clean, attractive, and convenient public areas. However, consumer loyalty was low. Responses regarding customer grievance redresses and repeat buying at these malls were also low.

For Type 2 malls, respondents preferred them because they had a good selection of products. They also visited there for providing a good value for money. Shopping was also comfortable. In the case of these malls, many respondents were not loyals. There was also lack of trust.

In the case of Type 3 malls, decoration and audience were appealing. Store layout at these malls made it easy for consumers to locate what they wanted and easy to move around comfortably. Over half of the respondents were not loyal patrons of Type 3 malls. Respondents were neutral on the question of service.

Overall, respondents select shopping destinations based on three reasons:

Store layout made it easy for consumers to locate what they wanted. It also provide ease in movement. Good selection of products was another important reason.

About one-third of respondents were not loyal patrons.

About half of them gave neutral response to service provided by shopping malls.

Factors Motivating Consumers

For data, see Annex Table 2.

- In case of Type 1 malls, 90 per cent respondents preferred them owing to the attribute of parking facility; 81 per cent respondents preferred them because service was effective.

- For Type 2 malls, 97 per cent respondents were satisfied with parking facility. Another 91 per cent respondents reported overall satisfaction, 91 per cent respondents were satisfied with convenient approach and 25 per cent respondents were not satisfied with store ambience. 30 per cent respondents were not satisfied with sales person service.

- For Type 3 malls, 98 per cent respondents were satisfied with parking facility and 98 per cent respondents reported with overall satisfaction.

Overall, it can be said that respondents select shopping malls based on following factors: parking facility and overall satisfaction level.

We also found that respondents were not satisfied with service. They were also not satisfied with the parking facility and transparency in billing.

Table 1: Mean Comparison of Overall Perception using One Way Analysis of Variance

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	12.09	2.71953	18.539	0.000
Type 2 Mall group	14.19	2.51739		
Type 3 Mall group	14.06	2.61401		

HO: Mean of overall perception regarding different reasons across malls are equal.

Table 1 shows comparison for three types of malls groups using one-way analysis of variance. The F-value is 18.539 which is highly significant (P=0.00). Applying Scheffe Range test, we found that there was significant difference between Type 1 malls and Type 3 malls (P= 0.00). Similarly, there was significant difference between Type 1 malls and Mall Type 2 malls (P=0.00). However, no significant difference was noticed between Type 2 malls and Type 3 malls. (P=0.960). Hence, our hypothesis is rejected.

Table 2: Comparison of Different Factors with Respect to Mall Type

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	6.6700	1.82605	16.959	0.000
Type 2 Mall group	7.4400	1.48610		
Type 3 Mall group	8.2200	1.13011		

HO: Mean of overall different factors across the mall groups are equal.

Table 2 shows comparison of different factors for three types of malls using one way analysis. The F-value of 16.959 is highly significant (*P*=0.00). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.003). Similarly, there was significant difference between Type 1 mall and Type 3 mall (*P*=0.00). There is also significant difference between Type 2 mall and Type 3 mall (*P*=0.18). Hence, our hypothesis is rejected.

Table 3: Comparison of Variety

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	10.64	3.00	53.942	0.000
Type 2 Mall group	13.91	1.583		
Type 3 Mall group	11.36	1.816		

HO: Mean credits of attribute variety across all the mall groups are alike.

Table 3 shows comparison of variety for three types of malls. The *F* value of 53.942 is highly significant (*P*=0.00). Applying Scheffe Range test, we find that there is significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 2 mall and Type 3 mall (*P*=0.00). However, no significant difference exists there between Type 1 mall and Type 3 mall (*P*=0.196). Hence, our hypothesis is rejected.

Table 4: Comparison of One Stop Shopping

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	11.37	2.922	14.118	0.000
Type 2 Mall group	13.16	1.581		
Type 3 Mall group	12.74	2.831		

HO: Mean credits of attribute one stop shopping across all the mall groups are alike.

Table 4 shows comparison of one stop shopping for three types of malls. The *F*-value of 14.118 is highly significant (*P*=0.00). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 1 mall and Type 3 mall (*P*=0.06). However, no significant difference exists between Type 2 mall and Type 3 mall (*P*=0.613). Hence, our hypothesis is rejected.

Table 5: Comparison of Quality

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	10.94	2.781	24.507	0.000
Type 2 Mall group	12.91	1.173		
Type 3 Mall group	11.04	2.185		

HO: Mean credits of attribute quality across all the mall groups are alike.

Table 5 shows that comparison of quality for three types of malls using one way analysis of variance. The F-value of 24.507 is highly significant (*P*=0.00). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 2 mall and Type 3 mall (*P*=0.00). However, there was no significant difference between Type 1 mall and Type 3 mall (*P*=0.964). Hence, our hypothesis is rejected.

Table 6: Comparison of Ease of Shopping

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	11.51	3.037	20.502	0.000
Type 2 Mall group	13.59	1.173		
Type 3 Mall group	12.50	2.279		

HO: Mean credits of attribute ease of shopping across all the mall groups are alike.

Table 6 shows comparison for ease of shopping at three types of malls groups using one way analysis of variance. The F-value of 20.502 is highly significant (*P*=0.00). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 1 mall and Type 3 mall (*P*=0.047). There is also significant difference between Type 2 mall and Type 3 mall (*P*=0.025). Hence, our hypothesis is rejected.

Table 7: Comparison of Promotions and Offers

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	9.79	2.772	25.189	0.000
Type 2 Mall group	12.08	1.082		
Type 3 Mall group	10.92	2.039		

HO: Mean credits of attribute promotion and offers across all the mall groups are alike.

Table 7 shows provides comparison for promotion and offers at three types of malls using one way analysis of variance. The F-value of 25.189 is highly significant (*P*=0.00). Applying Scheffe Range we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 1 mall and Type 3 mall (*P*=0.18). There is also significant difference between Type 2 mall and Type 3 mall (*P*=0.14). Hence, our hypothesis is rejected.

Table 8: Comparison of Entertainment and Gaming Zone

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	4.61	4.497	48.885	0.000
Type 2 Mall group	9.30	2.250		
Type 3 Mall group	9.32	4.143		

HO: Mean credits of attribute entertainment and gaming zone across all the mall groups are alike.

Table 8 provides comparison for entertainment and gaming zone in three types of malls using one way analysis of variance. The F-value of 48.885 is highly significant (*P*=0.00). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 3 mall (*P*= 0.00). There was significant difference between Type 1 mall and Type 2 mall (*P*=0.00). However, no significant difference was found between Type 2 mall and Type 3 mall (*P*=1.00). Hence, our hypothesis is rejected.

Table 9: Comparison of Food Courts

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	7.67	4.388	3.892	0.022
Type 2 Mall group	8.74	2.264		
Type 3 Mall group	7.30	3.005		

HO: Mean credits of attribute food courts across all the mall groups are alike.

Table 9 shows that comparison of food courts in three types of malls using one way analysis. The F-value of 3.892 is highly significant (*P*=0.022). The Scheffe Range test shows significant difference between Type 2 mall and Type 3 mall (*P*= 0.05). However, no significant difference was found between Type 1 mall and Type 2 mall (*P*=0.86). Similarly, there was no significant difference between Type 1 mall and Type 3 mall (*P*=0.821). Hence, our hypothesis is rejected.

Table 10: Comparison of Attractive Business Areas

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	10.36	15.456	6.268	0.002
Type 2 Mall group	10.52	2.101		
Type 3 Mall group	4.86	3.117		

HO: Mean credits of attribute attractive business areas across all the mall groups are alike.

