

An examination of customer reviews for service process innovations: A study with respect to E-travel services

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Abstract—This study analyzed the online reviews of e-travel service customers for redesigning the service processes for better customer experience. The data for the study was customer reviews about online travel services shared in blogs and social media platforms. The general sentiments of the reviews were negative and significant areas of customer dissatisfaction were related booking procedures, refund policy, airlines ticket booking process, service quality of hotels in the e-travel service network. Redesigning service processes fall under ad-hoc innovations, which make the service offer more customer-oriented and capable addressing customer problems. Further, the research suggested major areas of process modification helpful in increasing positive reviews in the social media. An effective B2B enterprise resource planning (ERP) software connecting the demand side and supply side of the services and effective after sales process such as cancellation issues, rescheduling, miscommunication regarding flight changes, refund issues, etc. from partner firms may ensure customer experience optimization

Keywords— Customer Reviews, Social Media, E- Travel Services, Text Mining, Sentiment Analysis Introduction

I. INTRODUCTION

Social media is an amalgamation of a series of websites and applications designed to enable people to share their thoughts on a real-time basis to large masses in a cost effective manner [1]. A review is an opinion or a feeling shared by a customer about the consumption experience [2] in a product or service encounter. Such reviews, supply the most valuable customer feedback to the firm [3] about customer perceptions about various attributes in a product. Now, customers have many options to share their reviews, and social media platforms are the most preferred and easily available ones [4]. With the penetration of social media, firms started using it as a tool for business activities, especially in the fields of customer relationship, customer acquisition and customer-centric product or service developments [5]. Social media offer valuable insights about customer needs, beliefs, and problems that help firms in bringing customer orientation in product design and marketing strategies. The crux of social media linked marketing lies in identifying relevant content that informs about customer perceptions. Further, these insights about consumer behavior help firms in developing strategies to inculcate positive feelings with a firm's offers. An intention to share positive feelings [6] about a firm by the customer in social media helps the firm to acquire new customers cheaply and thus competitive advantage. Therefore, it is important to firms to track customer mentions appearing on social media about products and services they cherish or criticize. Such reviews form an unbiased of data [7] to

analyze customer priorities that are critical in new product development or modifications of existing ones.

Social media analytics attempt to collect and analyze data from social media platforms for gaining valuable insights that help in business decisions [8]. The scope of such analytics proceeds beyond frequent monitoring or fundamental analysis of tweets or "likes" to understand about a customer, and aims to enhance social media collaboration across business functions, such as marketing, customer services, new product design, etc. Social media serves as an excellent source of information to understand consumer choices, intentions, and sentiments [9] on a real-time basis. Service products always have the option to redesign their product more frequently than tangible products. Process modifications are bound to generate a new look and feel to every existing service. Process modifications can be touch point optimization, customer service journey revamping or through personalization efforts [10] in accordance with priorities of customers. All such efforts achieve proper direction from the analysis of customer reviews available in social media platforms. In this study, we attempt to analyze online customer reviews about e-travel services in India for developing strategies for optimizing customer experience.

Background: India, one among the leading countries in the world regarding internet users and Facebook users have an immensely high potential for growth in the online travel service business. E-Travel services account for 71% of e-commerce business in India [11]. The growing trends in leisure and business tourism, predicts more dependence of customers on e-travel services in planning travel related requirements. Now, travelers prefer to plan their itineraries after careful analysis of all available inputs from online travel support websites. The information sought may range from ticket availability, ticket booking, hotel identification and bookings, travel insurance, and destination specific arrangements. The growth in the need for E-travel services has led to an increase in the number of offerings and promotions for customer acquisition and retention. The traveler considers an e-travel website as a single shop for all the travel related needs. Many e-travel service providers offer complete solutions for online hotel bookings, holiday packages, travel guides, air tickets, rail and bus tickets, customized holiday packages and MICE (Meetings, incentives, conferences, exhibitions) to individual and group travelers. However, there exist many voids in the customer service area, which requires attention for achieving better customer experience and thus satisfaction. Therefore, in this paper, we have attempted to identify potential areas of customer service improvement from the analysis of online reviews about existing e-travel portals. We hope that the

insights retrieved from the analysis of customer reviews will help in redesigning their service product.

II. LITERATURE REVIEW

Many studies have identified that online customer reviews are strong influencers behind customer purchase decisions [12], [13]. It is estimated that 90% of consumers read online reviews, and 88% of them trust online reviews during decision making [14]. An online review helps customers in decisions related to major complexities attached to a buying process [15]. The quality of reviews attracts customers to the service provider and helps in increasing organic searches [16] which in turn significantly improves the effectiveness of marketing activities. A review is likely to contain customer views about their needs, problems and how the products performed in comparison with their expectations and what should have been a better solution. An examination of such information offers excellent ideas for every firm in redesigning service processes.

