Assessing the Performance of Service Failure Categories from Employee Perspective

Hsi-Tien Chen, Department of Leisure Industry Management, National Chin-Yi University of Technology, Taiwan

ABSTRACT

Early service marketing research concentrated on defining and measuring service quality; later research examined customer defection behavior due to service failure. However, previous literature paid little attention on how to apply the relationship between the frequency (or performance) and severity of service failure categories to assess service performance and translate service failures into improvement strategies. Based on service failure perspective of employee perception, this study used the concept of Importance-Performance Analysis grid to construct a Severity-Performance Analysis (SPA) grid and demonstrate an illustrative example to present the application of the SPA grid. It can be applied to improve service quality management and make resource allocation recommendations since it is a simple, low-cost, effective, and easily understood approach. Importantly, the SPA approach can offer enterprise managers insight and guidance for service performance improvement from different viewpoints and complementing the shortage of traditional assessment methods of service performance and identifying action strategies.

INTRODUCTION

Some studies have confirmed customer satisfaction is one of principal drivers of financial performance (Eklof, Hackl and Westlund, 1999; Zeithaml, 2000). Excellent service quality has gained in importance as a means of enhancing customer satisfaction and loyalty (Gouthier et al., 2012). Hence, understanding what influences consumer satisfaction can help firms design and deliver appropriate offers to meet market demand (Wu and Liang, 2009). Inherently, services are intangible, indivisible, variable and perishable (Fisk, Brown and Bitner, 1993). Thus, no matter how hard service planning and quality management tries to provide zero-defect services, and problems like delays, forgotten orders, or untrained staff may occur at any stage of a service process (Johnston and Hewa, 1997). Collier (1995) reported that customers who experienced a service failure told nine or ten individuals about their poor service experience. Halstead, Morash and Ozment (1996) revealed that a single service failure could potentially lead to multiple complaints, and it may result in severe consequences such as customer defection (Johnston and Hewa, 1997; Smith, Bolton and Wagner, 1999). Some studies (e.g., McCollough, Berry and Yadav, 2000; Michel, 2004) have offered evidence that post-recovery satisfaction levels are not restored despite effective recoveries. Hence, damage of business image and financial losses are generally inevitable when service failures occur.

A primary challenge to business management in the service industry is providing quality service to customers and keeping them satisfied. The assessment of service performance for firms is crucial. Early service marketing research focused on defining and measuring service quality (e.g. Chen, Chen and Lin, 2012; Zeithaml, 2000). As mentioned by Halstead et al. (1996), an objective measure such as service
failures may have less measurement error and less bias than a subjective measure such as consumer satisfaction (or service quality). To further explore and analyze the causes of consumer defection, some research (e.g., Bitner et al., 1990 & 1994; Hoffman, Kelley and Rotalsky, 1995; Ha and Jang, 2009; Sizoo, Küpper and Agrusa, 2011) examined customer defection behavior according to service failure. However, the literature about service failure paid little attention to the relationship between the frequency (or performance) and severity of service failure, how to apply them to assess service performance and translate service failures into improvement strategies. The Importance-Performance Analysis (IPA) grid may provide a valuable thinking direction and solution for above issues.

Also, the objects of prior service failure classification and related research primarily focused on the consumers rather than employees (e.g., Bitner et al., 1990; Hoffman et al., 1995; Mueller et al., 2003). However, Bitner et al. (1994) believed that it is crucial to understand the service encounter from different perspectives because the encounter involves at least two people (i.e., a customer and an employee). Therefore, they explored the critical service encounter from the employee perspective to remedy the lack of service failure classification proposed by Bitner et al. (1990). Because it is convenient for firms to observe and assess service performance of service failure categories from employee perspective, the current study assessed service performance of service failure perspective from employee perspective.

Based on the concept of IPA, the present study aims to propose a Severity-Performance Analysis (SPA) grid from service failure perspective to assess service performance. The grid is constructed and used to assess the service performance by simultaneously applying the frequencies (or performances) and severities of service failure categories. It can also define improvement priorities of service failure categories and guide resource allocation decisions. Ultimately, an illustrative example of chain restaurant with three stores was used to demonstrate a practical application of the SPA grid.

**THEORY BACKGROUND**

**Service Performance and Service Failures**

Andreassen (2001) mentioned that a service failure occurs when the service encounter falls short of the customer’s expectations. Regarding the research on “service failure classification,” the critical incident technique (CIT) is a qualitative research method that has been widely used in service failure and service recovery classification research (e.g., Bitner et al., 1990 & 1994; Hoffman et al., 1995; Mueller et al., 2003). Kelley and Davis (1994) mentioned that the frequency and severity of service failures are both quite important factors affecting service performance except for the timing of service failure occurrences. When a service failure occurs, the failure severity will determine the level of recovery required to restore customers’ satisfaction. Hence, the different frequencies and severities of service failures result in different levels of service performance losses for firms.