Table 10 shows comparison for attractive business areas for three types of malls. The F-value of 6.268 is highly significant (*P*=0.002). Applying Scheffe Range test, we found that there was significant difference between Type 1 Mall and Type 3 (P= 0.07). Similarly, there was significant difference between Type 2 mall and Type 3 mall (*P*=0.05). However, no significant difference exists there between Type 1 mall and Type 2 mall (*P*=0.994). Hence, our hypothesis is rejected.

Table 11: Comparison of Home Delivery

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	8.13	2.984	25.846	0.000
Type 2 Mall group	10.40	3.216		
Type 3 Mall group	6.76	3.274		

HO: Mean credits of attribute home delivery across all the mall groups are alike.

Table 11 shows comparison for home delivery using one way analysis of variance. The F-value of 25.846 is highly significant (*P*=0.00). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 1 mall and Type 3 mall (*P*=0.04). There was also significant difference between Type 2 mall and Type 3 mall (*P*=0.00). Hence, our hypothesis is rejected.

Table 12: Comparison of Open Seven Days

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	12.77	3.035	15.542	0.000
Type 2 Mall group	14.37	1.079		
Type 3 Mall group	14.32	1.856		

HO: Mean credits of attribute open seven days across all the mall groups are alike.

Table 12 shows comparison for open all days of the week. The F-value of 15.542 is highly significant (*P*=0.00). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 1 mall and Type 3 mall (*P*=0.00). However, no significant difference exists between Type 2 mall and Type 3 mall (*P*=0.991). Hence, our hypothesis is rejected.

Table 13: Comparison of Availability of Branded Goods

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	9.49	3.093	63.260	0.000
Type 2 Mall group	13.41	1.706		
Type 3 Mall group	11.12	2.362		

HO: Mean credits of attribute available branded goods across all the mall groups are alike.

Table 13 shows that comparison of availability of branded goods in three types of mall groups. The F-value of 63.260 is highly significant (*P*=0.00). Applying Scheffe Range test, we found that there was significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 1 mall and Type 3 mall (*P*=0.01). There is also significant difference between Type 2 mall and Type 3 mall (*P*=0.00). Hence, our hypothesis is rejected.

Table 14: Comparison of Parcel Pick Up

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	8.55	2.750	2.795	0.063
Type 2 Mall group	8.64	4.444		
Type 3 Mall group	7.26	3.076		

HO: Mean credits of attribute parcel pick up across all the mall groups are alike.

Table 14 shows that comparison for parcel pickup. The F-value of 2.795 is not significant (*P*=0.063). Applying Scheffe Range test we found no significant difference between Type 1 mall and Type 2 mall (*P*= 0.984). There was no significant difference between Type 1 mall and Type 3 mall (*P*=0.117). There was also no significant difference between Type 2 mall and Type 3 mall (*P*=0.86). Hence, our hypothesis is accepted.

Table 15: Comparison of Frequent Shopper Programmes

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	8.08	2.838	7.060	0.001
Type 2 Mall group	9.19	2.809		
Type 3 Mall group	7.64	1.977		

HO: Mean credits of attribute frequent shopper programmes across all the mall groups are alike.

Table 15 shows comparison for frequent shopper programmes in three types of malls. The F-value of 7.060 is highly significant (*P*=0.001). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.015). Similarly, there was significant difference between Type 2 mall and Type 3 mall (*P*=0.004). However, no significant difference was found between Type 1 mall and Type 3 mall (*P*=0.638). Hence, our hypothesis is rejected.

Table 16: Comparison on Price Discount

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	8.87	3.448	1.035	0.357
Type 2 Mall group	9.31	3.100		
Type 3 Mall group	8.58	2.339		

HO: Mean credits of attribute price discount across all the mall groups are alike.

Table 16 shows comparison on price discounts. The F-value of 1.035 is not significant (*P*=357). Applying Scheffe Range test we found no significant difference between Type 1 mall and Type 2 mall (*P*= 0.608). Similarly, there was no significant difference between Type 1 mall and Type 2 mall (*P*=0.866). Also, no significant difference is found between Type 2 mall and Type 3 mall (*P*=0.402). Hence, our hypothesis is accepted.

Table 17: Comparison of Freebies

Mall group	Mean	Standard deviation	f-value	P value
Type 1 Mall group	7.05	3.483	14.949	0.000
Type 2 Mall group	9.41	2.917		
Type 3 Mall group	8.58	2.467		

HO: Mean credits of attribute freebies across all the mall groups are alike.

Table 17 shows comparison on freebies. The F-value of 14.949 is highly significant (*P*=0.00). Applying Scheffe Range test, we found significant difference between Type 1 mall and Type 2 mall (*P*= 0.00). Similarly, there was significant difference between Type 1 mall and Type 3 mall (*P*=0.017). However, no significant difference is there between Type 2 mall and Type 3 mall (*P*=3.00). Hence, our hypothesis is rejected.

Cluster Analysis

For cluster analysis, 250 respondents were divided into two homogeneous groups, cluster 1 and cluster 2, based on perception, motivation, sales person service and behaviour, and problems. While 165 respondents belonged to cluster 1, 85 respondents belonged to cluster 2 (Table 18).

Table 18: Cluster Analysis

Total Cluster distribution	N	%
Cluster 1	165	66
Cluster 2	85	34
Total	250	100

Table 19: Cluster Analysis Using Perception

Perception	Yes		No	
	N	%	N	%
Cluster 1	165	68.5	0	0.000
Cluster 2	76	31.5	9	100.0
Total	241	100	9	100.0

From Table 19 we find 165 respondents in cluster 1 and 76 respondents in cluster 2 gave positive response. Nine respondents in cluster 2 gave negative response. This implies that consumers perceive that shopping malls offer good opportunities for shopping.

Table 20: Cluster Analysis Using Motivation

Motivation	Yes		No	
	N	%	N	%
Cluster 1	165	72.7	0	0.000
Cluster 2	62	27.3	23	100.0
Total	227	100	23	100.0

In Table 20 we find 165 respondents in cluster 1 and 62 respondents in cluster 2 gave positive response while 23 respondents from cluster 2 gave negative response. This implies that shopping malls motivate respondents.

Table 21: Cluster Analysis Using Sales Person Service

Sales person easily approachable	Yes		No	
	N	%	N	%
Cluster 1	165	75.7	0	0.000
Cluster 2	53	24.3	32	100.0
Total	218	100	32	100.0

From Table 21, we find 165 respondents in cluster 1 and 53 respondents in cluster 2 gave positive response, whereas 32 respondents from cluster 2 gave negative response. Respondents feel that sales persons are easily approachable.

Table 22: Cluster Analysis Using Sales Person Behaviour

Salesperson humble and soft spoken	Yes		No	
	N	%	N	%
Cluster 1	165	72.7	0	0.000
Cluster 2	50	27.3	35	100.0
Total	215	100	35	100.0

From Table 22, we find that 165 respondents in cluster 1 and 50 respondents in cluster 2 gave positive response whereas 35 respondents in cluster 2 negative response. Majority respondents are of the opinion that sales persons are humble and soft spoken.

Table 23: Cluster Analysis Using Sales Person Service and Behaviour

Sales person providing solution to problems	Yes		No	
	N	%	N	%
Cluster 1	165	86.4	0	0.000
Cluster 2	26	13.6	59	100.0
Total	191	100	59	100.0

From Table 23, we find that 165 respondents in cluster and 26 respondents in cluster 2 gave positive response whereas 59 respondents in cluster 2 gave negative response. Most respondents feel that sales persons provide solution to problems.

Table 24: Cluster Analysis Performed Using Problems

Problems faced with the mall	Yes		No	
	N	%	N	%
Cluster 1	36	52.2	129	71.30
Cluster 2	33	47.8	52	28.70
Total	69	100.0	181	100.0

In Table 24 we find 36 respondents in cluster 1 and 33 respondents in cluster 2 gave positive response, whereas 129 respondents in cluster 1 and 52 in cluster 2 gave negative response. This implies that majority of respondents do not face major problems.