New product development is a process of creating a product or service from the conception of an idea to delivering it to the customers. The process includes ideation and concept generation and ending with the product's introduction to the market. The BAH model [17] suggests that different stages in the process of new product development are strategy, idea generation, screening and evaluation, business analysis, development, testing, and commercialization. The first step of business strategy helps to align their product design to the overall objectives of the firm. However, in the case of service development, idea for new services emerge from systematic planning and design of various attributes in the service process [18] and rarely ideation occurs by chance [19]. The role of environment in the creation and performance of services [20] is established and therefore, service process configuration is conditional upon the degree of adaptiveness to environment. The simplest model of new service development contains four stages like design, analysis, development, and launch [21] and in this model the scope of feedback in service design is highlighted. The feedback analysis is critical, because heterogeneity and intangible nature of services makes it difficult to standardize the activities involved in service production and hence feedback from customers offer valid insight about gaps service quality.

According to Nobel Laureate, Joseph Schumpeter, innovation brings change and something, new emerges. While an invention is the first occurrence of an idea for a new product or process, innovation helps to execute it to the acceptance of stakeholders [22]. Innovation is about a positive action, even though not perfect, but creates an incremental change capable of bringing wonders [23] in overall value perceptions. Incremental Innovation is a common form of innovation where marginal changes are brought in for better value perceptions through small design changes to existing products. Almost all companies engage in incremental innovation in one form or another. Six types of innovation that take place in services, namely radical innovations, incremental innovations, improvement innovations, combinatory (architectural) innovations, formalization innovations, and ad hoc innovations [24]. Here, ad hoc innovations are due to the interactive (social) construction of a solution to a particular problem put forward by a customer [25]. Such innovations in services are essential

for retaining customers [26], and to enhance the scope of ad-hoc innovations customer feedback by way of reviews are important.

In the four-dimensional model of service innovation" [27], emphasize the need to engage in many changes within the various parts of the service process to innovate it. The four dimensions to analyze innovation are new service concept dimension, new client interface dimension, new service delivery system dimension, and technological options dimension. All these dimensions are customer centric and therefore requires their views for making changes. Customer feedbacks offer insights for creating such innovations in a service product. A modification made to an existing product for greater appeal or functionality by changing product's shape or by adding a new feature that enhances performance falls well within the scope of new product development [28]. Such marginal changes often provide a new product feel to customers and in turn increases their value propositions. Services has plenty of such opportunities to make modifications in the service creation process [29]. Now, customers expect innovation in service products for a better experience that enhances both utilitarian and hedonic experiences [30]. The ability to innovate products or processes helps service firms to survive in a marketplace and for identifying avenues for such innovations in service creation customer feedbacks are important.

The current consumer behavior is complex and today's customers exhibit traits related to innovation seeking, information dependence, multiple clarification seeking, social congruence and risk evasiveness. The present customer wishes to see some kind of innovation every service process, desire to get correct information about service, demands higher value and loves to minimize risk in every decision. The "Marketing Mix" [31] paradigm has evolved from four P's representing price, promotion, product, and place to "SAVE" (Solutions, Access, Value, and Education) model [32]. Therefore, to remain competitive, firms should listen customer voices and try to offer right solutions which significantly address customer problems, right way to access services, right value and right means to understand the service mix offered by firms.

From the above deliberations, it appears that customers will perceive a e-travel service product as innovative and useful when it doesn't create hardships to them and offer better value and easiness in making travel related decisions. Re-designing of service process after evaluating their feedback about the complexities attached to the prevailing processes may result in customer loyalty and analysis of existing customer reviews will expose areas potential improvement.

III. RESEARCH METHODOLOGY

This research had two stages. In the first stage, we collected the online reviews, opinions, feedbacks, etc. shared by customers about the quality of service obtained from e-travel service providers in India. The reviews were collected from www.consumeraffairs.com, www.tripadvisor.in, and www.mouthshut.com, etc. These sites are considered since it contained many reviews about e-travel service experience from customers of various characteristics. Further, these websites are independent from the service providers and hence provide ample scope for customers to openly express their reviews about services they received without any fear or



Fig 2 WORD CLOUD OF WISHLIST WORDS IN REVIEWS

To understand, more reasons behind the sentiments appearing in the case of words having highest frequency in the review corpus, a “word in context” enquiry was made. The areas of distress were more related to hotels, ticketing, refund, booking process, driver and cab arranged, service quality at hotels, hidden charges, proper communication and general experience. The table 2 provides major grievances mentioned in the reviews by the customers.

