Modelling customer satisfaction and customer loyalty in the frame of telecommunications industry: a review

Rituraj Saroha* and Saloni Pawan Diwan

University School of Management,
Kurukshetra University,
Kurukshetra-136119, Haryana, India
Email: rituraj.saroha@gmail.com
Email: salonipdiwan@gmail.com
*Corresponding author

Abstract: The purpose of this paper is to review the existing literature on the modelling of customer satisfaction and loyalty determinants in the context of the telecommunications industry. The available literature on the development and treatment of various models of customer satisfaction and customer loyalty in the context of Telecom service sector is reviewed systematically. This allowed us to compare the findings from different studies carried out in different geographies on this subject. The review provides underlying patterns of relationships and interplays between customer satisfaction, customer loyalty and their influencing factors. The paper vividly examines the areas wherein the reviewed studies taken from varied geographical areas of the world stand in consensus with each other and the areas wherein they differ in opinion. Such understanding is relevant for academicians and researchers for furthering the work in this field. The insights into the previous studies, considered for this paper, are discussed and suggestions for future research are provided which paves the way of further empirical analysis of the insights thus brought to surface by this paper.

Keywords: telecommunications; customer satisfaction; customer loyalty; modelling.


Biographical notes: Mr. Rituraj Saroha is presently engaged in Doctoral research at University School of Management, Kurukshetra University, India. He received his MBA in Marketing and Supply Chain Management. He has professional experience of four years in the domain of quantitative market research as Research Manager serving several high end clients from varied industries including BFSI, e-commerce, Media, Telecom, Automobiles, FMCG etc. His research area includes branding, marketing communications and consumer behaviour. He has several research publications including research papers, research reports and a book to his credit. He has presented his research papers at several reputed national and international conferences.

Saloni Pawan Diwan is presently working as an Assistant Professor in University School of Management, Kurukshetra University, Kurukshetra – India. She received her MBA in Marketing and International Business and PhD in Branding. She has ten years teaching experience. Her research area includes brand positioning, marketing communications, brand image and consumer
behaviour. She presented her research papers in various seminars and conferences of national and international repute. Her research work appears in international as well as national journals like *Journal of Strategic Marketing*, *Journal of Global Marketing*, *Indian Journal of Marketing*, *Prabhandhan: Indian Journal of Management* etc.

1 Introduction

In the telecommunications industry, customers are able to choose among multiple service providers and actively exercise their rights of switching from one service provider to another (Lu, 2002). The telecom market is characterised by intense competition where the customers are exposed to vast choices and low switching costs leading to high customer attrition rates. In this fiercely competitive market, customers demand tailored products and better services at less prices.

A strong base of satisfied and loyal customers helps the companies realise significant financial benefits, including reduced costs due to better customer retention, increased profitability through expanded relationships and new revenue from customer referrals. Companies with more loyal customers consistently tend to report better results in terms of profitability. Your truly loyal customers have every intention of continuing business with you and they have a positive attitude toward your company. They like working with you and are more likely to increase their spending and recommend your company to others. According to Bughin et al. (2013), about 76% of Belgian consumers converse about telecom brands, and 26% of them proactively recommend brands to others, mostly friends (68%) and family (66%). In France, 64% converse about telecom brands, and 34% recommend to buy brands. The study found that, in telecom 41% comment and converse about brands with the main intent of receiving information and feedback from others to help them in purchase decisions and that, 47% of the telecom category purchases relied on brand conversations.

Given the fact that the telecommunications industry experiences an average of 30–35% annual churn rate and it costs 5–10 times more to recruit a new customer than to retain an existing one, customer retention has now become even more important than customer acquisition. Such a high churn rate sends a signal to the telecom companies that they need to pay more attention to the issue of customer satisfaction and loyalty through identifying the reasons for switching. It is a cumbersome task for the telecom operators to retain the profitable customers. As the competition is always a stone’s throw away, customer satisfaction and loyalty are essential for the telecom operators both in an economic as well as competitive sense. This makes it imperative for them to constantly track the factors driving customer satisfaction and loyalty.

Hence, a theoretical background is required to provide further understanding of contributing factors of customer satisfaction and loyalty in the telecommunications industry. In this pursuit, the current paper aims to provide a review of the studies done in relation to modeling of customer satisfaction and loyalty in the context of telecom services.

While customer satisfaction and loyalty regarding most physical goods and services have been well explored in academic literature, but only limited researches such as Gerpott et al. (2001), Lee et al. (2001), Athanassopoulos and Iliakopoulos (2003), Wang
et al. (2004), Kim et al. (2004) etc. are available till now on these factors with respect to mobile telecommunications services (Turel and Serenko, 2006). However, there have been various studies such as Eshghi et al. (2008), Balaji (2009), Ahmed et al. (2010), Deng et al. (2010), Akroush et al. (2011), Ahmad et al. (2015) etc. which have examined the contributing factors to the development of customer satisfaction and loyalty in the context of telecom services since then. These studies point to the need for understanding how customer loyalty is developed. The studies conducted in this direction indicate only some parts of relationships between the antecedents of customer satisfaction and loyalty along with their influence.

Hence, this paper attempts to synthesise the available literature in order to understand the conceptual nature of customer satisfaction and customer loyalty in relation to telecom services. More specifically, the study provides a review of literature available on telecom customer satisfaction and loyalty. In addition, the study also objects to assess the methodology adopted by various authors and the outcomes of the study relationships among the considered variables. The purpose of the paper is to identify various factors in the telecommunications services sector which have a bearing on customer satisfaction and customer loyalty with respect to the telecom service providers. The paper is organised as follows:

First a snapshot of the concepts and definitions of customer satisfaction and customer loyalty specifically pertaining to services sector is provided. This is followed by a summary of the selected studies which deal with various factors determining customer satisfaction and customer loyalty in the context of telecommunications service sector from various geographies. The details of these studies are arranged into two sub-sections wherein, the first sub-section deals with such studies which were conducted before 2006 while the following sub-section deals with those which took place 2006 onwards. As mentioned above, the reason behind such a division is that only a limited number of studies were conducted in the domain of customer satisfaction and customer loyalty research in telecommunications sector before 2006, while the number of such studies quite increased 2006 onwards; as is evident from the study of available literature on the subject (Turel and Serenko, 2006). Then, a detailed review of the selected literature is presented, which is followed by a discussion and conclusion of the review highlighting the broad areas of consensus and contradiction as observed among the reviewed studies. Finally, based on the evidence of the review, the directions for future research in the domain are developed.