Table 25: Comparison of Each Attribute Across Homogeneous Groups of Respondents Based on Cluster Analysis

Attributes	Cluster no	N	Mean	Standard deviation	T value	P value
Variety	1	165	11.9	2.697	1.573	0.117
	2	85	12.5	2.797		
One stop shopping	1	165	12.5	2.143	1.278	0.203
	2	85	12.1	3.247		
Quality	1	165	12	1.997	2.634	0.009
	2	85	11.2	2.825		
Ease of shopping	1	165	12.7	2.251	1.402	0.162
	2	85	12.2	2.84		
Promotion and offers	1	165	11	2.369	0.226	0.822
	2	85	10.9	2.732		
Entertainment and gaming zone.	1	165	6.92	4.412	2.641	0.009
	2	85	8.42	4.004		
Food courts	1	165	7.98	3.389	0.308	0.758
	2	85	8.12	3.554		
Attractive business areas	1	165	9.33	12.241	0.007	0.994
	2	85	9.32	3.84		
Home delivery	1	165	8.9	3.12	0.891	0.374
	2	85	8.49	3.984		
Open seven days	1	165	14.2	1.771	4.352	0
	2	85	12.9	2.961		
Available branded goods	1	165	11.5	3.011	0.999	0.319
	2	85	11.1	3.057		
Parcel pick	1	165	8.25	3.547	0.485	0.628
	2	85	8.48	3.737		
Frequent shopper program	1	165	8.44	2.663	0.003	0.998
	2	85	8.44	2.905		
Price discount	1	165	8.95	2.8	0.257	0.797
	2	85	9.06	3.669		
Freebies	1	165	8.23	3.198	0.472	0.637
	2	85	8.44	3.354		

From Table 25, we find that the overall perception regarding various attributes across the homogenous groups based on perception, motivation, sales person service and behaviour, and problems about mall culture are alike.

For quality attributes, *t*-value was found to be significant (*P*=0.009), so by rejecting null hypothesis we conclude that there exists significant difference in the mean value for quality attribute across both clusters. Cluster 1 has larger mean value than cluster 2.

For entertainment and gaming zone attributes, *t*-value was found to be significant (*P*=0.009), so by rejecting null hypothesis we conclude that there exists significant difference in the mean value for entertainment and gaming zone attribute across both clusters. Cluster 2 has larger bigger mean value than cluster 1.

For open seven days attribute, *t*-value was found to be significant (*P*=0.00), so by rejecting null hypothesis we conclude that there exists significant difference in the mean value for quality attribute across both clusters. Cluster 1 has larger mean value than cluster 2.

Conclusion

Out of three types malls in Vadodara, Type 3 mall is most preferred in terms of atmosphere and decoration, 96 per cent respondents like type 1 mall group atmosphere and decoration. Against this 90 per cent liked the atmosphere of Type 2 malls.

As far as quality of merchandise is concerned, Type 2 malls are most preferred with 97 per cent respondents liking them. Against this, 56 per cent respondents each agree like it in Type 1 malls and Type 3 malls.

Type 2 mall group is preferred when it comes to good value for products. Compared to this, 56 per cent respondents agree that in Type 1 malls provide value for money and only 50 per cent respondents say that Type 2 malls provide value for money.

As far as consumer complaint settlement is concerned, Type 3 malls are preferred with 84 per cent respondents agreeing that there is proper mechanism for customer grievances. Compared to this, 49 per cent respondents agree to this in Type 1 malls and 71 per cent respondents agree to this in Type 2 malls.

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Annex Table 1: Mall Group Wise Percentage Frequency Distribution of Different Reasons to Visit at Vadodara

	Type 1 mall group						Type 2 mall group						Type 3 mall group						Total					
	1		2		3		1		2		3		1		2		3		1		2		3	
Reasons	n	%	n	%	n	%	n	%	n	%	N	%	n	%	n	%	n	%	n	%	N	%	n	%
Shopping mall atmosphere and decoration are appealing for purchase.	69	69	30	30	1	1	90	90	10	10	0	0	48	96	2	4	0	0	207	82.8	42	16.8	1	0.4
Good selections of products are available.	83	83	13	13	4	4	97	97	3	3	0	0	45	90	2	4	3	6	225	90	18	7.2	7	2.8
Merchandise sold is of the highest quality.	56	56	34	34	10	10	97	97	0	0	3	3	28	56	16	**32**	6	12	181	72.4	50	20	19	7.6
The merchandise sold is a good value for the money.	56	56	25	25	19	19	88	88	9	9	3	3	25	50	6	12	19	38	169	67.6	40	16	41	16.4
Availability of literature/brochures.	67	67	21	21	12	12	88	88	6	6	6	6	42	84	5	10	3	6	197	78.8	32	12.8	21	8.4
Ambience would be an important factor.	63	63	29	29	8	8	86	86	3	3	11	11	45	90	3	6	2	4	194	77.6	35	14	21	8.4
Degree of differentiation in type and quality products important.	75	75	23	23	2	2	63	63	14	14	23	23	44	88	5	10	1	2	182	72.8	42	16.8	26	10.4
Customer grievance cell.	49	49	40	40	11	11	71	71	23	23	6	6	42	84	7	14	1	2	162	64.8	70	28	18	7.2
Consider buying from the mall.	54	54	35	35	11	11	52	52	44	44	4	4	39	78	9	18	2	4	145	58	88	35.2	17	6.8
I can trust the service by the shopping mall.	50	50	27	27	23	23	43	43	57	57	0	0	20	40	24	**48**	6	12	113	45.2	108	43.2	29	11.6
I am loyal patron of this shopping mall.	21	21	32	32	47	47	31	31	61	61	8	8	11	22	6	12	**33**	**66**	63	25.2	99	39.6	88	35.2
Shopping mall is not meant only for urban but also rural consumer.	73	73	18	18	9	9	56	56	31	31	13	13	39	78	4	8	7	14	168	67.2	53	21.2	29	11.6
Malls are opportunities for consumer to experiment their purchase decisions.	73	73	21	21	6	6	93	93	3	3	4	4	47	94	2	4	1	2	213	85.2	26	10.4	11	4.4
The malls culture has changed the purchase pattens of consumer in general.	82	82	18	18	0	0	90	90	10	10	0	0	44	88	3	6	3	6	216	86.4	31	12.4	3	1.2
Shopping bags are visually available.	84	84	14	14	2	2	92	92	8	8	0	0	48	96	1	2	1	2	224	89.6	23	9.2	3	1.2
Shopping mall has clean attractive and convenient public areas.	84	84	8	8	8	8	92	92	4	4	4	4	46	92	2	4	2	4	222	88.8	14	5.6	14	5.6
The store layout at shopping mall makes it easy for consumer to find what they need & easy to move around store.	90	90	2	2	8	8	93	93	7	7	0	0	48	96	2	4	0	0	231	92.4	11	4.4	8	3.2
Shopping mall insists on decreasing the hassles.	80	80	18	18	2	2	97	97	3	3	0	0	42	84	5	10	3	6	219	87.6	26	10.4	5	2

