Customer Satisfaction and Customer Loyalty as Drivers of Customer Lifetime Value: An Analysis

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Abstract: The paper is a review of existing 35 literatures that have studied the impact of customer satisfaction and loyalty on Customer Lifetime Value. The paper makes an analysis from previous studies that have studied the impact and association between the selected variables of study. In order to bring more light into the context, the authors have also included the association of Word-of-Mouth with satisfaction and loyalty in the study. Over the years, authors have found how satisfaction and loyalty are inter-dependent and how they are important drivers for making customers repeat their purchases. Previous studies concluded that even the referral intentions of customers are highly influenced by satisfaction and loyalty. However, a few authors have opined that satisfaction and loyalty are over prioritized by many marketers. The paper shall be of use to academicians working in the lines of marketing and also benefit marketers in identifying a correct approach towards calculating Customer Lifetime Value.

Keywords: Customer satisfaction, customer loyalty, Customer Lifetime Value, Customer Retention, Repurchase, Word-Of-Mouth, customer relationship management, marketing, customers, drivers.

1. Introduction:

Relationship marketing made an appearance in the theories of marketing since the early 1990s (Khan, 2014a). The concept of Customer Relationship Management (CRM) is about recognizing, initiating, maintaining, increasing and even concluding relationships with customers, if necessary. CRM aims to enhance the wealth of a company by building long-lasting relationships with their most valuable customers (Bernat, 2018). With relationship marketing, the objectives of both parties (seller and customer) are satisfied (Rashid, 2003). The aim of relationship marketing is to develop long-lasting and mutually beneficial relationships with customers (Peppers, 1993). This involves a cost on the part of the business firms. Firms can spend a certain sum of money in retaining their profitable customers (Glebova, 2015). For this, it is important for the firms to identify and understand their profitable base of customers. Firms need to measure the impact of all the CRM strategies that

they implement. This concept of evaluating the value of customers and taking CRM strategies accordingly is called Customer Lifetime Value.

Over the years, researchers have defined the concept of CLV in different ways, though, more or less they are all indicating the same philosophy.

Table 1: CLV definitions by different authors over time

Authors	Definition
Dwyer (1997)	LTV is the current value of the perceived advantages (e.g. gross margin) less the liabilities (e.g., direct cost of servicing and communicating) from customers.
Hoekstra & Huizingh (1999)	The direct and indirect contribution of an individual customer to the profits of a company during his/her entire lifetime is CLV.
Kumar, Ramani & Bohling (2004)	The sum of discounted cumulated cash flows that a customer contributes during his/her lifetime is called lifetime value of customer.
Kumar (2007)	CLV is the value of total monetary contribution that a present customer is likely to render in the future.
Blattberg, Kim & Neslin (2009)	The net present value of profits that an acquired customer contributes after exclusion of cost involved in marketing, selling, producing and servicing the customer over his/her entire life cycle is called CLV.

Source: Compiled by Author

Till date, different CLV estimation models have come about in the marketing literature. According to the basic structural model of CLV estimation (developed by Jain and Singh, 2002), CLV can be calculated as:

$$CLV = \sum_{i=1}^{n} \frac{M - C}{(1 + d)^{i-0.5}}$$

"Where, i = total transaction period of customer, M = margin gained, C = cost associated with the customer in time period i, n = number of total expected lifetime period of the customer, d=discount rate. The profit obtained against each customer in a year is multiplied at a given power (i-0.5) to adjust the mean times between revenue and spending flows."

Estimation models are developed by researchers using the components that affect CLV. There are basically three important components of CLV-"frequency of purchase," "contribution margin" and the "marketing costs" (Kumar & Pansari, 2016). Based on an examination of the different CLV models, it is evident that "revenue," "retention rate" and "cost" are three necessary components for CLV calculation (Bauer et al., 2003). Qi et al., (2012) state that "customer relationship duration" and "customer revenue" are the two important

components of CLV modelling. Since CLV modelling requires past transaction data on customers, uncertainty elements are usually needed to be incorporated in the different approaches. Authors have come about with different mathematical and statistical models of CVL estimation with the financial components.

However, some authors opine that 'price' cannot be the only criterion for winning the battle. The exclusion of non-financial factors indicates an incorrect estimation of CLV and subsequently fails to address customers with individual marketing efforts (Lee et al., 2006). Calculating customer profitability with only one dimension can lead to an incomplete picture of customer relationship. (Damm & Monroy, 2011). Some authors in the past have done several studies in finding the effect of non-financial factors on CLV. According to Kaul (2017), non-financial values like customer satisfaction, repeat purchase probability may ultimately help retailers in determining CLV for long-term competitive advantage. For the correct estimation of CLV, it is important to include the impact of both financial and non-financial factors. It is important for marketers to understand what helps them increase their customer's lifetime value. It is necessary that business firms identify the exact drivers that affect customer value in order to correctly estimate CLV (Qi et al., 2012). Researchers have studied and established the impact of demographics (age, gender, income) on CLV. Though some researchers (Anderson et al., 1994, Hallowell, 1996, Reinartz and Kumar, 2002, Chang 2010) have investigated the influence of customer behaviour on CLV, studies in this field are found to be rare. However, it is important to understand the influence of behavioural factors like satisfaction and loyalty on customer profitability. It is important for firms to know whether customer satisfaction and loyalty are CLV drivers in order to adopt marketing strategies to enhance customer value (Qi et al., 2012).