2 Concepts of customer satisfaction and customer loyalty

2.1 Customer satisfaction

Customer satisfaction is a central concept in modern marketing thought and practice. Higher customer satisfaction leads to improved financial performance by lowering customer switching, improving loyalty, promoting positive word-of-mouth, and enhancing firm image and reputation. The realisation of this importance has led to a proliferation of research on customer satisfaction over the past two decades (Srivastava, 2014). At present, customer satisfaction has become the prime concern in all businesses. Reviewing the current literature, there is a plethora of customer satisfaction definitions
and dimensions of the same. Table 1 and the following text illustrate the diversity of existing definitions and the concept of customer satisfaction. The theory of disconfirmation is considered as the base of satisfaction models. Customer satisfaction serves to link processes culminating in purchase and consumption with post purchase phenomena such as attitude change, repeat purchase, and brand loyalty (Churchill and Surprenant, 1982). This definition is supported by Jamal and Naser (2003) and Mishra (2009) as well.

**Table 1** Definitions of customer satisfaction

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description of the concept</th>
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<tbody>
<tr>
<td>Westbrook and Reilly (1983)</td>
<td>Customer satisfaction is an emotional response to the experiences provided by, associated with particular products or services purchased, retail outlets, or even molar patterns of behaviour such as shopping and buyer behaviour, as well as the overall market place</td>
</tr>
<tr>
<td>Oliver (1987)</td>
<td>Customer satisfaction is an outcome of a purchase/usage experience which would appear to be an important variable in the chain of purchase experience linking product selection with other post purchase phenomena including favourable word-of-mouth and customer loyalty</td>
</tr>
<tr>
<td>Tse and Wilton (1988)</td>
<td>Customer satisfaction is the consumer’s response to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product/service as perceived after its consumption</td>
</tr>
<tr>
<td>Cacioppo (2000)</td>
<td>Customer satisfaction is the state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service.</td>
</tr>
<tr>
<td>Giese and Cote (2000)</td>
<td>Customer satisfaction is identified by a response (cognitive or affective) that pertains to a particular focus (i.e., a purchase experience and/or the associated product) and occurs at a certain time (i.e., post-purchase, post-consumption)</td>
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<tr>
<td>Hansemann and Albinsson (2004)</td>
<td>Customer satisfaction is an overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfillment of some need, goal or desire</td>
</tr>
<tr>
<td>Schiffman and Kanuk (2004)</td>
<td>Customer Satisfaction is defined as the individual’s perception of the performance of the products or services in relation to his or her expectations</td>
</tr>
<tr>
<td>Zeithaml and Bitner (2004)</td>
<td>Customer Satisfaction is customer’s evaluation of product or service in terms of whether that product or service has met their needs and expectations. Failure to meet needs and expectation results in dissatisfaction with product or service</td>
</tr>
<tr>
<td>Hill and Alexander (2006)</td>
<td>Customer satisfaction is a measure of how your organisation’s product performs in relation to a set of customer requirements</td>
</tr>
<tr>
<td>Karunakaran (2008)</td>
<td>Customer Satisfaction is the extent to which a product’s perceived performance matches buyer’s expectations. If the product’s performance falls short of expectations, the customer is dissatisfied; if it matches with expectations, the customer is satisfied. If it exceeds expectations, the customer is highly satisfied or delighted</td>
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According to Liu and Khalifa (2003), difference between the expected and experienced standards determine the satisfaction. Disconfirmation is defined as the limit to which a
product fails to meet a customer’s expectations (Mckinney et al., 2002; Spreng et al., 1996). According to Gundersen et al. (1996), customer satisfaction is typically defined as a post consumption evaluative judgement concerning a specific product or service while for Oliver (1980), it is the result of an evaluative process that contrasts pre-purchase expectations with perceptions of performance during and after the consumption experience. Westbrook and Oliver (1991) described customer satisfaction as a post choice evaluative judgment concerning a specific purchase selection. Similarly, Kristensen et al. (1999) state customer/customer satisfaction as an evaluative response of the product purchase and consumption experience resulting from a comparison of what was expected and what is received. The overall conclusion from this study is that expectations influence customer satisfaction and the effect can be positive, negative or non-existent.

Moliner et al. (2007) defined satisfaction as the consumer’s judgment about pleasure versus displeasure. Moliner et al. (2007) had pointed out that satisfaction invoked two responses viz., cognitive response and affective response to service encounters. Under the cognitive response, comparison is made between expectations and performance by the customer. Association with the service invoking feeling of pleasure is known as affective response. Kumar and Oliver (1997) indicated that satisfaction was associated with customers expectations being met, feeling they got ‘fair’ value and feeling contented. Giese and Cote (2000) classified satisfaction into three components based on response – the nature of response viz. cognitive or an emotional response, the focus of the response-product or usage experience or expectations and the stage at which the response occurs- after purchase, after consumption and based on cumulative experience. Haistead et al. (1994) found that customer satisfaction is a transaction-specific affective response resulting from the customer’s comparison of product performance to some pre-purchase standard. Cote et al. (1989) suggest that satisfaction is determined at the time the evaluation occurs. In some cases, satisfaction assessment may be a naturally occurring, internal response such as after consumption, or prior to repurchase. In some case of the assessment of satisfaction may be externally driven.

Giese and Cote (2000) classified satisfaction into three components based on response – the nature of response viz. cognitive or an emotional response, the focus of the response-product or usage experience or expectations and the stage at which the response occurs- after purchase, after consumption and based on cumulative experience. Haistead et al. (1994) found that customer satisfaction is a transaction-specific affective response resulting from the customer’s comparison of product performance to some pre-purchase standard. Cote et al. (1989) suggest that satisfaction is determined at the time the evaluation occurs. In some cases, satisfaction assessment may be a naturally occurring, internal response such as after consumption, or prior to repurchase. In some case of the assessment of satisfaction may be externally driven.