Annex Table 2: Reason for Visiting Shopping Malls

	Type 1 mall group						Type 2 mall group						Type 3 mall group						Total					
Reasons	1		2		3		1		2		3		1		2		3		1		2		3	
	N	%	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Price of the item.	59	59	30	30	11	11	79	79	17	17	4	4	48	96	2	4	0	0	186	74.4	49	19.6	15	6
Convenience in approach.	64	64	24	24	12	12	81	81	15	15	4	4	46	92	1	2	3	6	191	76.4	40	16	19	7.6
Assortment (a verified collection)	64	64	20	20	16	16	91	91	9	9	0	0	42	84	6	12	2	4	197	78.8	35	14	18	7.2
Transparency in billing.	67	67	29	29	4	4	89	89	11	11	0	0	44	88	3	6	3	6	200	80	43	17.2	7	2.8
Sales person service.	82	82	15	15	3	3	56	56	14	14	30	30	39	78	4	8	7	14	177	70.8	33	13.2	40	16
Advertisement.	81	81	15	15	4	4	84	84	16	16	0	0	46	92	4	8	0	0	211	84.4	35	14	4	1.6
Store ambience.	80	80	18	18	2	2	76	76	21	21	3	3	48	96	2	4	0	0	204	81.6	41	16.4	5	2
Overall satisfaction level.	80	80	16	16	4	4	91	91	6	6	3	3	49	98	1	2	0	0	220	88	23	9.2	7	2.8
Parking facility	90	90	8	8	2	2	97	97	3	3	0	0	49	98	1	2	0	0	236	94.4	12	4.8	2	0.8

List of Hypotheses: (Tables 3-17)

1. Mean credits of attribute variety across all the mall groups are alike.
2. Mean credits of attribute one stop shopping across all the mall groups are alike.
3. Mean credits of attribute quality across all the mall groups are alike.
4. Mean credits of attribute ease of shopping across all the mall groups are alike.
5. Mean credits of attribute promotion and offers across all the mall groups are alike.
6. Mean credits of attribute entertainment and gaming zone across all the mall groups are alike.
7. Mean credits of attribute food courts across all the mall groups are alike.
8. Mean credits of attribute attractive business areas across all the mall groups are alike.
9. Mean credits of attribute home delivery across all the mall groups are alike.
10. Mean credits of attribute open seven days across all the mall groups are alike.
11. Mean credits of attribute available branded goods across all the mall groups are alike.
12. Mean credits of attribute parcel pick up across all the mall groups are alike.
13. Mean credits of attribute variety across all the mall groups are alike.
14. Mean credits of attribute shopper programmes across all the mall groups are alike.
15. Mean credits of price discount variety across all the mall groups are alike.

Kanhai Foods Pvt. Limited

Padmini Solanki *
Urvija Singh *
Vikas Agarwal *
C. Gopalkrishnan **

Shashank Chokhani, Director of Kanhai Foods Private Limited, Ahmedabad, looked at the computer screen as the latest figures of performance of the company rolled before him. He was happy that his clients included some of the very best restaurants, coffee houses, and hotels in Ahmedabad, besides some well known institutional buyers. Kanhai Foods had become the largest bakery chain in Gujarat in a relatively short period of 15 years. It had built 21 own sales outlets called KabhiB in 12 cities in Gujarat and in addition had over 5000 distributors. It had also set up five KabhiB Bake Studios in five cities in Gujarat. It was the largest player in the organized bakery market (Exhibit 1) and Kalory was a well-known brand in Gujarat for egg-less bakery products (see Exhibit 2 for a list of products).

Shashank was now considering various options to enter the pan Indian market, which was growing very fast. He noted that bakery chains from abroad were keen to enter the Indian market. He was also examining the possibility of reaching the markets in the Gulf countries where there was a very large Indian expatriate population.

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As he reviewed the operations of Kanhai Foods, Shashank felt nostalgic about the early days. He was the first to conceive the idea of marketing bread and other bakery products without egg. It was a "small" innovation that had catapulted the company into the market leader today. Being born and brought up in Ahmedabad, the nuances of the predominant culture of the state of Gujarat and his own community (Marwari) played a major role in his thinking and decision making process. It led to a range of products (Exhibit 3) that many consumers are grateful today – egg-less bread and other bakery and patisserie products, which vegetarians could consume without feeling guilty. This was not the case before he entered the market, since good quality pure vegetarian bakery products were not available earlier.

Entrepreneur Shashank Chokhani

Shashank Chokhani is the youngest son. His father, Daudayal Chokhani, had a well established business of spare parts and engineering tools in Ahmedabad. Shashank Chokhani took a bachelor's degree in commerce and wanted to go abroad for further studies. He, therefore, moved to Mumbai to prepare for examinations such as TOFEL and GMAT. Though he got admission call from the University of Texas for the MBA programme, his father would not let him go. He thought that it would be very difficult for Shashank to come back to India afterwards and adjust to the Indian way of life. Shashank Chokhani started taking interest in his father's business and learned the basics.

Birth of Kalory Bread

Shashank belongs to a Marwari family, where it is strictly forbidden to consume eggs and other non-vegetarian foods. Gujarat had a significant number of Marwaris, Jains, and others who are pure vegetarians. They generally avoided consuming bakery-made bread, cakes, and pastries since these were made with eggs.

Shashank got the idea of making bakery products from his cousin who was in bakery plant manufacturing business in Surat (Gujarat). Since Shashank had absolutely no experience in the bakery industry, he did a lot of research and experimentation on making bread, more specifically egg-less bread. For this he visited China and Germany for understanding bread-making technology and production of bread. He procured machinery for making bread and other bakery products from New Delhi. For production of egg-less bread, he did a lot of experimentation. Distribution was handled by his father, D.D. Chokhani. He chose Kalory (a play on the word "calorie") as the brand name for the bread.

Shashank made several visits to retail outlets, bakery shops, grocery stores, dairy outlets, and FMCG stores in Ahmedabad to promote his bread. Grocery stores and bakery shops were the major retailers of bakery products in Gujarat. However, he found that they were mostly

owned by members of a certain community, which had a strong and wide social networking system. This community was also known to have very fierce member loyalty and, therefore, no retailer was willing to keep Shashank's products in spite of the fact that Kalory bread had such a unique selling proposition.

The problems did not end here. When the market started slowly accepting the product, distributors of other bakeries started destroying Kalory bread at retail outlets. The shop owners were highly indifferent and did not show any interest in selling Kalory bread. Shashank, therefore, decided to pay extra commission and kept a watch on the outlets where his products were displayed.

On August 15, 1996, he formally registered Kanhai Foods Pvt. Ltd. at Changodar, on the outskirts of Ahmedabad, to manufacture egg-less bread. He took Ajay Kariwala as his partner for the business. Ajay Kariwala was a family friend and was entrusted with the operations of the factory.

In the beginning Shashank had only two auto-rickshaws (three-wheeler pick-up vans) for delivering his products to the outlets. Now Kanhai has over 60 commercial vehicles. Products of Kanhai Foods are sold through more than 10,000 outlets in Gujarat. The company has 25 branches all over Gujarat and the number is growing.

The company is the only bakery in Gujarat to obtain ISO 22000 certification. Kanhai follows the norms of food safety management system (FSMS). It has also obtained ISO 9001 certification (Exhibit 4).

Birth of KabhiB

Initially, the company used to depend on other bakeries and retailers for selling its products. However, the retailers asked a far higher commission and this led to Kanhai Foods opening a number of own retail outlets.

First the company started a sales outlet of Kalory bread, naming it just "Kalory." But it did not do well as it was only a bread selling outlet and Kalory was not a well-known brand. It was closed down. Shashank built upon the concept of KabhiB outlets which stocked cakes, chocolates, cookies, etc. as main merchandise and bread as a point-of-purchase item. The first KabhiB outlet came up in Maninagar on rented premises, which had a small production facility as well. The response was very positive, which gave Shashank confidence to work on the idea further. However, the outlet was closed down owing to conflict among the premise owners. The Maninagar outlet was re-opened in 2010 at another site which again had a good response.

Production of cold section items takes place in the factory only following the just-in-time approach (Exhibits 2 and 3). Products such as bread, cakes, and pastries have a very short shelf-life. Also demand for different products keeps fluctuating.