The concept of customer satisfaction occupies a core position in marketing literatures. It is considered that customer satisfaction is the major outcome of marketing efforts which culminates post-purchase customer behaviour like repeat purchase, attitude change and brand loyalty (Churchill and Surprenant, 1982). Oliver (1992) had defined customer satisfaction as "the consumer's fulfilment response."According to him, "it is the judgement that any product or service feature, or the product or service itself, provided a pleasurable level of consumption related fulfilment, including levels of under or over-fulfilment." In the words of Kotler (2000), satisfaction is "a feeling of pleasure or disappointment which results from comparing a product's perceived performance or outcome against his/her expectations." Satisfaction is thus, a state of mind where the customer intends to make repeat purchases from the business. Another important aspect of customer behaviour that strongly impacts customer purchase decisions is customer loyalty. Several authors have related customer loyalty with repeat purchases. Newman and Werbel (1973) define loyal customers as "those who re-bought a brand, considered only that brand, and did no brand related information seeking." Oliver (1997) made a little variation and defines it as "a deeply held commitment to re-buy or repatronize a preferred product or service consistently in the future, thereby causing repetitive same brand or same brand-set purchasing, despite situational influences and marketing efforts that have the potential to cause switching behaviour." Loyalty is thus, also a state of mind where the customer makes repeat purchase of the same brand,

irrespective of the marketing efforts of other marketers. Some authors (Sivadas and Baker-Prewitt, 2000, Zeithamal et al., 1996) have found significant association between customer satisfaction and loyalty with CLV, while a few have found the impact to be over-prioritized. Thus, to enhance CLV, it is important to understand the kind of association between CLV drivers and CLV components. The study of association between drivers and components would help in identifying the correct drivers of CLV.

The present study is made with an intent to review the existing literatures on the impact of customer behaviour on CLV. Studies examining customer behavioural factors on CLV are rare (Qi et al., 2015). The present study is an attempt to review the rare articles that have studied the impact of customer behaviour on CLV. The study envisages examining the view points of different authors in this regard.

2. Objectives:

Many factors like customer satisfaction, customer loyalty, trust, commitment affect CLV components (Qi et al., 2015). Previous researchers have found customer loyalty to be one of the important forces of CLV (Kim et al., 2006). Another important driver that influences CLV from direct to indirect ways is customer satisfaction (Lages et al., 2005). Considering the significance of the two important CLV drivers, the objective proposed for the study is to briefly assess the influence of customer satisfaction and loyalty on CLV. To correctly justify the objective of the study, a review of existing literatures in this direction is made.

3. Methodology:

The paper is a review paper prepared on the basis of extant literature search in the relevant areas. By making a systematic electronic search in different databases (JSTOR, Springer Link, Semantic Scholar, Google Scholar, Research Gate, Emerald, Science Direct, and ProQuest) , a total of 35 research articles were chosen for final review. For selection of literatures, the first step involves the search of literatures with keywords like 'customer satisfaction,' 'customer loyalty,' 'CLV,' 'profitability,' 'customer retention,' 'Word-Of-Mouth' and 'repeat purchase.' The reasons for the selection of the above keywords are stated hereunder:

1. Since the sole objective of the paper was to identify the effect of customer satisfaction and loyalty on CLV through literature search, three keywords, namely, 'satisfaction,' 'loyalty' and 'CLV' formed the base of search.

2. Authors in the past have pointed that CLV has a lot to do with customer retention and repeat purchase (Kaul, 2017; Hallowell, 1996; Reinartz and Kumar, 2000). Researchers have identified that retention and repeat purchase are important components of CLV. Customer retention and repeat purchase as CLV components, therefore, form of part of keyword search for the present article.

3. Marketing researchers are presently concerned over inculcating the value that Word-Of-Mouth recommendations generate while calculating customer value (Singh and Jain, 2013). The authors have therefore included "WOM" in their keyword search.

4. CLV is generally named as 'customer value,' 'customer profitability,' 'Net Present Value,' 'customer equity' (Estrella-Ramon et al., 2013). Some authors have differentiated CLV with customer profitability (Pfeifer and Carraway, 2005). However, in the present study, CLV and profitability are assumed to have conveyed the same meaning.