Satisfaction is also classified based on approaches: either as a transaction-specific satisfaction which is defined in terms of customer evaluation of a specific product transaction or service experience (Olsen and Johnson, 2003) or as a cumulative satisfaction/post-consumption satisfaction (Oliver, 1997). Transaction specific evaluation occurs at a specific point of time or the evaluation is restricted to one encounter with the service provider or to one specific performance occasion of the product or service. Cumulative evaluation occurs when the customer evaluates all the purchase commodities or service experiences on a holistic basis. Cumulative satisfaction evaluation may provide the enterprise some important operational performance indicators for the future (Anderson et al., 1994). After 1990s, many researchers view satisfaction as customers’ cumulative, after purchase, and overall judgment on purchasing behavior (Johnson et al., 1995; Oliver, 1997). According to Oliver (1997), satisfaction is defined as a combination of both affective (emotion) and cognitive elements. According to Oliver (1997) “Satisfaction is the consumer’s fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment”.

Customer satisfaction is also identified as an influence to repurchase intentions and behavior, which, in turn, leads to an organisation’s future revenue and profits. However, Bowen and Shoemaker (2003) report a different view. Their study states that satisfied customers may not return to the firm and spread positive word-of-mouth communications.
to others. One of the reasons is that the firm does not deliver what customers need or want (Roig et al., 2006).

The review of above literature indicates definition of customer satisfaction from which it is understood that customer satisfaction is determined by a cognitive process of comparing what customers receive against what they pay for getting the service.

2.2 Customer loyalty

Nowadays, customer loyalty has received much consideration and attention in the business environment. The traditional role of the marketing has been to win customers. No emphasis was on retaining customers. Most of the companies lose their customers before or at the time of repurchase decision, mainly due to poor service. It proves that there are high number of customers who are not loyal to the company and searching for better options. Customer loyalty highlights issues of commitment, feeling of association and involvement from a service firms market (Bhattcharjee, 2005). Johnson and Gustafsson (2006) claimed that over the past two decades, many companies have moved sequentially from focusing on quality to focusing on customer satisfaction and then on customer loyalty as a panacea of the day. Dawes and Swailes (1999) propounded that high customer loyalty is central to successful customer retention, and firms who compete on the basis of loyalty will win over the battle of competition.

The conceptualisation of customer loyalty construct has been developed steadily over the years. In the earlier years, the focus of loyalty was brand loyalty with respect to tangible goods. Gremler and Brown (1996) found that past studies on customer loyalty focused largely good related brand loyalty, whereas research on customer loyalty to service firms has remained limited. Gremler and Brown (1996) extended the concept of loyalty to services (intangible goods) and defined the service loyalty as the degree to which a customer exhibits repeat buying behaviour from a service organisation, possesses a positive attitudinal temperament towards the organisation, and considers only this organisation when a need for this service exist.

Lovelock and Wirtz (2004) defined customer loyalty as “Loyalty has been used to describe a customer’s willingness to continue patronizing a firm over the long term and recommending the firm’s products and services to friends and associates”. In addition to this, Heskett et al. (1994) gave definition of customer loyalty as “Customer loyalty represents the repeat purchase and referring the company to other customers”. Also Bloemer and Kasper (1995), viewed loyalty in relation to commitment as, loyalty is interpreted as true loyalty rather than repeat purchasing behavior, which is the actual rebuying of a brand, regardless of commitment. Similarly, Gremler and Brown (1996) viewed customer loyalty the degree to which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition towards the provider, and considers using only this provider when a need for this service exists.

On the other hand, Zikmund et al. (2003) claimed customer loyalty refers to a customer’s commitment or attachment to a brand, store, manufacturer service provider or other entity based on favorable attitudes and behavioral responses such as repeat purchase. Oliver (1999) also contend as, customer loyalty is a buyers overall attachment or deep commitment to a product, service, brand or organisation. Oliver (1999) defines loyalty as even though the environment has changed, and even though the sales efforts of competitors have latent influences on consumer variety seeking behavior, the customer still has a high degree of commitment to purchase or consume their preferred products
and services, that cause the repeated purchases for one brand or one group of brands. According to Reichheld and Detrick (2003), customer loyalty is viewed as a strategy that creates mutual rewards to benefit firms and customers. Loyalty is defined as a customer’s intention or predisposition to repurchase from the same firm again (Edvardsson et al., 2000).

Literature review shows that customer loyalty has three distinct approaches. Behavioral loyalty approach (Grahn, 1969); attitudinal loyalty approach (Bennett and Rundle-Thiele, 2002; Jacoby, 1971; Jacoby and Chestnut, 1978) and integration of attitudinal and behavioral loyalty approach (Dick and Basu, 1994; Jacoby, 1971; Jacoby and Chestnut, 1978; Oliver, 1997).

