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Customer Service Failures: After-sales services in the Home Appliances Industry

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Abstract: The purpose of this research is to understand better the customer service failures in the home appliance industry. The researchers conducted a descriptive study with a standardized questionnaire and a judgmental sampling method to achieve the desired goal. The researchers surveyed 500 customers in Bangalore who had experienced service failures from home appliance companies. The data were analyzed using principal component analysis (PCA) to identify the significant service failure areas in home appliance companies. The PCA findings revealed seven major service failure areas: Core Service Deterrents, Poor Service and Systemization, Poor Technical Knowledge & Support of Service Personnel, Long Service Lead Time, Inappropriate Service Person Behavior, Warranty Issues, and Service Spontaneity Failure, accounting for 61 percent of the variance. The study would assist home appliance companies in understanding and eliminating inefficiencies and improving customer satisfaction.

Keywords: Customer service failure, After-sales services, Customer satisfaction, home appliances.

1. Introduction

Customers are aware and vocal about their brand preferences for home appliances, and their decision is heavily influenced by the quality of after-sales services these brands provide. After-sales service plays an essential role in reinforcing the brand-customer relationship. As a result, companies must put forth their best efforts to meet their customers' needs to ensure their return to the same brand or company. Unfortunately, after-sales service has always been an inevitable failure, resulting in a variety of negative consequences. After-sale service failure is defined as a situation in which a company provides a service that falls far short of the customer's acceptable service expectations (Shapiro & Nieman-Gonder, 2006). When a customer encounters a failure in after-sales service, they can react emotionally and behaviorally

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(Bonifield & Cole, 2007). The customer not only believes that the extreme of the service failed to exhibit specific negative behaviour, but they also believe that even a minor service error could have serious consequences (Lee & Park, 2005). Customer loyalty is essential to a company's success, and poor aftersales service can erode customer loyalty (Anna, 2001). Many works of literature contend that if home appliance companies are to survive in this competitive business environment, they must leave no room for after-sale service failure (Dutta & Venkatesh, 2007). Furthermore, after-sale service failure results in a negative image of the company and leads to negative behaviours (Huang & Lin, 2011; Sabharwal & Soch, 2011).

The preceding discussion only addresses the consequences of a failed after-sales service. Many researchers have studied service failures (Dutta & Venkatesh, 2007; Funches, 2011; Lee & Park, 2005), but the exact reasons for different behaviours remain unknown. As a result, there is a need to investigate persistent negative behaviour despite home appliance companies' efforts to satisfy customers through effective after-sales services. This research aims to understand better various after-sales service failure areas, particularly in the home appliances industry. This study aims to gain a thorough understanding of the issues that customers face by utilizing customer feedback and reviews from various home appliance retailers' websites and the most recent literature from leading services marketing journals. Furthermore, the researchers attempted to identify significant service failures using principal component analysis.

2. Review of Literature

As previously stated, after-sale services Service failure occurs when a company's service provided after the sale of a product falls far short of the services expected by the customers (Hoffman and Bateson, 2001). Furthermore, various behavioural and psychological studies show that customers have more negative memories than positive ones based on their experiences (Rozin and Royzman, 2001). In addition to this behaviour, any negative experience with after-sale service causes dissatisfaction and acts as a bad memory for the customer perspective, resulting in severe consequences for home appliance companies such as switching, negative word of mouth, negative recommendation, and repurchase intentions, among other things (Bitner et al., 1990; Tax et al., 1998). Similarly, Raychaudhuri and Rahela (2013) asserted that good after-sales service has a long-term impact on customers.

When a company fails to resolve a service failure, it reinforces customers' negative attitudes toward brands (Hart et al., 1990). It is also known as a double deviation when the customer observes a company's insufficient response to initial failures in providing services (Bitner et al., 1990). These failures contribute to the escalation of negative attitudes. The inability to provide adequate services aggravates customers' previously negative attitudes toward the company or brand, resulting in extreme negative behaviour.

Sometimes, the company fails to resolve the service failure, reinforcing customers' negative behaviors towards brands (Hart et al., 1990). It sometimes is represented to as a double deviation which means the customer observes a company's insufficient response to initial failures in providing the services (Bitner et al., 1990). These failures lead to the intensification of negative attitudes. The inability to provide the proper services aggravates the customers 'previously low attitudes toward the company or the brand, leading to extreme negative behaviors. When customers experience these service failures, it is challenging for the company to regain a customer's positive attitude, even if it retries to provide more comprehensive

reclamation efforts (Johnston & Fern, 1999). And these can have a severe negative influence on a company's reputation and profitability (Bitner et al., 1990; Johnston & Fern, 1999).