Locations for KabhiB were chosen on the basis of potential of sales. As of now the company has 13 outlets in Ahmedabad, majority of which are on franchisee basis, 3 in Anand, 2 each in Gandhidham and Vadodara, and one each in Bhuj, Rajkot, Bhavnagar, and Nadiad. There are plans to open more than 100 KabhiB outlets all over India.

Franchisees are chosen on the basis of suitability of the premise for this line of business, interest of the businessman, etc. It is expected that that at least one member of the family is involved full time in the business. The franchisee will also have to undergo practical training in one of the outlets of the company.

Kanhai Foods undertakes promotional activities for own outlets as well as for the franchisees. A new counter is always highlighted in promotional activities. The company has been using print media and radio widely. Promotional activities are stepped up during festive seasons (Exhibit 4).

Growing from Strength to Strength

Kanhai Foods prides itself on making egg-less bakery products. Other core strengths, according to Shashank, have been technology, administration, and human resources.

Logistics has especially played an important part in making the company move forward. It played a very crucial role during the initial launch of Kalory bread. The company has a fleet of vehicles—trucks, tempos, jeeps, rickshaws, etc. — for delivering goods on time to outlets. Shashank believes that opening so many outlets in Gujarat and diversification of his business to KabhiB (bakery and patisserie) and KabhiB Bake Studios have been made possible because of strong logistics.

KabhiB Bake Studio is a retail outlet with a small production facility attached to it. Shashank started the first KabhiB Bake Studio in Nehrunagar in Ahmedabad in August 2009. The idea was simple: consumers visiting the outlet see the baking of products related to hot and cold sections, and feel the freshness of the products. Tasting success, other Bake Studios came up in Jamnagar and Gandhinagar. The company now plans to start more Bake Studios in Vadodara and Rajkot.

Use of Technology

The company has made it a point to be on the forefront in use of technology. It got software designed for accounts and office administration. It also has Internet facility for communication within the office, factory, and outlets to increase accuracy of operations as well as quick delivery. The firm has developed an SMS service to keep in touch with its branches. Shashank is working on developing software which will allow the company to maintain contact with important endusers of its products and to get feedback on a continuous basis. The technological sophistication of Kanhai Foods has forced the competitors in Gujarat to change their working style.

Replacement Policy

The replacement policy of the company is simple. As the shelf-life of cakes and other confectionary is only three days, if the product remains unsold till the third day from the day it has been packed, the company calls the products back and incinerates them. The company maintains computerized data of returned products by retailers and company outlets. Because the company has been trying to match demand with supply, returns are generally minimal.

If, on the other hand, the size of return of a particular product is large, the company reduces the quantity of product to be sent in the next order. Reduction can be up to 50 per cent of the ordered quantity.

Human Resources

Kanhai Foods employs about 200 shopfloor workers. They respect the company and management very highly. The human resource department under the guidance of Vaidehi Chokhani, CEO, takes active interest in the welfare of all employees (highly skilled, semi-skilled, and unskilled). The company has constructed a number of cottages for them with a canteen.

The employees belong to different castes and regions in the country, which has resulted in a diverse culture at the work place. Management does not differentiate between employees on any kind of demographic basis. The employees are encouraged to work and stay together, irrespective of their language, caste or region.

However, diverse caste and regional backgrounds can create unexpected tensions of social nature at the work place. There was an incident related to differences in caste. Some workers refused to use the plates in the canteen because these were used by all. These differences

were soon sorted out with the firm intervention of management. Management emphasized that all are equal at the work place and therefore cannot be divided on the basis of caste, religion or region.

Kanhai's Future Plans

Keen to explore its pan India idea, Shashank is looking forward to start Bake Studios in Udaipur city in Rajasthan, as Udaipur presents a very huge market for its differentiated products. Udaipur's proximity to Ahmedabad is another attraction. There are also plans to reach tier-3 cities such as Vadodara, Kalol, and Porbandar in Gujarat through KabhiB outlets.

The company is keen to take the concept of live baking further by including it in each Bake Studio outlet. It is also looking for ways to connect KabhiB and KabhiB Bake Studios by making Bake Studio a production house and making it a delivery centre for KabhiB outlets nearby. By doing so, the company will be able to increase its mobility and keep the freshness of the products. Shashank is also keen to start exports of items with relatively long shelf-life.

Organization Structure

As the company is growing, Shashank has had a re-look at the structure of the organization (Exhibit 5). Shashank, Ajay, and Vaidehi together have decided that Ajay will handle all work related to the Kalory section and Vaidehi will look after the cold section. Shashank will manage future development, both market and product oriented. Vaidehi will handle human resources management. Management has communicated the structure to the administrative and working staff and, therefore, there is no ambiguity about reporting relationships in the organization.

Appendix

The Bakery Industry in India

The bakery industry in India is the largest sector in the food processing industry. According to a report of the Ministry of Food Processing Industries, there are over 60,000 bakeries in India. The bakery sector has been on a continuous growth path. Bakery units in India are mainly small and belong to the unorganized sector. The main products are bread and biscuits; pastries, cakes, buns, and rusk are other popular products. According to the estimates of the Ministry, yearly production of bread and biscuits is about 4 million tonnes. Further, "bread manufacturing is reserved for the small-scale sector. Out of the total production of bread, 40 per cent is produced in the organized sector and remaining 60 per cent in the unorganized sector; in the production of biscuits the share of the unorganized sector is about 80 per cent."[1]

According to a report on the bakery industry in India, "bakery industry in India is on a growth curve....The sector which is riding a positive growth journey is known to generate over 50 per cent profits on certain products and net profits to the tune of 30-50 per cent annually."[2]

Quoting a study of the University of Agricultural Sciences (UAS), Bangalore, and the Central Food Technological Research Institute (CFTRI), Mysore, Nandita Vijay states that "bakery is a promising sector for growth going by the interest evinced for products like cakes, biscuits, buns, rusks among others for all age-groups. University of Agricultural Sciences estimates that the bakery industry in India generates Rs,10,000 crore." With globalization, bakery chains representing both international and Indian players are setting up production as well as distribution centres across the country, which include "Au Bon Pain, the US-based bakery café chain, Donut Baker, Cookie Man, Croissant, Café Coffee Day, Ovenpick, Bread Talk, SAJ Industries' Bisk Farm, Hot Bread, Birdy's, Donut Master and Kookie Jar."[3]

Market Segments for Bakery Products

The report has identified three market segments for bakery products: need-based, basic hotel requirements, and connoisseur requisites. "The need-based category caters to products like bread and biscuits. Under hotels, it varies from breads to pastries, cakes, pizza and puffs. The connoisseur category focuses on international standards and will cover products like specialized pastries and cakes," according to Sanjay Mehra, Director, Paramount Impex, a manufacturer of bakery machinery in India. [4]

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[1] Ministry of Food Processing Industries, "Present Status and Future Prospects of Indian Food Processing Industries," mofpi.nic.in/ContentPage.aspx? CategoryId=122, accessed on December 5. 2011.
[2] Vijay, Nandita, "Bakery Industry in India: Riding High on Retail Chains Wave," *FranchiseIndia,* June 21, 2011.
[3] *Ibid.*
[4] *Ibid.*