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Summary of considered studies</th>
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<tbody>
<tr>
<td><strong>Pre 2006 Research studies</strong></td>
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<tr>
<td><strong>Authors</strong></td>
<td><strong>Dependent variables</strong></td>
</tr>
<tr>
<td>Gerpott et al. (2001)</td>
<td>Customer loyalty, customer retention</td>
</tr>
<tr>
<td>Lee et al. (2001)</td>
<td>Customer loyalty</td>
</tr>
<tr>
<td>Athanassopoulos and Iliakopoulos (2003)</td>
<td>Overall customer satisfaction</td>
</tr>
<tr>
<td>Wang et al. (2004)</td>
<td>Customer satisfaction</td>
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<tr>
<td>Kim et al. (2004)</td>
<td>Customer loyalty</td>
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</table>
Table 2  Summary of considered studies (continued)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Dependent variables</th>
<th>Independent variables</th>
<th>Analysis methods</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eshghi et al. (2007)</td>
<td>Customer loyalty</td>
<td>Customer satisfaction, age, income, education</td>
<td>Structural equation modeling</td>
<td>Paper identifies customer satisfaction as a strong determinant of customer loyalty which transcends income, age and education categories.</td>
</tr>
<tr>
<td>Eshghi et al. (2008)</td>
<td>Customer satisfaction, repurchase intention, customers’ propensity to recommend</td>
<td>Relational quality, competitiveness, reliability, reputation, support features, transmission quality</td>
<td>Factor analysis, multiple regression</td>
<td>Reliability, reputation and transmission quality factors emerged as significant predictors of customer satisfaction. Repurchase intention is influenced by relational quality, competitiveness, reliability and transmission quality.</td>
</tr>
<tr>
<td>Balaji (2009)</td>
<td>Customer loyalty</td>
<td>Expectations, price quality, value, customer satisfaction, trust</td>
<td>Structural equation modeling</td>
<td>Perceived quality is an important predictor to customer satisfaction, which ultimately results in trust, price tolerance and customer loyalty.</td>
</tr>
<tr>
<td>Akbar and Parvez (2009)</td>
<td>Customer loyalty</td>
<td>Perceived service quality, trust, customer satisfaction</td>
<td>Structural equation modeling</td>
<td>The results indicate that trust and customer satisfaction are significantly and positively related to customer loyalty. Customer satisfaction is found to be an important mediator between perceived service quality and customer loyalty.</td>
</tr>
<tr>
<td>Ahmed et al. (2010)</td>
<td>Customer loyalty</td>
<td>Customer satisfaction, service quality</td>
<td>Pearson correlation, multiple regression</td>
<td>Significant and positive relations were observed between all variables of service quality, satisfaction and customer loyalty except empathy that shows significant but negative relations with satisfaction &amp; customer loyalty.</td>
</tr>
<tr>
<td>Kim and Lee (2010)</td>
<td>Customer loyalty</td>
<td>Corporate image, brand awareness, service price, service quality, customer support services</td>
<td>Multiple regression</td>
<td>Corporate image, brand awareness, service price and service quality are strong antecedents for establishing customer loyalty in mobile communications service markets. In addition, the empirical findings show that corporate image plays the most important role in establishing and maintaining customer loyalty.</td>
</tr>
<tr>
<td>Authors</td>
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<td>Independent variables</td>
<td>Analysis methods</td>
<td>Remarks</td>
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<tr>
<td>Boohene and Agyapong (2010)</td>
<td>Customer loyalty</td>
<td>Service quality, customer satisfaction, image</td>
<td>Multiple and logistic regression</td>
<td>The results indicate that there is a positive relationship between service quality and customer loyalty. However, the results show a negative relationship between customer satisfaction and customer loyalty.</td>
</tr>
<tr>
<td>Deng et al. (2010)</td>
<td>Customer loyalty</td>
<td>Customer satisfaction, trust, perceived service quality, perceived customer value, switching cost, age, gender, usage time</td>
<td>Structural equation modeling</td>
<td>The findings confirm that trust, perceived service quality, perceived customer value contribute to generating customer satisfaction. The results also show that trust, customer satisfaction and switching cost directly enhance customer loyalty. Additionally, this study finds that age, gender, and usage time have moderating effects.</td>
</tr>
<tr>
<td>Akroush et al. (2011)</td>
<td>Customer loyalty</td>
<td>Customer satisfaction, trust, perceived switching costs, perceived service quality</td>
<td>Structural equation modeling</td>
<td>Customer loyalty is affected directly and significantly by customer satisfaction, customer trust, perceived switching costs and perceived service quality. Customer loyalty was found to be a multi-dependent construct affected by several additional factors such as demographics, operator’s image, economic, social and technological conditions.</td>
</tr>
<tr>
<td>Almossawi (2012)</td>
<td>Customer satisfaction, customer retention, customer loyalty</td>
<td>Financial factors, intercommunication factors</td>
<td>Factor analysis</td>
<td>The factors related to payments and savings (offers, rents, charges) are the most significant in determining satisfaction, retention and likelihood of switching. Intercommunication factors (customer service, employees, websites) were found to be the least significant. A significant positive relationship was found between satisfaction &amp; retention while a poor association was noticed between satisfaction /retention &amp;loyalty.</td>
</tr>
<tr>
<td>Khayyat and Heshmati (2012)</td>
<td>Customer satisfaction</td>
<td>Gender, age, location, education level, purpose of use, income, price</td>
<td>Logistic regression</td>
<td>Gender, age, location, education level and purpose of use are all highly statistically significant but only gender and age have positive effect on customer satisfaction.</td>
</tr>
<tr>
<td>Authors</td>
<td>Dependent variables</td>
<td>Independent variables</td>
<td>Analysis methods</td>
<td>Remarks</td>
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<tr>
<td>Adeleke and Aminu (2012)</td>
<td>Customer satisfaction, customer loyalty</td>
<td>Service quality, price, customer service, corporate image</td>
<td>Pearson correlation</td>
<td>Corporate image followed by service quality are the most positively correlated constructs with customer satisfaction and loyalty while price is negatively correlated with customer satisfaction and loyalty</td>
</tr>
<tr>
<td>Malik et al. (2012)</td>
<td>Customer satisfaction</td>
<td>Service quality, brand image, price</td>
<td>Pearson correlation</td>
<td>Service quality, price and brand image are strongly correlated with customer satisfaction. Increase in price has a negative impact on customer satisfaction while improvements in service quality and brand image result in increased customer satisfaction</td>
</tr>
<tr>
<td>Salleh and Gelaidan (2012)</td>
<td>customer satisfaction</td>
<td>Perceived quality, perceived value, customer expectation, corporate image</td>
<td>Correlation, multiple regression</td>
<td>The study found that perceived value, perceived quality and corporate image have a significant positive influence on customer satisfaction, whereas customer expectation has positive but without statistical significance</td>
</tr>
<tr>
<td>Adjei and Denanyoh (2014)</td>
<td>Customer loyalty</td>
<td>Call rate/quality, network coverage, sales promotion, brand image, customer service</td>
<td>Pearson correlation</td>
<td>The results identified call rate/quality, network coverage and sales promotion as having significant positive relationship to customer loyalty. Brand image and customer service had a less effect on customer loyalty</td>
</tr>
<tr>
<td>Oghojafor et al. (2014)</td>
<td>Customer satisfaction, customer loyalty</td>
<td>Product, price, distribution, promotion, customer service, trust</td>
<td>Multiple regression</td>
<td>The results revealed that product, promotion and distribution have a higher impact on customer satisfaction. Apart from customer satisfaction, trust was found to be a major determinant of customer loyalty in the telecom market.</td>
</tr>
<tr>
<td>Ahmad et al. (2015)</td>
<td>Customer loyalty</td>
<td>Customer satisfaction, customer trust, switching cost</td>
<td>Multiple regression</td>
<td>Customer satisfaction and customer trust are stronger predictors of customer loyalty. Switching cost has no moderating effect on customer loyalty. Customer trust partially mediates the relationship of customer satisfaction with customer loyalty</td>
</tr>
</tbody>
</table>
3 Modeling customer satisfaction and customer loyalty in telecommunications sector