The entire consumer durable industry experiences service failures, regardless of the area of operation, and the extent and level of service failures vary from company to company. Nonetheless, the majority of the businesses have identified some common flaws. For example, Huang and Lin (2011) discovered two significant service failures: inadequate service, referring to the company service person's rude behaviour, and flawed services. In contrast, Zhang and Liu (2010) asserted that service lead time significantly influenced customer satisfaction and behaviour.

Few researchers have identified product security as a significant factor in promoting customer satisfaction and a positive attitude (Marlin U. Thomas, 2006). Companies typically provide these securities with insurance, warranty terms, annual maintenance contracts (AMC) or incentivize the vendor to improve item quality. These theories and conditions differ from one industry to the next (Emons, 1989). According to Gruber (2011), another type of service failure occurs when customers have direct contact with service personnel. It refers to the first approach taken by service personnel when customers encounter a product or service problem. These service failures include unsatisfactory customer service, a lack of technical know-how, a lack of attention to customers, impolite behaviour, non-apologizing behaviour, and so on.

Various researchers have proposed different theories regarding service failures. For example, (Lee & Park, 2005) introduced a double deviation in which the failed recovery attempt occurs immediately after the loss of service. According to Tsai and Su (2009), another cause of service failure is unclear policies and facility problems; similarly, Park et al. (2008) identified unreasonable charges and return/refund as major service failure areas in the home appliance industry.

Customers would feel more at ease with prioritized after-sales services. Failure to do so disqualifies this theory in the customer's eyes, resulting in dissatisfaction and negative customer behaviour. As a result, there is a shift from a product-centric to a customer-centric perspective in today's services-oriented market. In the home appliance industry, after-sales services are regarded as a critical indicator of customer satisfaction. After-sales services are used in this industry to continue long-term customer relationships. Therefore, it is vital to understand and identify after-sale service failure areas, which will assist home appliance companies in avoiding service failures in those areas and developing similar strategies. Although the after-service structure is rich in empirical studies on various service sectors such as information technology, current research on the home appliance industry's after-sales service is limited, with only a few notable exceptions. As a result, the primary goal of current research is to identify the significant areas of after-sale service failures using literature and reviews from customers who experienced service failures in their home appliances.

3. Method and Analysis

Participants

The study focused on Bangalore, where home appliance purchases are on the rise. As a result, the study ensured that the respondents were home appliance shoppers who had experienced after-sale service failure. Respondents were primarily working professionals, business executives, and homemakers who used home appliances. This study used Judgmental sampling, a non-probability sampling technique, to identify the respondents. This implies that the researcher used their sole discretion in selecting respondents. Because the total population is infinite, the sample size chosen by Krejcie and Morgan, 1970 is 500, which is greater than 384 and represents the total population. The researchers gathered the variables or items for the study through extensive literature reviews, customer reviews from home appliance websites, and brief interviews with people who frequently used these appliances.

Normality, validity, and bias

It is also essential to meet the significant assumptions of the various investigations before conducting the analysis. As a result, the data was prescreened and cleaned, with missing values and inappropriate symmetrical responses removed. The data was further cleaned by removing outliers using the Mahalanobis distance, and the researchers discarded probabilities less than 0.001 as a rule of thumb. The final records in the data set for analysis was 413. The researchers checked skewness and kurtosis to ensure data normality, which is another assumption of data analysis. The majority of the values were within standard ranges +/- 3 (Hair et al., 2016). Another serious issue that can lead to false results is common method bias; therefore, it is vital to ensure that the dataset is free of common method bias. Harman's single factor test is applied in this study to detect the same. The results show that the total variance explained by the single factor is 31.794 percentage, which is significantly less than the 50 percent threshold for testing the common method bias. Therefore, we can say that the data set is free of common method bias.

Table 1: Common Methods bias

	Total Variance Explained					
	I	nitial Eigenvalue	es	Extractio	n Sums of Squar	ed Loadings
Component	Total	percentage of variance	Cumulative percentage	Total	percentage of variance	Cumulative percentage
1	13.035	31.794	31.794	13.035	31.794	31.794
2	3.134	7.645	39.438			
3	2.223	5.421	44.860			
4	1.661	4.050	48.910			