Exhibit 1: Market Share of Bakery Products

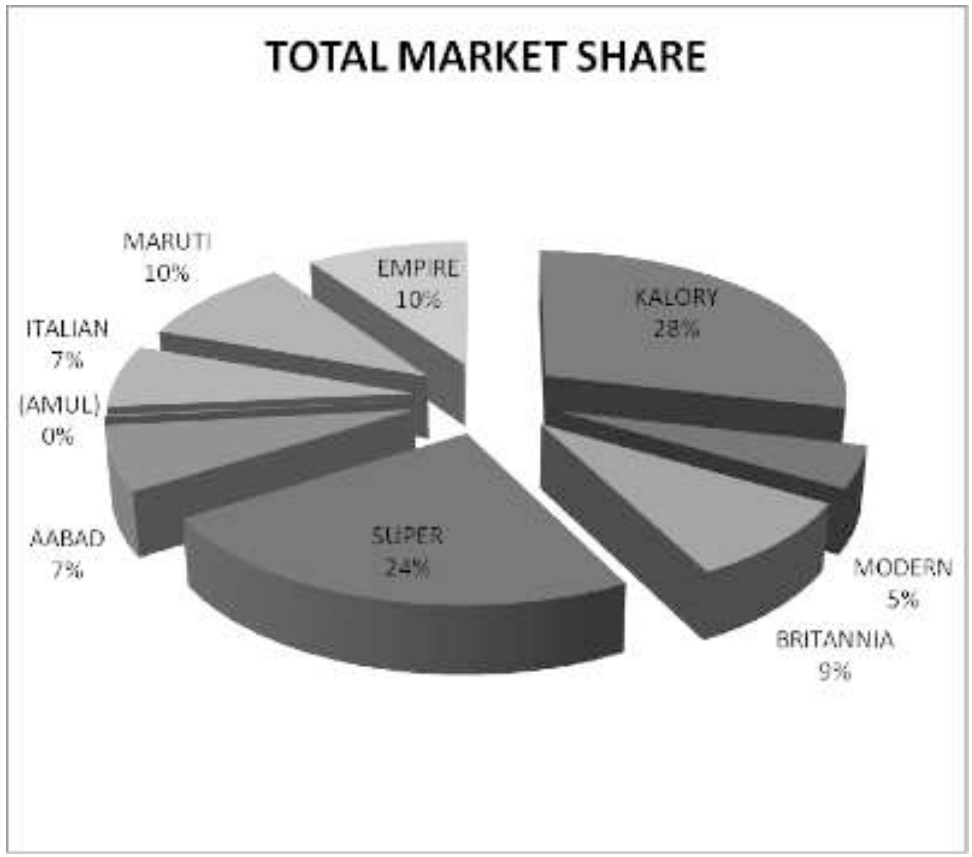


Exhibit 2: KABHI-B (Bakery and Patisserie): Products

Cake and Pastries	Puddings/Tarts	Savories
Popular Pastries	Brownie	Samosa
Premium Pastries	Muffins and Dry Cakes	Cream Rolls
Xotic Pastries	Pies	Khari and Rusk
Supreme Pastries	Cookies	Khakhra
Maestro Pastries	Breads (Regular)	
Moussee	Puffs	

Exhibit 3: Hot and Cold Section Items

Hot Section	Cold Section
Bread	Cakes
Puff	Pastries
Savories	Mousse
Samosa	Puddings / Tarts
Khari and Rusk	Chocolates
Khakhra	Brownies
	Muffins and Dry Cakes
	Pies
	Cookies

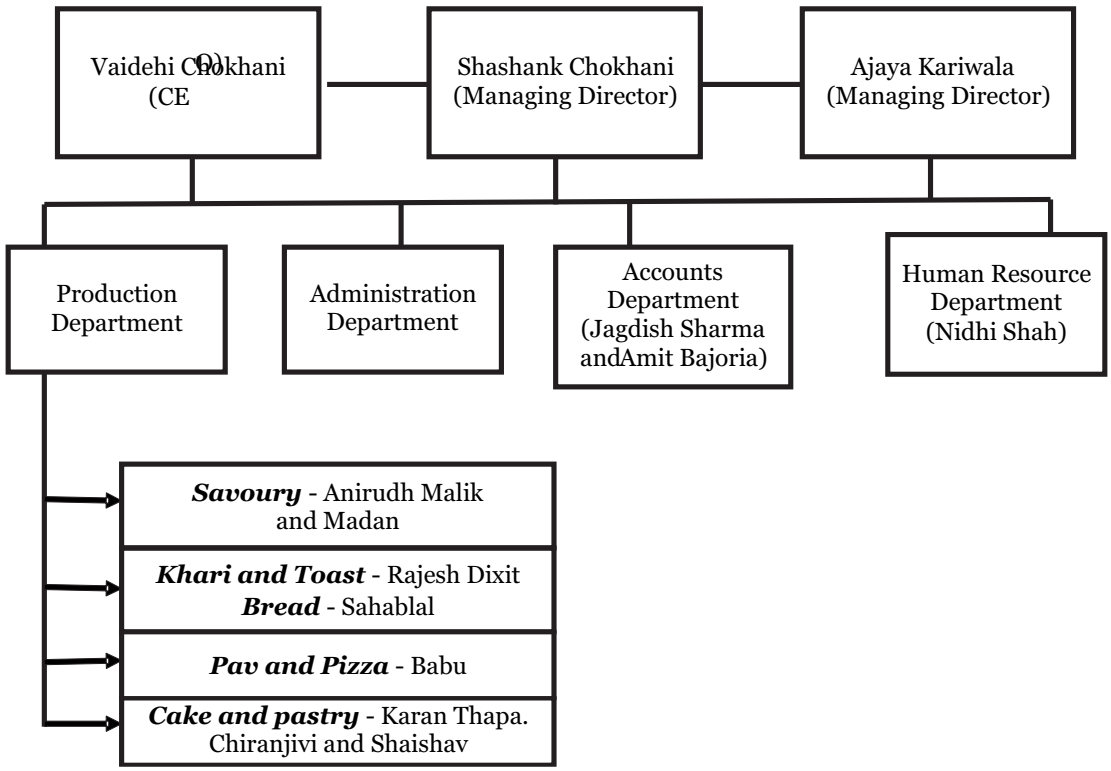
Exhibit 4: Press Advertisements

Source: Ahmedabad Mirror, various issues.

Exhibit 4: Press Advertisements (Contd.)

Exhibit 4: Press Advertisements (Contd.)

Exhibit 5: Organization Chart



Repositioning Nirmal Hospital

A.C. Brahmbhatt*
Jayesh P. Aagja*
Sapna Choraria**

Dr. Nirmal Choraria, a renowned paediatrician and socialist, believes that changing consumer behaviour has changed the competitive landscape of the medical industry in Surat. Patients desire cashless quality services. With new hospitals taking roots in Surat, acquiring and retaining patients has become important. Nirmal Hospital is facing problems of brand image and employee retention. The hospital finds it difficult to move from a well established pediatric care hospital to a multi-specialty hospital.

Genesis of Nirmal Hospital

Dr.Nirmal Choraria began his career in 1982 as in-charge of the paediatric department at Shree Mahavir General Hospital. In 1983, he conceived the idea of setting up a childcare hospital and established Nirmal Hospital, with a loan of Rs one lakh from Bank of India. In 1988, he set up the first paediatric intensive care unit (PICU) at the hospital, the first of its kind in western India and now recognized as Level III PICU. Hospital capacity went up gradually from 50 beds in 1992 to 100 beds in 1998, and 115 beds in 2002. Expansion is continuing.

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Dr. Choraria initiated several steps to introduce new services. The hospital started using nitric oxide therapy and surfactant therapy for the first time in South Gujarat. The hospital also offered a fellowship programme in the paediatric intensive care unit (PICU) and neonatal intensive care unit (NICU). It was the only centre in Gujarat with two seats in the programme (Figure 1). Currently, the hospital has the largest intensive care unit in paediatrics in South Gujarat. It is associated with non-government organizations such as Smile Train (USA) and Harsiddhi Medical Trust, Surat, to provide free treatment for cleft lip and palate.