This section of the paper attempts to synthesise the available literature on customer satisfaction and customer loyalty in relation to telecommunications services. Germany, France, Greece, China, USA, Jordan, Bahrain, Kurdistan, Nigeria, Pakistan, Ghana, Syria, South Korea, Yemen, Bangladesh and India are the study areas of the considered articles published in different national and international journals. These studies are arranged in the form of pre and post 2006 researches. A summary of the selected papers is presented in Table 2.

The studies included in Table 2 are diverse but still, a significant pattern in the modeling of contributory factors of customer satisfaction and loyalty can be found. In this section more detailed discussion of some critical aspects associated to Table 1 is provided.

3.1 Customer satisfaction and customer loyalty research in telecommunications sector before 2006

As per Turel and Serenko (2006), before 2006, only a limited number of researches dealt with studying Customer Satisfaction and Customer Loyalty in the purview of Telecommunications sector, while the number of such studies increased post 2006.

Gerpott et al. (2001) conducted their study in German mobile cellular telecommunications market to study the supply side customer retention drivers using data from a sample of 684 residential mobile communications users. They examined the differences, commonalities and inter-linkages between the constructs ‘customer retention’, ‘customer loyalty’ and ‘customer satisfaction’ with reference to the mobile communications market and what supply side factors influenced them both conceptually and empirically. They hypothesised the interrelationships between customer retention, customer loyalty, customer satisfaction and their determinants in the German mobile market and then tested the hypotheses empirically by developing a structural equation modeling based multi-stage causal model. The results pointed that overall customer satisfaction has a significant impact on customer loyalty which in turn influences a customer's intention to terminate/extend the contractual relationship with his mobile cellular network operator (customer retention). Mobile service price and personal service
benefit perceptions as well as (lack of) number portability between various cellular operators were identified as supply-related variables with the strongest effects on customer retention. Mobile network operators' perceived customer care performance had no significant impact on customer retention.

While Gerpott et al. (2001) studied the direct relationship between customer satisfaction and customer loyalty, Lee et al. (2001) extended the relationship to include the role of switching costs as the moderator. The study was conducted in France using a sample size of 256 adult private mobile phone users. To analyse the moderating role of switching costs, they ran a regression that tested the main effect of satisfaction and the interaction of satisfaction and perceived switching costs on customer loyalty. The results showed that for a given level of satisfaction, customers might have different levels of loyalty depending on the level of switching costs. The regression results implied that customers with high switching costs were more loyal, since high switching costs made them less likely to switch.

Athanassopoulos and Iliakopoulos (2003) narrowed down their research to focus on customer satisfaction function of residential customers of a major European telecommunications company. They analysed the impact of the service delivery process as experienced by customers at various transaction points that shape their overall judgment about the organisation. Based on the available theoretical content, they hypothesised about these impacts and then tested the developed hypotheses empirically on the data collected from 2500 fixed line residential customers. According to the study results, all transaction elements were found to contribute positively in the overall satisfaction variable. The satisfaction attributes of continuous transaction (corporate image, billing, product quality, branch service) had a higher impact on the overall perceived performance compared to the incident driven transactions such as new service provisioning and fault repair.

Wang et al. (2004) conducted their research in mobile communication market of China. It is a systematic study of the dynamic relationships among the key drivers of service quality, customer value and customer satisfaction followed by the examination of their influences on behavior intentions of customers. Results are based on the development and testing of structural equation models comprising measured and hypothesised relationships. It is found that not all quality-related factors contribute to customer perceived service quality, customer value and customer satisfaction equally. In addition to the direct interrelationships among customer perceived service quality, customer value and customer satisfaction, the moderating effect of customer value on the relationship between customer perceived service quality and customer satisfaction is detected. It is also found that only the impacts of customer value and customer satisfaction on behavior intentions of customer are statistically supported. However, the customer perceived service quality may influence behavior intentions of customers indirectly by affecting customer value and customer satisfaction.

Kim et al. (2004) examined the role of switching barrier as a direct determinant of customer loyalty in addition to customer satisfaction. They collected the data from 306 South Korean mobile telecom subscribers. The results of hypothesis tests of the relationship between constructs including customer satisfaction, the switching barrier and customer loyalty indicated that customer satisfaction and the switching barrier both have a significant positive effect on customer loyalty. Also, it was revealed that among the factors which establish service quality - call quality, value-added services and customer support had a significant positive effect on customer satisfaction. The results also show
that among the factors creating switching costs which positively affect customer satisfaction, loss cost and move-in cost were significant. Additionally, in line with Lee et al. (2001), the switching barrier was revealed to have an adjustment effect on customer satisfaction and customer loyalty. It was shown that the switching barrier is a factor directly affecting customer loyalty, and its influence on customer loyalty is produced through an interaction with customer satisfaction. Among factors constituting the switching barrier, loss cost has a direct effect and an adjustment effect on customer loyalty, and interpersonal relationship only an adjustment effect. One of the main focuses of interest is that, while move-in cost appears to be only a major effect, loss cost can be both a major and a controlling effect of the switching barrier. This reinforces the fact that the loss cost, which involves the loss of benefits and conveniences received from the existing telecommunication carrier, strengthens customer satisfaction. However, move-in costs, such as changing telephone numbers, only add to the switching barrier, and do not appear to affect customer satisfaction and interaction. This suggests that a customer is likely to remain with the existing carrier even when he or she experiences only a low level of customer satisfaction, if he or she perceives the overall switching barrier or loss costs to be high, or forms a high level of interpersonal relationship.

