

#### 1. Customer Care Registry

Authors: Dong Pei-wu, Huang Yan-qiu

**Year:** 2016

By the further research into service recovery, it is found that customers will do complain when they get poor services. And the most complaining behaviors have two forms, one is negative word-of-mouth, the other is complaining. In existent service failure studies, the difference between complaining and non-complaining customers has been found in terms of satisfaction level as well as service recovery expectation. However, no further effort has been made to ascertain whether service recovery will have different effects upon complaints and non-complaints. This paper, through scenario experiment method, is designed for a comparative analysis on the different effects of service recovery upon complaints and non-complaints. In consequence, it tries to analysis whether it will have significant effects between complaining and non-complaining customers after they get same service recovery.

### 2. Consumer Complaints in Banking Industry

Authors: Surbhit Chugani, K Govinda, Somula Ramasubbareddy

**Year:** 2018

This paper focus on exploring and analyzing Consumer Finance Complaints data, to find how many similar complaints are there in relation to the same bank or service or product. These datasets fall under the complaints of Credit reporting, Mortgage, Debt Collection, Consumer Loan and Banking Accounting. By using data mining techniques, cluster analysis as well as predictive modeling is applied to obtain valuable information about complaints in certain regions of the Country. The banks that are receiving customer complaints filed against them will analyse the complaint data to provide results on where the most complaints are being filed, what products/ services are producing the most complaints and other useful data. Our model will assist banks in identifying the location and types of errors for resolution, leading to increased customer satisfaction to drive revenue and profitability.

#### 3. Consumer Complaints Management System

Authors: Pattamaporn Kormpho, Panida Liawsomboon, Narut Phongoen, Siripen

Pongpaichet **Year:** 2018

Customers are the essential factor in the organization. The business has to support the customers' preferences and demands for creating the customer loyalty, which make the customer still purchases with the particular company. The customer may feel dissatisfied with the service when he or she receives the delay of services and they do not know the channel for filing the complaint, and also the current complaint handling in the organizations still has the problems. Therefore, we, developers of this project implemented the Smart Complaint Management System (SCMS) consisting of the mobile application, chatbot and web application, for solving the customer's dissatisfaction issue. Furthermore, the SCMS has the service for classifying the complaint, then automatically direct to the responsible department, and the service for finding the similar complaint to avoid submitting the duplicate complaint. The test result shows that this system is able to reduce the time and procedures for complaint handling, increase the channel for filing the complaint, and increase the channel for progress reporting and tracking the status of the complaint.

### 4. Automating Customer Claim Registration by Text Mining

**Authors:** Peyman Beyranvand, Tevfik Aytekin

**Year:** 2020

In this paper, we present the use of text mining and machine learning in call centers to increase the efficiency of registering customer claims and improving customer satisfaction. Our proposed method makes the process of claim registration faster and more accurate compared to experienced call center agents. Use of text mining and machine learning techniques will increase the customer satisfaction and endows the call center staff with better ways to help the customer.

# **5.**Announcing Delay Information to Improve Service in a Call Center With Repeat Customers

Authors: Miao Yu, Chunguang Chang, Yu Zhao, Ying Liu

**Year:** 2019

We study the model of predicting and announcing delays, including customer satisfaction and repeat the behavior. In a call center, anticipated delays affect the customer behaviors of balking and reneging; we characterize the level of satisfaction with delay information to modulate customer reactions. In reality, a customer reacts by repeating behavior upon entering the service with a full perception of the delay. In particular, customers may feel dissatisfied when entering service because they have experienced a delay that is longer than announced. That is how satisfaction with delay information and waiting time affects customers' repeat behavior. Generally, customers may arrive at a higher rate when they are satisfied with the anticipated delay and the waiting experience in a call center. We characterize such performance measures using an M/M/+M queue model. The revenue of a call center is generated by serving customers, and each time a customer abandons a call, the system loses revenue. Interestingly, the model reveals the revenue from the repeat behavior of satisfied customers. The formula used to approximate the arrival process reveals that traditional research could systematically underestimate the total number of call-ins and revenue. We show how call center managers can determine the most economically optimal anticipated delay so that they can control the trade-off between revenue loss and revenue from satisfaction.

## 6. Framework for Sentiment-Driven Evaluation of Customer Satisfaction With Cosmetics Brands

**Authors:** Jaehun Park

**Year:** 2020

Cosmetics brand managers' efforts in monitoring customer satisfaction and service quality have suffered due to the lack of effective analysis methods. In order to derive more comprehensive and objective insights into customer opinions on product quality and preferences for cosmetics brands, this study derived an online-review-based process for evaluation of customer satisfaction. The present study developed a systematic approach to the evaluation of relative customer satisfaction with cosmetics brands via sentiment analysis and statistical data analysis, and interpreted the determinants of positive and negative opinions via Term Frequency-Inverse Document Frequency (TF-IDF) analysis. To illustrate the efficacy and applicability of the proposed approach, an empirical case study applying it to the global top 26 cosmetics brands was conducted, which evaluated relative customer satisfaction with brands and examined the main causes of positive and negative opinions. The proposed approach is expected to be employed by cosmetics companies to realize or improve satisfaction with the brands that customers evaluate. Furthermore, we hope that it can be used as a source of fundamental data that could be applied to efforts to improve both brand competitiveness and provision of systematic services.

## 7. Customer Perceived System Reliability and its Application in EV Charge Station

**Authors:** Jiliang Zhang

Year: 2018

Certain systems are designed for providing services or utilities to customers. Such services or utility need to be sufficient to satisfy customers. The ultimate performance measure of these systems is customer satisfaction. For simplicity purpose, the term of utility will be used in the rest of the paper but it could mean service. Customers care about not only the availability of the utility but also the quantity of the utility. EV charge station is a good example. It provides charging power to the vehicles. When the customers come to the site, they want the charge port ready for them and can charge the vehicle reliably during the session per their expectation. They can be unhappy not only if the charge port is down but if the charging time takes too long than the rated. In this paper, inherent reliability is defined as the system's ability to provide utility to customers without considering customer perspective. Customer perceived reliability is the reliability that customers truly feel. The inherent system reliability may not necessarily be fully reflected in the customer perceived reliability. Detailed explanations are provided in Section 1. Defining and utilizing customer perceived reliability provides important aspect in understanding and improving system performance for customer satisfaction. In the rest of paper, several aspects of customer perceived reliability are discussed. The customer perceived reliability and availability for multi state system is defined and studied. The customer perceived reliability based component reliability importance is proposed. The results are applied to a simplified EV charge station, and the customer perceived availability is calculated and discussed. The potential applications is summarized in the last section.