Although customer complaints provide managers with an opportunity to learn about problems and take appropriate corrective actions to ensure the mistakes do not recur (Namkung et al., 2010), service failure ultimately leads to a decline in customer confidence, negative word-of-mouth, reputation damage and the direct cost of re-performing the service. Some prior research (Smith et al., 1999; Weun, Beatty and Jones, 2004) on how customer response to service failures reported that the higher the severity of service failure, the lower the level of customer satisfaction and service performance is. As pointed by Smith et al. (1999), in failure/recovery encounters, customers will prefer to receive resources in amounts commensurate with the severity of the failure they experienced and the added value of the recovery resources is reduced as the customer’s loss gets larger. Thus, more severe failure is generally more difficult to resolve with an effective recovery (Hoffman et al., 1995).
Maxham III and Netemeyer (2002) suggested that firms cannot merely become recovery experts and need to get it right the first time. Since prevention is always better than cure, the frequency of service failure should also be monitored and controlled to pursue the better service performance. Clearly, the lower the frequency of failure categories, the better the service performance is. The larger the severity of service failure, the smaller the tolerable frequency of service failure is. Hence, reducing the frequency of severe failures can enhance service performance and customer satisfaction.

**Importance-Performance Analysis**

To assist in understanding customer satisfaction as a function of both expectations concerning the product/service attributes and judgments about their performance, the IPA grid was proposed by Martilla and James (1977) in marketing research (Mullins and Spetich, 1987). This technique offers a simple, yet useful method for simultaneously considering both the importance and performance dimensions when evaluating the performance of quality attributes or identifying action strategies. It has also been successfully used in a variety of settings and to assess a firm’s competitive position in the market, identify the opportunities of improvement and resource reallocation, and guide strategic actions (Ainin and Hisham, 2008; Enright and Newton, 2004; Frauman and Banks, 2011; Lai and To, 2010; Lin, Chan and Tsai, 2009; Wilkins, 2010). Figure 1 illustrates the IPA grid. The y-axis shows the service attribute importance, and the x-axis represents service attribute performance. In practice, the overall means of attribute performance and attribute importance are commonly utilized to divide the grid into four quadrants. Then, the IPA grid is constructed and four quadrants are called “Keep Up the Good Work,” “Concentrate Here,” “Low Priority” and “Possible Overkill,” respectively.

![Figure 1: Importance-Performance Analysis (IPA)](chart)

Along the similar line, this study constructed and used a SPA (Severity-Performance Analysis) grid to assess the service performance from service failure perspective. It can also be divided into four quadrants which are similar to IPA grid.
RESEARCH METHODOLOGY

Development of Service Failure Categories

Because the present paper assesses the service performance from service failure perspective of employee perception, “service failure” is defined as “any service-related events (mishaps or problems) of employee perception that makes customer dissatisfied occur during a service process” in this paper. Moreover, the present study adapted service failures categories proposed by Bitner et al. (1990, 1994), Hoffman et al. (1995) and Mueller et al. (2003), made additions and revisions based on case restaurant scenarios and experts’ opinions (including 2 restaurant managers, 2 related-field professors and 3 long-term customers) to develop the questionnaire. Finally, 4 failure groups and 20 failure categories for the restaurants -- “Service delivery system failures” (7 items), “Customer needs and requests” (5 items), “Unprompted/unsolicited employee action” (6 items) and “Problematic customer behavior (2 items)” -- were generated (Table 1). They should possess good content validity and can correctly represent service failures of employee perception.

To keep the integrity and accuracy of the questionnaire, the seven experts examined and discussed the 20 failure categories and relevant descriptions. Subsequently, they provided revised suggestions when they find any lack of clarity or response difficulties. Additionally, a foreign language teacher was hired to complete the back translation to avoid translation errors and ensure the original meaning is expressed. Therefore, the questionnaire scale should achieve a high level of expert validity. The service performance can then be measured by the severities and frequencies of the failure categories.