5	1.568	3.824	52.734
6	1.110	2.708	55.442
7	1.086	2.650	58.092
8	.920	2.244	60.336
9	.852	2.077	62.413
10	.803	1.958	64.371
11	.781	1.905	66.276
12	.771	1.880	68.155
13	.758	1.850	70.005
14	.745	1.818	71.823
15	.671	1.637	73.460
16	.652	1.590	75.051
17	.637	1.554	76.604
18	.605	1.476	78.080
19	.564	1.376	79.456
20	.544	1.327	80.783
21	.515	1.256	82.039
22	.505	1.231	83.271
23	.486	1.187	84.457
24	.476	1.161	85.618
25	.474	1.157	86.775
26	.465	1.135	87.910
27	.431	1.052	88.962
28	.424	1.033	89.995
29	.409	.998	90.993
30	.391	.954	91.947
31	.377	.920	92.867

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32	.355	.867	93.734
33	.340	.829	94.563
34	.326	.794	95.358
35	.316	.771	96.128
36	.299	.730	96.858
37	.285	.696	97.554
38	.278	.679	98.233
39	.264	.644	98.878
40	.237	.578	99.456
41	.223	.544	100.000

Extraction Method: Principal Component Analysis

Source: Author's findings

Demographic Profile of customers of online grocery

Table 2 provides a summary of the respondents' demographics. Male and female respondents are almost evenly distributed, with males accounting for 44.3 percent and females accounting for 55.7 percent. The majority of respondents were between the ages of 21 and 40. They mainly were service professionals, with the majority earning between 600,000 and 1 million rupees per annum.

Table 2: Demographic Profile of Respondents

Demography	Group	Frequency (N) Total = 413	Percentage
	Male	183	44.3
Gender	Female	230	55.7
	Other	0	0
	21-30 yrs	205	49.6
	31-40 yrs	103	24.9
Age	41-50 yrs	65	15.7
	>50 yrs	40	9.7
	Employed/Salaried	275	66.6
Occupation	Self Employed/Business	113	27.4

	Home Makers	25	6.1
	<500 thousand	137	33.2
The family income per annum (INR)	600 thousand-1 million	174	42.1
	1-2 million	74	17.9
	>2 million	28	6.8

Source: Author's findings

Customer service failures leading to post-purchase dissatisfaction in the home appliances industry:

Home appliance companies need to be aware of service failures that result in post-purchase dissatisfaction from customers. Thus, selecting the most relevant and essential dissatisfaction statements from users' plethora of dissatisfaction statements becomes critical. The researchers conducted a factor analysis to know the same. On a five-point Likert scale, respondents expressed their dissatisfaction with home appliance after-sales services, and this study used principal component analysis to extract factors. Varimax rotation was used, along with Kaiser normalization.

Table 3: Reliability Statistics
Reliability Statistics

Cronbach's Alpha N of Items

0.922 37

Source: Author's findings

As shown in Table 3, the Reliability analysis was applied to all 37 variables in this study. According to Hammerton and Nunally (1978), a reliability coefficient of 0.7 is appropriate for further analysis. Cronbach's alpha was found to be 0.922 in this case, indicating that the variables used in this research are reliable.

Table 4: KMO and Bartlett's Test

KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of	Kaiser-Meyer-Olkin Measure of Sampling Adequacy942					
Bartlett's Test of Sphericity	Bartlett's Test of Sphericity Approx. Chi-Square					
	df	666				
	Sig.	0.000				

Source: Author's findings

KMO and Bartlett's Test of Sphericity confirms the validity and reliability of the variables used for the study. KMO checks for sampling adequacy, and Bartlett's Test of Sphericity analyzes the significance of the correlation matrix of the variables. According to the rule of thumb, if the KMO value is ≥0.5, it is advisable to move ahead with PCA. As shown in Table 4, KMO is more than 0.5, demonstrating that the variables used for the study are appropriate for the given set of data, and the strength of the factor analysis solution is 0.942. Also, at five percent significance, for Barlett's test, the p-value is 0.000, which is less than 0.05, indicating sufficient correlations among the statements taken for the study.

Table 5: Rotated Component Matrix Indicating Factors for Customer's Post -Purchase Dissatisfaction Leading to Service Failure

Rotated Component Matrix ^a							
	Component						
	1	2	3	4	5	6	7
The company has unreasonably slow service	.735						
The company does not keep its promise in terms of resolving the issue on time	.706						
The company does not have any facility for instant service in case of an emergency	.688						
The company does not define its after-sale service policy clearly	.682						
Sometimes the company ignores the customer complaints	.671						
The company's online customer interface takes too much time to respond	.626						
The return/exchange policy of the company is not satisfactory	.625						
The company takes a long time for fixing a failed item under warranty	.588						
Sometimes the company charges for the service which I have not asked for	.566						
Most of the time, parts of the product are not replaceable	.558						
The company takes a long-time to respond to warranty claims	.551						
The company's online customer support interface is poorly designed		.787					