TABLE 2. WORD IN CONTEXT- REFERENCE WORD ‘HOTEL’

Word in Context--- Hotel		
for one night only but	hotel	staff refused to speak to
what to do, called the	hotel	talked and they said that
26th March 2018 for a	hotel	booking in July 2018. Initially
with xxx, and book another	hotel	On the spot asked for
getting any problem with the	hotel	flights or any holiday booked
harassment while checking in at	hotel	as xxxxx did not make
from xxx. I booked an	hotel	with xxxx The pictures shown
I got. Name of the	hotel	was xxxxx Resort Goa
bad odor, view outside the	hotel	was garbage bins of another
was garbage bins of another	hotel	beside it. Very bad experience
wonderful days stay in	hotel	Jodhpur xxxxx they provide me
We were 3 people. The	hotel	was haunted. I felt some
Next day I left that	hotel	with excuses. The owner of
excuses. The owner of the	hotel	was asking strange question while
asking strange question while leaving	hotel	I called xxxx to refund
am not satisfied with the	hotel	They didn't refund my money
didn't refund my money. Instead	hotel	owner charged some extra amount
When we reached near about	hotel	and called hotel manager he
near about hotel and called	hotel	manager he said, "You have
you and drop you to	hotel	We waited there for almost
worst place where I local	hotel	was there and asked to
I don't stay at the	hotel	I have to pay the

The major areas of dissatisfaction as evident from the above table were related to poor responsiveness of hotel staff, poor cleanliness, communication clarity related issues, extra charges than informed, poor service quality etc.

The next frequently appeared word was related to booking. The examination of word in context usage of ‘booking/ed’ revealed issues related to communication, technology challenges, website related issues and information deficiencies for decision making. We further examined the word ‘ticket’ since it relates to the basic attribute in a travel service. Table 3 provides word in context comments related to ‘ticket’.

TABLE 3. WORD IN CONTEXT- REFERENCE WORD ‘TICKET’

Word in Context--- Ticket		
reference was **. I cancelled the	ticket	directly from the airlines on the
paying 14500 INR for a	ticket	which would have otherwise cost
I can't even cancel my	ticket	with xxxx or yyyy Drivers
back in 24hrs and the	ticket	gets resolved by itself. They
not resolved. I had booked	ticket	to travel Dubai and by
My mother booked an return	ticket	from Australia and due to
We literally wanted an air	ticket	to any city in India
received is excuses and another	ticket	with full price. If there
for sending me a fake	ticket	and screwing up entire money
booked (Booking ID: **) a return	ticket	and paid for Zero Cancellation
journey. Recently I booked Flight	ticket	of my child from Delhi
Credit card and got the	ticket	Later I observed that My
how cheap you are getting	ticket	from this website (xxxxx) don't
me that for changing my	ticket	I have to pay penalty
the fare difference for the	ticket	I said ok and ask
ask him to book this	ticket	but after a sudden he
am not satisfied with the	hotel	They didn't refund my money

TABLE 4. WORD IN CONTEXT- REFERENCE WORD ‘REFUND’

Word in Context--- Refund		
21 Apr. They indicated a	refund	of Rs 914.00. However, since
Rs 914.00. However, since	refund	was not credited to my
the	refund	has been sent to xxxx
which told me that the	refund	of my booking where have
On the spot asked for	refund	" It is xxxxx's responsibility if
this matter xxxxx said, "No	refund	" Pathetic customer service, poor quality
after 8 days said, "No	refund	information wasn't shared with
customer will get the full	refund	anything. But one of their
got rejected they refused to	refund	but till now I haven't
said you will get the	refund	I have booked package on
now I haven't received any	refund	Second one was reschedule the
and they will give maximum	refund	or transfer than that is
when it comes down to	refund	my money as I am
hotel. I called xxxx	refund	my money. Instead hotel owner
with the hotel. They didn't	refund	hard earned 5 lacs. Message
whether I will get a	refund	request for Mxxxx Booking ID
from xxxx "We have received	refund	of about Rs 21700/- within
that I would get a	refund	I decided to lodge a
not receive any communication or	refund	

The major issues cited include lack of transparency in booking procedures, insecurity perceptions in sharing card details, feeling of trust deficit, delay in problem solving etc. We could find that the term 'refund' appears in many reviews directly and was mentioned indirectly as money lost etc. Therefore, we analyzed the word in context details of 'refund' provided in table 4.