Formal Questionnaire Design and Survey

The above-mentioned 20 failure categories were employed to design a questionnaire. The questionnaire consisted of three parts. Part I included questions on gender, age, length of service, and position. Part II consisted of 20 items assessing the severity of service failure (“how severe is this service failure category?”). Part III consisted of 20 items assessing the performance of service failure categories in D chain restaurant (“did this service failure category rarely occur?”). Since Michel (2004) utilized a 3 point scale -- “acceptable”, “unacceptable” and “absolutely unacceptable” to assess the severity of service failure, a Likert-type 5 point scale of “severity” (or “agreement”) ranging from 1 to 5 (in which ‘1’ represented ‘very not severe’ (or ‘very disagree’) and ‘5’ represented ‘very severe’ (or ‘very agree’)) was employed in part II (or part III). In September 2012, the questionnaires were distributed to 42 regular employees with working one year above in D chain restaurant. In all, 36 valid questionnaires were returned (a usable rate of 85.7%).

Construction of the SPA Grid

The lower the frequency of service failure, the better the service performance is. Otherwise, the service performance is worse. Along the similar line, the service performance of service failure categories is used to represent the frequency of service failure categories in this study. Because the customer satisfaction is affected by both perceived severity and frequency (or performance) of service failure categories, customer satisfaction is a function of perceived severity and performance of service failure. It is similar to the assumption of IPA grid (Martilla and James, 1977). Based on the viewpoint of service failure, the “importance (I)” and “performance (P)” in IPA are replaced with the “severity (S)” and “performance (P),” respectively, to construct a SPA grid in this study. The questionnaire data from a perceived survey of severity and performance of service failure for a restaurant is utilized to construct a
two-dimensional grid, SPA. In this grid, the severity of service failure category is depicted along the y-axis and the performance of failure category is depicted along the x-axis. The severities and performances of service failure categories are measured using self-stated rating scales. The overall means of all severities and performances are utilized to divide the grid into four quadrants shown as Figure 2.

![Figure 2: Severity-Performance Analysis (SPA) Grid](image)

There are few different features between the SPA and IPA grid. For instance, the measuring objective of SPA grid is service failure, but the one of IPA grid is service quality. The contents of x-axis and y-axis are different and so forth. However, the idea and methodology of the SPA grid is similar to IPA grid.

In Quadrant I, the performances of failure categories are perceived to be fairly high (i.e., failure frequencies of failure categories are low). At the same time, the corresponding failure categories are seen as very severe to respondents. They are major strengths and should be classified as “Keep Up the Good Work” in SPA. However, Michel (2004) indicated the negative effects of ‘unacceptable’ or ‘absolutely unacceptable’ failures are not only significant, but are also of great magnitude. That is, severe service failures are likely to cause a customer to switch firms. Negative word-of-mouth may affect the firm’s reputation and even cause domino and halo effects (Halstead et al., 1996). Therefore, the enterprises should not overlook severe failure, especially on the failure categories which are close to “Concentrate Here.” Thus, the enterprise managers should always be vigilant for the severe failure categories, while also perform good education training and set up appropriate service recovery strategies. Thus, “Keep Alert” may also be a managerial strategy for some enterprises in this quadrant.

In Quadrant II, the failure categories are perceived to be very severe to respondents, however, the performances of failure categories are seen as very low (frequencies of failure categories are high). Thus, the failure categories are major weaknesses and require immediate attention for improvement. Thus, the improvement efforts should “Concentrate Here” in SPA.

In Quadrant III, the failure categories have low severity and low performance (or high frequency). Although the performance of failure categories may be low in this quadrant, managers should not be overly concerned since the failure categories are not perceived to be severe. They are minor weaknesses and the management strategy should be classified as “Low Priority” in SPA. Limited resources should not be preferentially expended on this quadrant. However, high frequency of service failure highlights the lack of staff education training or an effective service management system. The improvement priority of failure categories in this quadrant is inferior to the failure categories in “Concentrate Here.” In Quadrant
IV, the failure categories have low severity and high performance (or low frequency) to respondents. They are minor strengths and should be classified as “Possible Overkill” in SPA. The enterprises should not invest too many resources to improve the performance of the failure categories in this quadrant.

Usually, there are several failure categories in individual quadrants of the SPA grid. Sometimes, it is difficult to determine the performing sequence of strategic actions. In particular, it is critical to identify and prioritize the improvement of the failure categories in the “Concentrate Here”. This paper employed the magnitude of service failure severity to identify improvement priority of service failure.

**ILLUSTRATIVE EXAMPLE AND DISCUSSIONS**

*D* chain restaurant with three stores in Taiwan was established in 2002. Since its operations began, this restaurant has upheld the mission principles of “Quality, Service and Delicacy.” Over the years, this restaurant has been maintaining a good performance and reputation in the local catering market. However, the operation performance of first quarter in 2012 was analyzed and compared with the same period of last three years, the average number of customers decreased and customer complaint events significantly increased. The SPA grid was apply to provide appropriate improvement actions and enhance decision-making quality.