Combating Competition

Nirmal Hospital is facing competition from other hospitals which have come up in recent years. Mahavir General Hospital, one of the oldest and well established hospitals, has a training institute for nurses and gets trained nurses from there. Adventist Wockhardt Heart Hospital, a superspecialty heart care facility, offers comprehensive services in cardiology and cardiothoracic surgery under one roof. CARE Hospital, a superspeciality hospital, is known for its quality service in cardiac care. All these are situated very close to Nirmal Hospital. Surat Civil Hospital and Surat General Hospital also stand out as good options. Along with these big hospitals, there are other hospitals which provide quality service at affordable fees.

Concerned at the decreasing level of occupancy owing to competition, Dr. Choraria turned Nirmal Hospital into a multispecialty general hospital to provide treatment to adult patients also. Several new departments were set up. The hospital boasts of four state-of-the-art operation theatres for complicated surgeries. The hospital is also planning to install a CT scanner in near future.

Promotion Mix

While Nirmal Hospital has established itself as a best childcare centre, it is struggling to create its image as a best multispeciality hospital. It advertised on local TV channels, magazines, newspapers, and radio. Understanding the need of the market, it has also created its presence on the web (http://www.nirmalhospital.com). The site has space for online queries which get answered quickly. Management has also used other strategies to gain its desired image. It has a team of doctors which meets other doctors to create a positive relationship. Well-known surgeons have been approached to conduct major operations at the hospital owing to the availability of sophisticated equipment.

Response to Natural Disasters

The people of Surat still remember the services rendered by the hospital staff during the communal riots of 1992, outbreak of pneumonic plague in 1994, and the disastrous flood of 2006. At a time when everyone was leaving the city during the plague outbreak, Dr.Nirmal Choraria and the hospital staff provided free service to patients. During the floods in 2006, major parts of Surat were submerged in water. The hospital's basement was also submerged. At that time there were 65 patients in the hospital with their relatives. Again the doctors and the staff stayed back to serve the patients.

Such motivated and responsible staff form the biggest asset of Nirmal Hospital. Most employees stay with the organization for 3-5 years. Salary is decided on the basis of their educational profile as well as their experience in the respective field. One major problem is nursing staff who mostly hail from Kerala. These nurses generally join as freshers, acquire experience, and then move to big, reputed hospitals or overseas. Patients are less comfortable with nurses not conversant with Hindi or Gujarati. The hospital has approached several nursing colleges in the state to recruit nurses but has not succeeded as these colleges have a contract with the government relating to recruitment.

Free Camps

The hospital used to conduct free health check-up camps on the outskirts of Surat three to four times in a year. It has incurs an expenditure of approximately Rs. 50,000 on each camp. Patients mostly belong to the poor class who can barely afford medical treatment. Doctors from several branches conduct preliminary medical check-ups and provide free medicines. Because of low levels of literacy and income, the patients never came back to the hospital for further treatment. Management never compromised on the quality of service and, therefore, such free camps have turned out to be as an expensive affair. Free camps are now conducted once or twice a year. The hospital has no other source of funds; therefore, it deploys its profits in such philanthropic activities.

Later on, management realized that such camps did not contribute much the image of a successful multispeciality hospital. Management is concentrating on entire South Gujarat, keeping in mind that Surat is the only place in the region where patients can get good quality medical treatment. The hospital has already organized a camp for joint replacement in association with Lions Club, Chikli (this place has no surgeon for joint replacement).

Dr. Choraria and his team of doctors are contemplating what efforts on their part would address issues such as nurse retention, marketing efforts required to effect successful

positioning as multispecialty hospital, and leveraging benefits from its philanthropic activities carried out in Surat.

Exhibit 1: Survival Rate at Nirmal Hospital (April 2008-September 2008)

Intervention	Number	Survival (%)
Ventilation	100	77 (77%)
CPAP	38	38 (100%)
Surfactant	26	22 (84.6%)
Exchange Transfusion	12	12 (100%)

Exhibit 2: PICU Statistics (June 2008-November 2008)

Disease	No. of Patients	Mortality Rate	Survival Rate (%)
Dengue Shock Syndrome	21	2	90
Malaria Vivax (complicated)	9	0	100
Malaria Falciparum (complicated)	24	2	92
Enteric Fever (complicated)	4	0	100
Pyrogenic Meningitis	12	1	92
Tbm	7	0	100
Viral Encephalitis	8	1	88
Complicated Pneumonia	47	3	94
Adem	3	0	100
Poisoning	10	0	100
Metabolic Disorders	5	2	60
Road Traffic Accident/Head Injury	43	3	93
Foreign Body-Airway	5	0	100

Exhibit 3: Medical Resources

The hospital has state-of-the-art operating theatres designed to perform all types of major and supra major surgeries. They are equipped with sophisticated equipment like C-Arm with image intensifier and operating microscope. Development of a separate operation theatre wing has recently been completed. The hospital has also introduced computer assisted surgery.

Special precautions have been taken to provide the highest level of sterility inside the theatres.

Neonatal and Pediatric Intensive Care Unit (NICU, PICU)

Nirmal Hospital is the ultimate referral centre for neonatal and paediatric care in South Gujarat. A dedicated team of paediatricians has helped the hospital achieve great heights in delivery of paediatric and neonatal care.

Equipped with state-of-the-art ventilators, glucometers, and pulse oxymeters, the neonatal intensive care unit is able to deliver quality critical care. A special feature of this unit is high frequency ventilator. The unit is accredited by the National Neonatology Forum.

The hospital also has a seven-bed paediatric intensive care unit (PICU) with sophisticated life-saving gadgets. It is recognized as a Level III PICU by the Indian Society for Critical Care. It has been recognized as a tertiary level care unit and is accredited by the Paediatric Critical Care Council.

Medical Intensive Care Unit

A twelve-bed medical intensive care unit provides critical care to all medical patients and is manned by qualified medical and nursing staff.

Surgical Intensive Care Unit

A seven-bed surgical intensive care unit is equipped with ventilators and cardiac monitors to provide quality post-operative care.

Pathology

The pathology department has important investigative equipment like cell counters, biochemistry analysers, arterial blood gas analysers, Elisa reader etc. Two full time pathologists provide service to the department which functions round the clock.

Radiology

The radiology department offers round the clock X-ray and sonography services.

Cardiology

The hospital has ECG, TMT, and Echo to diagnose cardiac problems.

Physiotherapy

There are nine full-time physiotherapists in the hospital. Specialized treatment is provided in neuro development therapy, sensory integration, cerebral palsy, mental and motor disabilities, etc. Services of trained occupational therapist and speech therapist are also available.

Dialysis Unit

The hospital has a fullfledged dialysis department where dialysis is done on a routine basis.

Dentistry

A full time dentist provides dental services.

Health Check-Up Department

The hospital firmly believes in the maxim "Prevention is better than cure". It has designed several health check packages to increase health consciousness among the public.

The hospital is also on the panel of all leading life insurance companies for pre-insurance check-up. It is the only authorized centre for medical check-up of New Zealand immigrants in Surat. It is also on the panel of all leading TPAs and general insurance companies for cashless treatment.

Ambulance

Three ambulances equipped with life saving equipment are available for transport of critical patients. The ambulance is always accompanied by a post-graduate resident doctor to handle any kind of emergency and for better patient care.

Pharmacy

An in-house pharmacy run by experienced pharmacists provides drugs and medicines to patients. It operates round the clock.

Central Sterile Supply Department

The department is responsible for the sterilization and supply of all re-usable material and instruments in the hospital. It functions under the watchful eye of qualified personnel.