3.2 Customer satisfaction and customer loyalty research in telecommunications sector post 2006

Along with the increase in the number of mobile phone users in the world, the importance as well as the number of research studies dealing with customer satisfaction and customer loyalty in telecommunications sector also increased.

In line with Gerpott et al. (2001), Eshghi et al. (2007) also upholds the strong relationship between customer satisfaction and customer loyalty on the basis of a data-based structural equation model developed during this study. The data used were collected via a US national phone survey of 3205 consumers of telecommunications services. The results indicate that socio-demographic variables including income, age and education are only weak predictors of customer’s propensity to switch (customer loyalty). It implies that customer satisfaction is such a strong predictor of customer loyalty that it transcends all socio-demographic categories i.e. regardless of the customer category, the association between satisfaction and propensity to switch is going to be strong.

Eshghi et al. (2008) identified the service-related factors in the Indian mobile telecommunications service sector and examined the impact of these factors on customer satisfaction, repurchase intention and customers’ propensity to recommend the service to others. The data for the study was collected from 238 mobile phone users in four cities of India viz. Delhi, Kolkata, Mumbai and Hyderabad. It was found that six factors: relational quality, competitiveness, reliability, reputation, support features and transmission quality represent the underlying dimensions by which Indian mobile phone customers assess the quality of their service. Relational quality, competitiveness, reliability, reputation and transmission quality factors emerged as significant predictors of customer satisfaction. Repurchase intention is influenced by relational quality, competitiveness, reliability and transmission quality. Finally, relational quality, competitiveness, reliability, reputation and transmission quality emerged as significant predictors of recommendation of services to others.

Balaji (2009) investigated the antecedents of customer satisfaction with mobile services in India. The study examined the causal relationships among customer
expectations, quality, value, satisfaction and loyalty through a structural equation model developed using data collected from 199 Indian postpaid mobile subscribers. The results show that perceived quality is an important predictor to customer satisfaction, which ultimately results in trust, price tolerance and customer loyalty. While the significance of perceived quality in predicting customer satisfaction is not surprising, the insignificant relationship between perceived value and customer satisfaction suggests that mobile service subscribers perceive the price charged for the quality of services provided to be high. This was further supported by the negative and significant relationship observed between perceived expectation and perceived value. Thus, improving the quality of services was found to be important for achieving high satisfaction with the mobile services in the Indian context.

Akbar and Parvez (2009) proposed a conceptual framework to investigate the effects of customers' perceived service quality, trust and customer satisfaction on customer loyalty based on Structural Equation Modeling for which the data was collected from 304 customers of a major private telecommunication company operating in Bangladesh. The data supported the proposed model having direct paths from customers’ perceived service quality and trust to customer loyalty and indirect paths from customers’ perceived service quality to customer loyalty as mediated through customer satisfaction.

Ahmed et al. (2010) also conducted research to study the relationship of service quality (tangibles, responsiveness, empathy, assurance and reliability), customer satisfaction and customer repurchase intentions (customer loyalty) in the telecom sector of Pakistan by collecting data from 331 young mobile users. The study results show significant and positive relations between all variables/dimensions of service quality, satisfaction and repurchase intentions, except empathy that shows significant but negative relations with satisfaction and repurchase intentions. There is also a positive relationship between satisfaction and repurchase intentions of customers. The results also show the role of mediation played by customer satisfaction in the relationship between service quality and customers’ repurchase intention.

Kim and Lee (2010) conducted a web-based survey among 469 South Korean respondents the results of which reinforced previous research that service quality, service price and corporate image are strong antecedents for establishing customer loyalty. The results showed that service quality and price of mobile telecommunications service providers play an important role in creating customer loyalty to the service providers. Corporate image of mobile telecommunications service providers plays an important role in reflecting service providers’ overall reputation and prestige and hence impacts customer loyalty to the service providers.

Boohene and Agyapong (2010) investigated the determinants of customer loyalty for Vodafone (Ghana). The study adapted the SERVQUAL model as the main framework for analysing service quality. Multiple and logistic regression analyses were used to examine the relationships between service quality, customer satisfaction, image and customer loyalty. The study results indicate that there is a positive relationship between service quality and customer loyalty. Also customer satisfaction is observed to be significant in explaining customer loyalty even though there is an inverse relationship between the two which is in contradiction to the results of previous studies. This finding implies that among customers of Vodafone (Ghana), satisfaction is not a basis for loyalty. Some reasons accounting for this result may include the underdeveloped nature of the telecom sector. The results also show that corporate image is observed to be significant in explaining customer loyalty.
Deng et al. (2010) investigated the factors affecting customer satisfaction and loyalty of mobile instant messages in China. Trust, perceived service quality, perceived customer value were found to contribute to generating customer satisfaction with mobile instant messages. Specifically, perceived service quality is found to have the greatest effect on customer satisfaction. Also, trust, customer satisfaction, and switching cost positively influence customer loyalty. Customer satisfaction has the greatest effect while trust has less effect than customer satisfaction for building customer loyalty. The effects of switching cost are smaller than the two above. The results mean that satisfaction is much related to customer loyalty; thus, increasing the degree of customer satisfaction through improved service quality and customer value is an effective tool to maintain customer loyalty. Also, among the four dimensions of perceived customer value, the findings show that functional value and emotional value have significant effect on customer satisfaction, while social value and monetary value are found to have no significant effects. It means that the two variables, functional value and emotional value, are important customer value factors for customer satisfaction. Further, the results show that gender, age and usage time have significant moderating effects on the relationship between trust and customer satisfaction and on the relationship between emotional value and customer satisfaction. Also, the results show that customer satisfaction has significant mediation effects for relationships from trust, perceived quality, functional value and emotional value on loyalty.

Akroush et al. (2011) empirically developed a structural equation model of customer loyalty antecedents in the context of Jordanian mobile Telecommunications market using a sample of 756 mobile users. The findings underlined that customer loyalty in is a multi-dependent concept affected both directly and significantly by customer satisfaction, trust, perceived switching costs and perceived service quality. Perceived service quality exerts the lowest direct effect over customer loyalty, though it has a direct considerable effect over customer satisfaction, customer trust and perceived switching costs which is in line with Balaji (2009). Similar to the findings of Eshghi et al. (2007), Gerpott et al. (2001) and Lee et al. (2001), customer satisfaction had the highest direct effect over customer loyalty which also had a significant direct effect over customer trust and perceived switching costs as well. However, the effect of customer trust over loyalty was considered low when compared with that of customer satisfaction and it also failed to exert a significant effect over perceived switching costs. The perceived switching costs had a relatively low positive, direct and significant effect over customer loyalty. In addition, brand awareness is another strong antecedent for establishing customer loyalty in mobile communications service markets. However, customer support service shows no relationship to customer loyalty.