The major issues regarding 'refund' procedures were related to difficulty faced in getting refund, refund to wrong beneficiary, rejection of request for refund, poor information about refund procedures etc.

V DISCUSSIONS AND SUGGESTIONS

The purpose of this study was to develop process modifications for optimizing customer experience with e-travel services. We could identify from our study that process modifications need to be introduced in the areas such as refund processing, in-house customer relationship management in hotels, website modifications for ticketing easiness, quality management systems in customer service, information flow effectiveness across partners in the service process etc for better customer experience.

From the analysis done, many words that frequently appear in the customer reviews were identified. Among them, one important word which came into consideration was related to "refund." The word refund was mentioned directly or indirectly throughout the reviews by different customers. In e-travel services, the possibility that customers face difficulties in the refund procedures is more compared to conventional formats. Therefore, revamping refund procedures demand high importance in redesigning the overall service processes. A well-defined refund policy can give positive image to e-travel service provider. Therefore, having a well-thought-out return policy prominently displayed on the website will address one of the most significant concerns of the online travel customer, and this step will further help in attracting and retaining customers. So, e-travel service providers should formulate a transparent and acceptable refund policy for projecting their customer orientation and such an attempt will be regarded innovative by customers, if such a process eradicate the complexities related to refund issues.

Consumers generally expect to get adequate information on web portals to feel confident about their decisions. Therefore, incorporating a relevant Frequently Asked Questions (FAQ) section on e-travel service provider's website is likely to inform customers about what to expect from the service provider. A well-drafted FAQ page will benefit service providers in optimizing their organic searches. Further, from an operational perspective, the customer relationship management becomes more comfortable, and human resources can be better deployed. The reviews about hotel, booking process, information transfer, service quality hotels, etc. informs that customer has many ambiguities regarding the extent of expectation they had hold with regard to these attributes. Any occurrences against the customer expectation may be perceived as service failure and hence service recovery

procedures are equally important like providing excellent service. Service failures in e-business can originate from technical as well as employee bound reasons. Many times, the service failures can be just perceptual and real and therefore setting an acceptable expectation standard in the minds of the customer has a vital role. The reviews exposed many areas where service recovery procedures need to be initiated on an urgent basis. A grievance redressal system aligned with a service recovery process can minimize the impact of adverse reviews shared by customers. The process should have periodic evaluations on specific parameters such as the number of issues reported, factual content about the issue, service recovery procedure, time taken for corrective action, process changes needed to minimize similar occurrences, etc. Such a system can improve the customer experience and will undoubtedly reduce negative reviews.

Further, necessary process modification on following aspects are essential in the redesigning e-travel service product to optimize customer experience. The customers demand timely services from the hotels booked through e-travel service providers in activities such as check-in, delivery of food and cab service etc. Customers expect no extra costs for additional services that hotels offer. Excessive taxes on the rent without prior notice develops customer agitation. They hope the hotel to provide all services like free transport service to airport and free Wi-Fi etc. E-travel service provider should ensure such guarantees while they make the booking. Similarly, customers expect friendly and warm reception from service staff, sufficient to create positive emotions in their mind. E-travel service providers should incorporate a service quality manual for the staff of hotels in their network and should arrange periodic training for ensuring homogeneous service quality to the extent possible.

From the reviews, it is evident that many customer grievances are related to partner business houses of e-travel service provider. For effective B2B relations leading to better customer experience, Enterprise resource planning (ERP) software connecting the demand side for service provider and supply side of the services including after sales process such as cancellation issues, rescheduling, communication regarding flight changes, refund issues, etc. with partner firms is ideal. Many customers have mentioned about having problems with the airlines, hotels, and banks. A typical ERP system will allow information sharing at a higher pace among the partners, which will eventually lead to sustained customer satisfaction. The lead time for processes such as payment refunds or communicating the date changes can be reduced by streamlining these processes in collaboration with airlines, banks, and other business partners.

To conclude, social media is emerging as a prominent source of data to supply ideas for process modification aimed at customer satisfaction in the case of a service product like travel services. Text analytics, in the form of sentiment analysis, can be an essential tool for gaining better insights into customer issues. A periodic review of opinions shared by customers in social media can inform practitioners

to devise strategies aimed at re-designing of their service product. This study is a fundamental attempt to explain how reviews in social media can form valuable inputs for ad-hoc innovations of a service product. This study has limitations related to review size, cross-validation and generalizability. More reviews from different customer segments and comparative analysis across segments can further help in devising customized service products for meeting service requirements of each customer segment. A more elaborate study in that line is ideal to understand variations customer priorities across segments

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