I have to pay a massive amount for the spare parts	.737
Most of the time, spare parts are not available	.711
The company's online customer support interface is not user-friendly	.678
In my opinion, service charges by the company are too high	.644
The company does not follow the service compliance as per the service level agreement	.639
Sometimes the company does not perform the required service	.638
The company does not show any concern towards the customer's problems	.632
I need to contact too many people to report any product breakdown or service failure	.617
In my opinion, the company do not foresee the customer needs and wants in terms of service	.514
I feel that the service person does not show any concern towards the customer's problem	.668
I sometimes observe flaws in the product installation done by the company personnel	.663
I feel that the service personnel are rude to customers	.573
The company does not provide accurate information about the time of installation after the purchase of the products	.561
In my opinion, there is a long time elapsed between delivery and installation	.678
I usually do not receive any response from customer support for any email	.585
In my opinion, the company does not keep its warranty promises	.507
I feel Customer support does not show any respect towards the customers while taking the complaints	.721

I feel the Service person does not make an effort to understand and rectify the issue which I face with the product					.594		
The company personnel do not explain clearly the cause of the breakdown of the product						.678	
The company did not give clear warranty terms & conditions to me						.676	
In my opinion, the company usually gives satisfactory reimbursement for the products under warranty						.615	
The company does not resolve the issue in a very first contact							.768
There is a delay in providing the spare parts by the company							.537
Total	6.207	6.018	2.726	2.665	1.952	1.756	1.455
percentage of Variance	16.776	16.264	7.368	7.202	5.276	4.745	3.933
Cumulative percentage	16.776	33.041	40.409	47.611	52.886	57.632	61.565

Source: Author's findings

The rotated component matrix contains the factor loadings, which show how the statements/variables loaded for generated factors help group the variables into factors after varimax rotation. As shown in Table 5, with the cutoff point set to 0.5, 37 statements loaded to a total of 7 factors. The percent of variation explained by the first factor is the highest, at 16.776 percent. The variation rate then decreases with each factor, with the second factor explaining 16.264 percent of the variation, the third factor explaining 7.368 percent of the variation, the fourth factor explaining 7.202 percent of the variation, the fifth factor explaining 5.276 percent of the variation, the sixth factor explaining 4.745 percent of the variation, and the seventh factor explaining 3.933 percent of the variation. So, the total percentage of variation explained by all seven factors is 61.565. The remaining 38.435 percent of variation lost due to factor reduction is unaccounted for by the formed elements. These factors will be referred to as Customer Service failures in this study from now on.

Table 6: Major Customer Service failures

Sl. No	Major failures	Service failure Statements	Factor Loading	Cronbach's Alpha
	0 0	The company has unreasonably slow service	.735	
1	Core Service Deterrents	The company does not keep its promise in terms of resolving the issue on time	.706	0.9

	The company does not have any facility for instant service in case of an emergency	.688	
	The company does not define its after-sale service policy clearly	.682	
	Sometimes the company ignores the customer complaints	.671	
	The company's online customer interface takes too much time to respond	.626	
	The return/exchange policy of the company is not satisfactory	.625	
	The company takes a long time for fixing a failed item under warranty	.588	
	Sometimes the company charges for the service which I have not asked for	.566	
	Most of the time, parts of the product are not replaceable	.558	
	The company's online customer support interface is poorly designed	.787	
	I have to pay a massive amount for the spare parts	.737	
	Most of the time, spare parts are not available	.711	
	The company's online customer support interface is not user-friendly	.678	
	In my opinion, service charges by the company are too high	.644	
2 Poor Service and Its Systemization	The company does not follow the service compliance as per the service level agreement	.639	0.9
	Sometimes the company does not perform the required service	.638	
	The company does not show any concern towards the customer's problems	.632	
	I need to contact too many people to report any product breakdown or service failure	.617	
	In my opinion, the company do not foresee the customer needs and wants in terms of service	.514	

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		I feel that the service person does not show any concern towards the customer's problem	.668	
2	Poor Technical Knowledge &	I sometimes observe flaws in the product installation done by the company personnel	.663	2.0
3	Support of Service Personnel	I feel that the service personnel are rude to customers	.573	0.8
		The company does not provide accurate information about the time of installation after the purchase of the products	.561	
		In my opinion, there is a long time elapsed between delivery and installation	.678	
4	Long Service Lead Time	I usually do not receive any response from customer support for any email	.585	0.7
		In my opinion, the company does not keep its warranty promises	.507	
	Inappropriate	I feel Customer support does not show any respect towards the customers while taking the complaints	.721	
5	Service Person Behavior	I feel the Service person does not make an effort to understand and rectify the issue which I face with the product	.594	0.5
		The company personnel do not clearly explain the cause of the breakdown of the product, suggested the way to rectify the same	.678	
6	Warranty Issues	The company does not give clear warranty/AMC terms & conditions to me	.676	0.6
		In my opinion, the company usually don't give satisfactory reimbursement for the products under warranty	.615	
	Service Spontaneity	The company does not resolve the issue in a very first contact	.768	0.6
7	Failure	There is a delay in providing the spare parts by the company	.537	0.0