The study by Almossawi (2012) sheds light on the antecedents and consequences of customer satisfaction, customer retention and customer loyalty in the Mobile Telecom industry in Bahrain for which the data was collected from 228 male and female mobile users belonging to different age groups. The factors related to payments and savings (such as offers, rents, charges) were found to be the most significant in determining satisfaction, retention, and likelihood of switching from one mobile provider to another. Conversely, intercommunication factors (such as customer service, friendly employees, user-friendly websites) were found to be the least significant. This shows that mobile users do care the most about how much they pay and how much they save while they do not usually put much emphasis on personal contacts with mobile operators. A significant positive relationship was found between customer satisfaction and retention. However, in
contradiction to the empirical findings of Akroush et al. (2011), Eshghi et al. (2007), Gerpott et al. (2001) and Lee et al. (2001), results indicate no significant relationship between customer satisfaction and customer loyalty. Results also show that customer retention does not necessarily lead to customer loyalty owing to the observed insignificant association between the two.

A study carried among 1458 customers in the Kurdistan region of Iraq used logistic regression model to identify and quantify the impacts of the factors that drive mobile phone customer satisfaction and to determine the relationships between the demographic variables and the degree of customer satisfaction (Khayyat and Heshmati, 2012). The results show that gender, age, location, education level and purpose of use are all highly statistically significant but only gender and age have positive effect on customer satisfaction. Male users and relatively older ages are more likely to be satisfied with the service. The other significant factors have negative effects on user satisfaction. Even though the income and the price are not significant, they also have negative effects.

Adeleke and Aminu (2012) conducted Pearson Product Moment Correlation on the data collected from 198 Nigerian GSM mobile telephony service subscribers to establish the relationship between the independent and dependent constructs of their research. The study operationalised and tested four constructs (service quality, price/tariff, customer service/care and corporate image) that determine customer satisfaction and loyalty. Corporate image followed by service quality are the most positively correlated constructs with customer satisfaction and loyalty. The correlation of customer service with customer satisfaction and loyalty, though positive is very weak while price/tariff is negatively correlated with customer satisfaction and loyalty.

In line with Adeleke and Aminu (2012), Malik et al. (2012) studied the impact of brand Image, service quality and price on customer satisfaction in Pakistan Telecommunication sector by applying Pearson correlation on the data collected from 165 mobile phone subscribers. Service quality, price and brand image are strongly correlated with customer satisfaction similar to that observed by Adeleke and Aminu (2012). Service quality has the strongest correlation and any increase results in a positive impact on customer satisfaction. Similarly, improvements in brand image result in increased customer satisfaction while increase in price is shown to have a negative impact on customer satisfaction.

Salleh and Gelaidan (2012) undertook this study to find out the customer’s satisfaction with Yemeni Mobile service providers. This study examined the relationship between perceived quality, perceived value, customer expectation, and corporate image with customer satisfaction. The result of this study is based on data gathered online from 361 academic staff in public universities in Yemen. The study found that perceived value, perceived quality and corporate image have a significant positive influence on customer satisfaction, whereas customer expectation has positive but not statistically significant relationship with customer satisfaction.

Adjei and Denanyoh (2014) too used Pearson correlation to establish relationship between their dependent and independent variables so as to investigate the determinants of Customer Loyalty among mobile telecom users of Brong Ahafo region of Ghana utilising data from a sample of 194 mobile users. The study results identified call rate/quality, network coverage and sales promotion as having significant positive relationship to customer loyalty. In addition, brand image and prompt customer service were seen to have a less effect on customer loyalty.
In contrast to the studies reviewed above, Oghojafor et al. (2014) examined the role of basic elements of marketing mix (product, price, distribution, promotion and customer service) in influencing customer satisfaction and the factors that determine customer loyalty in Nigerian telecommunications industry. For the purpose of the study, a sample size of 1000 respondents was selected from Lagos State, Nigeria. Basis the result of regression analysis in examining the relationship between marketing activities and customer satisfaction, it is found that product (core service) has the highest impact on customer satisfaction. This shows that telecom users want network availability, accessibility and reliability. They want network to be available at all times and they also want their calls to go through whenever they make calls. The next construct with a high impact on customer satisfaction is promotion. This indicates that telecom users will be satisfied if their service providers are involved in promotion activities. Customer service has the least impact on customer satisfaction after price. This indicates that customer service and price are not the main sources of satisfaction. It was also found that, apart from customer satisfaction, trust is a major determinant of customer loyalty.

The study conducted by Ahmad et al. (2015), investigates the relationship among customer satisfaction, customer trust, switching cost and customer loyalty in mobile telecommunication service market of Pakistan. The data was collected from 515 customers and Correlation matrix and ordinary least squares regression analyses are used to determine the relationship among the variables. The evidence from this study suggests that customer satisfaction and customer trust are the stronger predictors of customer loyalty. In contradiction to the findings of Lee et al. (2001), the switching cost does not have a moderating effect on customer loyalty due to low switching cost and low mobile number portability cost enabling the customers to easily switch from one mobile telecommunication service provider to another service provider in the market. Furthermore, this study proves that customer trust partially mediates the relationship of customer satisfaction with customer loyalty; this suggests that customer satisfaction contributes towards building customer trust which ultimately leads to customer loyalty.

In recent research by Rahhal (2015), factor analysis is conducted using the data collected from 460 Syrian mobile phone service users to study the effects of service quality dimensions on customer satisfaction. The study strives to develop a valid and reliable instrument to measure customer perceived service quality incorporating both service delivery as well as technical quality aspects. It was empirically tested for unidimensionality, reliability and construct validity using confirmatory factor analysis. The findings show the direct significant impact of service quality on customer satisfaction, and this effect had appeared through three dimensions (network quality, responsiveness, reliability) and no direct effect of other dimensions on customer satisfaction was found.