**Respondent Profile and Descriptive Statistics**

The demographic profiles of *D* restaurant’s employees were presented as follows. The sample included 22 females (61.11%) and 14 (38.89%) males among the respondents. The main age group was 18–30 years old (69.44%). In terms of length of service, 1-3 years attained 55.56%, while the others are distributed sequentially: 3-5 years (25.00%), 5-7 years (11.11%) and over 7 years (8.33%). The main job position was frontline employees (77.78%) and the leaders (including 1 store managers, 3 assistant managers and 4 directors) attained 22.22%.

The means and standard deviations of the severity and performance ratings of service failure categories for *D* restaurant were calculated and displayed in Table 1. The most severe top-three-ranking failure categories are “Poor service attitude,” “Cultural norms violated,” and “Seating problems,” respectively. They are between “severe” and “extremely severe.” The “Unreasonably slow service,” “Lost order” and “Product defects” are perceived as the three worst failure categories. Ultimately, we can calculate and obtain total mean severity (3.73) and total mean performance (2.96) of all service failure categories in Table 1.

**Table 1: Descriptive Statistics of Severity and Performance for Failure Categories**

<table>
<thead>
<tr>
<th>Failure groups</th>
<th>Failure categories</th>
<th>Severity</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>Service delivery system failures</td>
<td>1.Unavailable service</td>
<td>3.80</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>2.Unreasonably slow service</td>
<td>3.75</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>3.Cook error</td>
<td>3.65</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>4.Product defects</td>
<td>3.83</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td>5.Facility problems</td>
<td>3.58</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>6.Unclear policy</td>
<td>3.64</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>7.Out of stock</td>
<td>3.35</td>
<td>1.06</td>
</tr>
<tr>
<td>Customer needs and requests</td>
<td>8.Customer special needs not met</td>
<td>3.42</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>9.Customer preferences not met</td>
<td>3.47</td>
<td>1.14</td>
</tr>
</tbody>
</table>
The SPA Grid

Based on Table 1, we used total mean severity and total mean performance to divide the SPA grid into four quadrants. Next, the mean severities and performances of all individual failure categories were plotted on the SPA grid. The SPA grid then was constructed as Figure 3. According to the management strategy of each quadrant, the restaurant manager decided a reasonable action plan for each failure category in each quadrant as below.

Quadrant II ("Concentrate Here") consisted of four failure categories, including "2. Unreasonably slow service," "4. Product defects," "15. Poor service attitude," and "16. Lost order." These failure categories are major weaknesses and require immediate attention for improvement. The improvement priority of failure categories in this quadrant is based on the severity magnitude of failure categories (See third column of Table 1 for detail). Since the severity magnitude of "15. Poor service attitude" was the largest, it is suggested that the manager should make special efforts on front-line staff education training. Some researchers also emphasised that hospitality training in the service attitude of employees is a very critical factor affecting customer satisfaction (Heskett & Schlesinger, 1994; Kuo, 2004 & 2009). Also, delegating authority, establishing a convenient customer complaint system, motivating employees stressed from heavy workloads, designing a motivation system tailored for part-time and heavy-load
employees, recruiting employees with good appearance and posture, and conducting an employee politeness race and so forth may be good strategies for improving service attitude. Next, the severity magnitude of “4. Product defects” was identified as the second priority. The restaurant manager must pay special attention to and make more efforts to solve problems with the products. These include cold, raw, burnt or spoiled food and inanimate objects found in the customer’s food, such as hair, glass, dead insects etc. To overcome the shortcomings, improvements like strengthening cooking and kitchen staff training, improving food and material quality management and executing diagnosis of the food delivery system should be employed.

The failure category “16. Lost order” was identified as the third priority for improvement. The restaurant’s customers were very concerned with misplaced or unfulfilled orders. Besides staff education training, the restaurant should make more efforts to improve the service delivery system and establish a computer-aided order system to reduce this category of service failures. Also, releasing number plates in sequential order may reduce the opportunity of misplaced orders. Next, “2. Unreasonably slow service” was identified as the fourth priority for improvement. It is suggested that the manager should ask the staff to actively care about the customers’ needs and help them immediately. Meanwhile, the manager may improve the service delivery system, construct a reservation system and adjust the service strategies based on service and production capacity of the restaurant. Finally, the manager can consider how to extend the customer’s tolerable waiting time. For instance, providing free newspapers and magazines, offering a free beverage and comfortable seating, constructing a good atmosphere, and so forth.