Source: Author's findings

Table. 6 provides the names of all the Customer Service failures. The major Customer service failures observed in the home appliances industry are Core Service Deterrents, Poor service and systemization, Poor Technical Knowledge & Support of Service Personnel, Long Service Lead Time, Inappropriate

Service Personnel Behavior, Warranty Issues, and Service Spontaneity Failure. The following sections explain each of these service failures in brief below.

An essential service failure is the Core Service Deterrents. It refers to the issues associated with quality, payment, price, delivery, and customer support. These policy clarities are the main constituents of aftersale service. If these things are not proper, then customers would surely face a high level of dissatisfaction.

The second most crucial factor is Poor Service and its Systemization. The problems falling under this are; poor services in terms of not performing the required services, spare parts un-availability, poor online interface, service systemization, etc. According to respondents, these situations are not ideal for after-sale service.

The third most important factor is Poor Technical Knowledge & Support of Service Personnel which reflects problems entirely based on the service personnel who are the primary contacts to provide the after-sale services to the customers. It includes the poor technical knowledge of the company personnel, flaws in the services offered like flaws in installation, deficiencies in the information provided on the product and its working, etc. The problems vary from person to person, depending upon the technical know-how of the service person.

The fourth most important factor is Long Service Lead Time, reflecting the time taken to respond to the customer complaints and resolving them.

The fifth most important factor is Inappropriate Service Person behavior to discourage customers from purchasing home appliances from the same brand. These include the personal efforts taken by the service personnel and the respect they show towards the customer and their work.

The sixth most important factor is Warranty Issues, which are considered critical factors for customer dissatisfaction, including non-clarity in warranty terms and conditions and dissatisfaction reimbursements.

Finally, the last important factor is Service Spontaneity Failures, which include poor company responsiveness in providing the services during emergencies or urgency.

4. Findings and Discussions

This study assists home appliance companies in understanding the dynamics of after-sales service failures and their potential for extreme dissatisfaction. Customers are concerned about all service failures, which can range in severity from mild to severe. As a result, home appliance companies must understand the potential risks that minor service failures may bring and devise firm after-sale service management strategies to avoid them.

Companies can avoid initial customer dissatisfaction by providing timely service, i.e., reducing service lead time, which was identified as a significant area of concern in the after-sale service by this study (Lee & Park 2005). The current study's findings empirically support the results of other studies, such as those of Choudhary et al. (2014). The warranty issue was identified as one of the significant service failure areas

following the sale of the goods in this study. Service systemization is a critical area, according to Hussain et al. (2011). Customers are dissatisfied because the service delivery system is not well-organized.

Various service failure areas must seriously consider training employees on their behaviour when dealing with the technical know-how of customers, which is also regarded as the primary concern. Other areas include core services such as spare parts availability and return/exchange policies. These service failures may or may not be critical in and of themselves, but they may significantly impact customers' negative behaviour. Hence, the current study provides additional knowledge and understanding to company managers to better realize after-sales service strategies, increase customer satisfaction, and decrease negative customer behaviours.

5. Conclusion

According to most researchers, achieving excellent service performance is essential for any company. On the other hand, consistent service performance is difficult to achieve (Sangeetha & Mahalingam, 2011). The primary goal of this research is to identify major after-sales service failures. This study presents novel insights into the dynamics of after-sales service failure areas as captured by customer perceptions. This study broadens people's understanding of service encounters and after-sales service failures in the home appliance industry.

This research identified seven major areas of after-sales service failure. They are Core Service Deterrents, Poor Service and Systemization, Poor Technical Knowledge & Support of Service Personnel, Long Service Lead Time, Inappropriate Service Person Behavior, Warranty Issues, and Service Spontaneity Failure. These major identified customer service failures will assist managers in developing strategies to avoid further dissatisfaction or losses.

6. Limitations of the study and Future research

No research can be considered complete and must have limitations. First, this research is limited to Bangalore; therefore, future research can include other geographic areas. Second, this research contributed to identifying only the significant causes of after-sales service failure. Still, these after-sales services' true impact or influence on customer behaviour has yet to be found out and understood. Third, additional research can include interviews with the employees of home appliances companies and customer support teams to understand commonly recurring customer complaints better.

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