4 Discussion and conclusions

Even though the studies reviewed above present varied views and models of various factors leading to customer satisfaction and loyalty, cohesively they present a basic pattern with regard to the determinants of customer satisfaction and loyalty in telecommunications industry. The studies depicts that direct as well as indirect causal links exist among various drivers which ultimately determine customer satisfaction and loyalty. This research brings together a number of empirical studies conducted in diverse
telecom markets spread widely across the world and critically examines findings from each of these studies to bring to light chief contributing factors leading to customer satisfaction or customer loyalty in the context of mobile telecommunications sector. The research also brings forth an opportunity to compare the behavior of the aforementioned contributing factors in the select telecom markets, which paves the way for a wholesome understanding of the concept. Equipped with this knowledge, the telecom operators functioning in various geographical markets can further streamline their service offerings with the end goal of enhancing satisfaction, loyalty and retention among their existing customers.

A large number of studies such as Gerpott et al. (2001), Lee et al. (2001), Kim et al. (2004), Eshghi et al. (2007), Akroush et al. (2011) and Deng et al. (2010) view customer satisfaction as a major determinant of customer loyalty though there also exist exceptions to this as seen in case of Almossawi (2012) wherein no significant relationship was observed between the two or in case of Boohene and Agyapong (2010) wherein the results show a negative relationship between customer satisfaction and customer loyalty.

The switching cost is another majorly studied factor in telecom loyalty research. It is the cost that is incurred by subscribers for terminating existing transaction relationships and initiating a new relation with a new operator. Switching costs are especially relevant in the context of telecommunication markets. This factor has been studied in different ways in the reviewed studies to assess the role it plays in shaping customer loyalty. While Lee et al. (2001) as well as Kim et al. (2004) establish the role of switching costs/barriers as the moderator in the observed relationship between customer satisfaction and loyalty, Ahmad et al. (2015) holds that switching cost has no moderating effect on customer loyalty. On the other hand, Akroush et al. (2011) maintains that the perceived switching costs have a low positive but direct and significant effect over customer loyalty.

Majority of the studies reviewed above have examined the impact of service quality on customer satisfaction and most strikingly establish a strong consensus on its direct and significant impact on customer satisfaction which evidently holds true in all the telecom markets studied. Studies like Akbar and Parvez (2009), Kim and Lee (2010) and Boohene and Agyapong (2010) indicate that there is a positive relationship between service quality and customer loyalty too.

The role of demographics has also been scrutinised by various studies. Some of these, such as Khayyat and Heshmati (2012) establish their significant positive impact on customer satisfaction while others like Eshghi et al. (2007) override their effect over other strong predictors. On the other hand, according to Deng et al. (2010), demographics have significant moderating effects on the relationship between trust and customer satisfaction and on the relationship between emotional value and customer satisfaction.

The reviewed studies are in agreement with regard to the role played by price. While Adeleke and Aminu (2012) and Malik et al. (2012) observe a negative correlation between price and customer satisfaction, Oghojafor et al. (2014) agrees that price is not a main source of customer satisfaction. Similarly, there is nearly a consensus among the reviewed studies in case of image as well. Salleh and Gelaidan (2012) as well Rahhal (2015) observe a significant positive impact of image on customer satisfaction while Adeleke and Aminu (2012) and Malik et al. (2012) cite a strong positive correlation between image and customer satisfaction. Boohene and Agyapong (2010) too observed corporate image to play a significant role in explaining customer loyalty. It is only the study by Adjei and Denanyoh (2014) which sees image as having relatively less though positive effect on customer loyalty.
The reviewed studies provide mixed results about the effects of customer value and customer trust. While Balaji (2009) observe an insignificant relationship between perceived value and customer satisfaction, Wang et al. (2004), Deng et al. (2010) and Salleh and Gelaidan (2012) observe perceived customer value to have a significant positive influence on customer satisfaction. Akbar and Parvez (2009) observed a direct significant relationship between customer trust and customer loyalty. Similarly, Deng et al. (2010) found trust to contribute to generating customer satisfaction as well as influencing customer loyalty while Oghojafor et al. (2014) as well as Ahmad et al. (2015) considered trust as a major determinant of customer loyalty. However, Akroush et al. (2011) considered the effect of customer trust over loyalty to be relatively low.

Evidently, the selected studies have reviewed the work done on telecom markets belonging to diverse geographies indicating the importance laid on the subject all over the world.

5 Limitations and directions for future research

The study attempted to examine various models of determinants of customer satisfaction and loyalty in telecom sector environments based on earlier studies. The paper not only catalogues the studies conducted on the subject in a systematic order but also helps in understanding the concept further. In addition, the studies present a pattern of relationships between the determinants of customer satisfaction and loyalty in telecommunications industry which can be researched further more comprehensively for better understanding of the phenomenon. The discussion above with regard to the relationships among the contributory factors of customer satisfaction and loyalty provides a direction in the way future research is to be carried. The paper’s contribution should be addressed in relation to its limitations, from which future research opportunities can be outlined. The foremost fruitful area of future research is to empirically examine the key conceptual and theoretical conclusions stated by the paper. The inadequacy of existing literature on customer satisfaction and loyalty with reference to the telecommunications sector calls for more research to be done in this domain. As the technological environment in which the telecom industry functions is subject to frequent advances and changes. Future research can explore and identify the influences arising as a result of some hitherto unexplored factors, moderating variables and their interplays with the already studied factors. Hence, it calls for continuing research in this direction. Also, the generalisation of the paper’s findings to other service business industries should be considered with caution since it is conducted in a single service industry-telecom service market. Finally, future research can explore the cumulative influence of all the factors over customer satisfaction and loyalty to strike wholesome models capable of explaining the phenomenon in a more lucid manner. It is the interplay of some specific and common factors leading to customer satisfaction and loyalty which has been studied in various telecom service markets producing varying or sometimes contradicting results. Thus, there lies a great scope for further study in the direction of unearthing some theories which can be commonly generalised to have universal applicability and conformance.
References


Modelling customer satisfaction and customer loyalty


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