Quadrant I (“Keep Up the Good Work” or “Keep Alert”) contained five failure categories, including “1. Unavailable service,” “10. Seating problems,” “14. Cultural norms violated,” “17. Wrong order,” and “18. Mischarged.” They are major strengths in SPA. Because once severe service failures occur, the serious losses of finance and business reputation cannot be avoided. As mentioned by Michel (2004), business managers have to be aware of the possibility of an accelerating downward spiral when service failure gets worse. For instance, a customer who encountered “Unavailable service” failure may leave for another restaurant. Since this failure category is the closest to the “Concentrate Here”, the managers should keep alert to prevent this failure category fall into “Concentrate Here.” It is suggested that the manager should ask the on-duty supervisor to monitor and pay more attention to customer needs and help them immediately at any time. Meanwhile, the manager should improve the service delivery system to significantly eliminate this category of service failure. In addition, it is necessary to inform customers about unavailable service items in advance and perhaps to remove the frequently unavailable service items in the menu.

Quadrant III (“Low Priority”) contained two failure categories, including “7. Out of stock,” and “12. Poor level of attention.” Since the improvement priority of failure categories in “Low Priority” is lower than that of the failure categories in “Concentrate Here,” the limited business resources should not be preferentially expended on the improvement of “Out of stock” and “Poor level of attention.” However, to pursue excellence and avoid occurrence of domino and halo effects, the restaurant manager may offer extra resources or efforts to improve the shortcomings of “Out of stock” and “Poor level of attention” after improving failure categories in “Concentrate Here.” Performing staff education training and establishing a good service management and inventory control system are still crucial factors for solving the two failure categories above. Quadrant IV (“Possible Overkill”) contained nine failure categories. The restaurant should not invest too many resources to improve the performance of the failure categories in this quadrant. The extra resources can be reallocated to the improvement actions of other failure categories in “Concentrate Here” or “Low Priority” quadrant according to the restaurant’s policy or
strategy. As proposed by Namkung et al. (2010), avoiding inefficient investments is crucial to the success of the restaurant.

In summary, error detection systems can provide the important information not only to recover from current customer problems, but also to prevent future service failures and customer complaints (Halstead et al., 1996). In addition, since successful and equitable handling of complainers is critical to avoid a spiral of increasing complaints, the managers should also set up appropriate service recovery strategies aside from carefully selecting employees and performing good education training. Therefore, a standard operation process of service failure recoveries must be established for this restaurant. For instance, the restaurant should: apologize first, listen carefully to customer complaints and opinions, understand the problem of the customer, provide and conduct a recovery alternative, confirm the effect of the recovery alternative, and finally get feedback and add it to the database of the failure recovery system to better deal with similar failure categories in the future.

CONCLUSIONS

To complement the shortage of traditional assessment methods of service performance, this study proposed a SPA approach to measure the service performance of restaurants from a service failure perspective of employee perception. An attractive merit of the SPA is that the analysis results can be graphically displayed on an easily-interpreted two-dimensional grid. It can offer other advantages for evaluating service performance from service failure perspectives. It not only can yield important insights into which aspect of the service failure may be inferior and require more attention and effort, but it can also identify service failure categories that may maintain an advantage, stay vigilant or consume too many resources. Presentation of the results on the SPA is beneficial to interpretation of the data for management purposes and efficiently enhances their practicality in making service performance improvement decisions. Also, the SPA approach can be applied in other industries to assess the service performance, and identify improvement priority of service failure and resource reallocation strategy.

The application and literature of IPA approach in recent years are popular and widely applied in many fields such as Ainin and Hisham (2008), Wilkins (2010), Lai and To (2010), Frauman and Banks (2011) etc. Similarly, the SPA approach can also be applied in many fields since it is a simple, low-cost, effective, and easily understood approach. Importantly, the SPA approach can offer enterprise managers insight and guidance for service performance improvement from different viewpoints such as measuring objective, thinking perspective and so forth. By providing methodology and guidance, it can be useful tool for enterprises making efforts to solve the questions of why and how they should execute service performance assessment with the SPA grid.

In the future, continuing research on the SPA will hopefully acquire more ample research results and better-applied paradigms. For instance, using multiple grids to deal with distinct segments and to examine their validity, dividing service failure categories into more detailed failure items to assess more comprehensive service performance, developing a more valid and reliable measuring instrument for service failures, improving or revising SPA to match the features of different fields and so forth. In addition, the SPA is not a dated or too simplistic technique. Actually, as mentioned by Huan, Beaman and Shelby (2002), different approaches to a problem have their advantages and may complement each other, particularly by their use at different stages of formulating strategies and related action plans.
REFERENCES