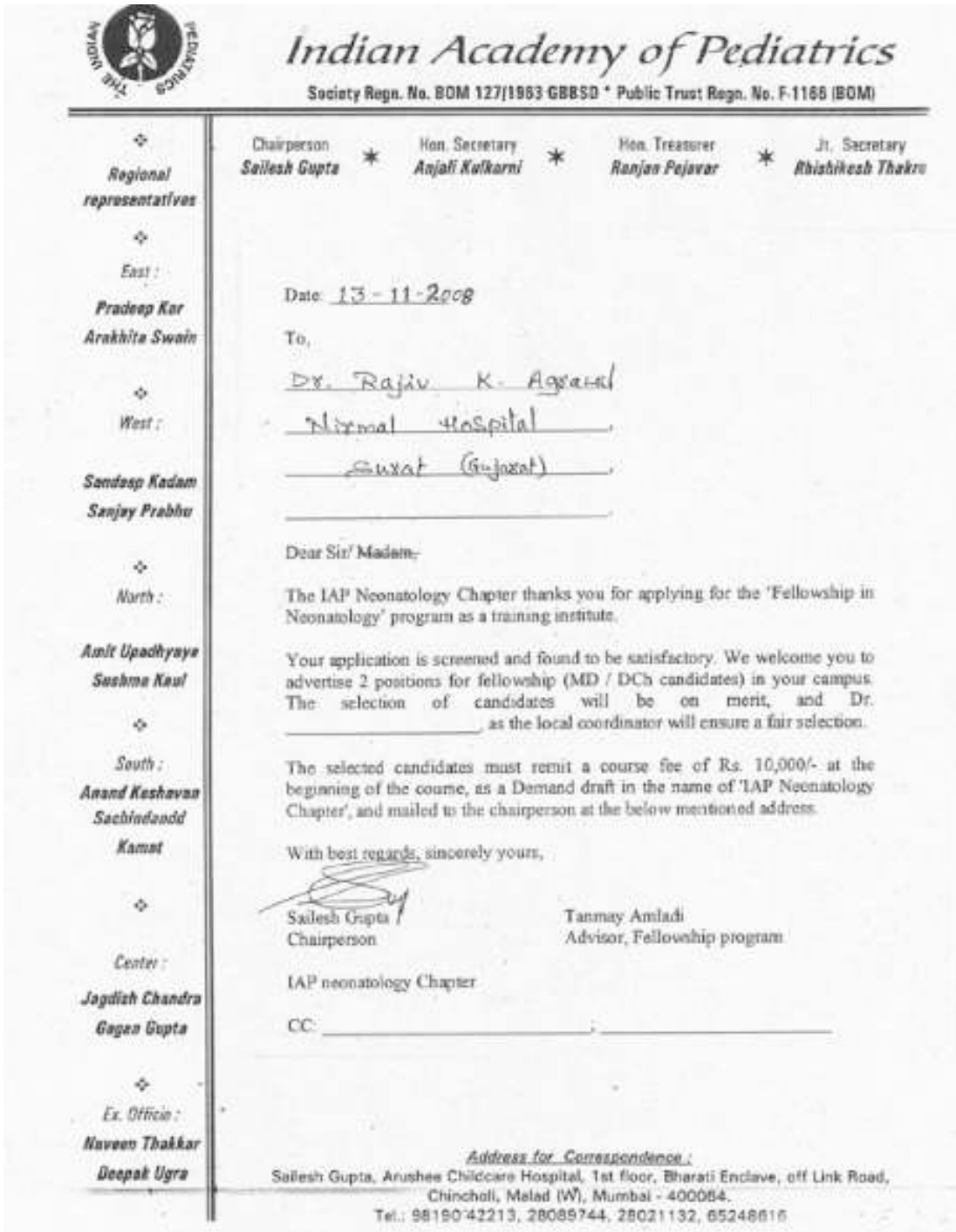
Waste Management

Realizing the importance of biomedical waste management the hospital has set up a system for the segregation, collection, and disposal of biomedical waste. Hospital of biomedical waste is assigned to an external agency.

Hospital Management Information System

The amount of data that emanates in a hospital is enormous. It is of prime importance for any hospital to filter this data and store it for analysis. The hospital has developed in-house software for storage and retrieval of information.

Figure 1: Certification for the Fellowship in Neonatology



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Date: 13-11-2008

To,

Dr. Rajiv K. Agarwal
Nirmal Hospital,
Surat (Gujarat),

Dear Sir/ ~~Madam~~,

The IAP Neonatology Chapter thanks you for applying for the 'Fellowship in Neonatology' program as a training institute.

Your application is screened and found to be satisfactory. We welcome you to advertise 2 positions for fellowship (MD / DCh candidates) in your campus. The selection of candidates will be on merit, and Dr. _____, as the local coordinator will ensure a fair selection.

The selected candidates must remit a course fee of Rs. 10,000/- at the beginning of the course, as a Demand draft in the name of 'IAP Neonatology Chapter', and mailed to the chairperson at the below mentioned address.

With best regards, sincerely yours,

Sailesh Gupta
Chairperson

Tanmay Amladi
Advisor, Fellowship program

IAP neonatology Chapter

CC: _____; _____

Address for Correspondence:
Sailesh Gupta, Arushee Childcare Hospital, 1st floor, Bharati Enclave, off Link Road, Chincholi, Malad (W), Mumbai - 400064.
Tel.: 98190 42213, 28089744, 28021132, 65248616

Exhibit 4: Organization Structure

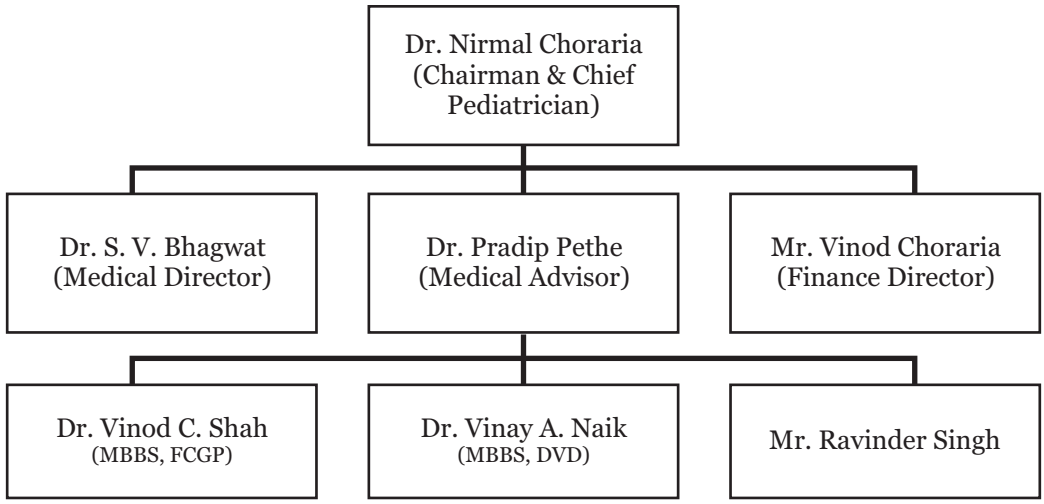

Exhibit 5: Manpower

Full Time Doctors (Consultants)	30
Visiting Consultants	70
Resident Doctors	20
Nursing Staff	75
Other Paramedical Staff	25

Guidelines to Contributors

1. Original research papers, articles, case studies, executive experience sharing, and book reviews on business and areas connected with management are welcome.
2. Two copies of the typescript, typed in double space on A4 size paper with adequate margins on all sides, should be submitted. The first page should have the title of the paper and name(s) of author(s) with institutional affiliation. The second page should start with the title of the paper, followed by text. Name(s) of author(s) should not appear anywhere in the text.
3. A soft copy of the typescript in PC compatible MS Word document format should be emailed to the editor at: editor.nujbms@imnu.ac.in
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6. All tables, charts, graphs, figures, etc. should be kept to the minimum. They should be given on separate sheets with sources indicated at the bottom.
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   Papers in journals: McGregor, D. (1957), "Uneary Look at Performance Appraisal," Harvard
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