The search with the specific keywords identified a total of 440 literatures. Out of all the literatures identified, 100 were eliminated due to duplicate citations, 50 literatures were excluded after abstract screening as they were found irrelevant with our study, 5 studies were excluded after full text screening and 5 after data extraction. The selected 35 papers deal specifically about the impact of the key customer behaviour determinants on CLV. It was also made sure that the selected papers are published in reputed sources. Only papers available online are included in the study. The papers selected are from a period of 1994 -2021. Our online search generated literatures relating to our context since 1994. To make an extensive study, literatures from the year available online are included till the last current year.
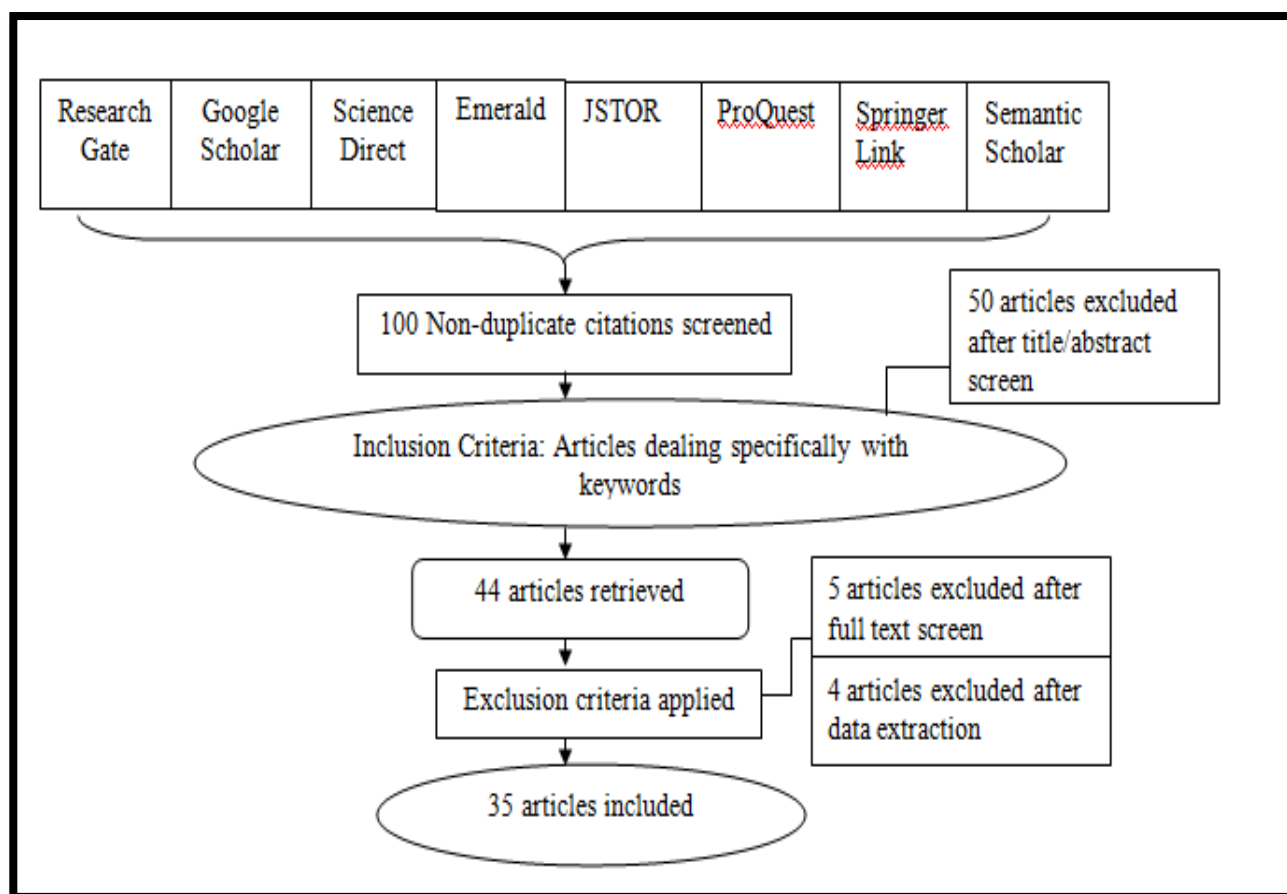

Figure 1: Flow Diagram showing literature selection process

Details regarding the selected papers are provided in Table 2.

Table 2: Details of literatures selected for the study

Author	Database	Criterion for selection
Anderson et al., (1994)	Journal Storage (JSTOR)	This is a study that explains the relation between customer satisfaction and

|		profitability, return on investments.
Dick and Basu (1994)	Springer Link	The paper discusses the different factors that affect the relation between customer loyalty and repeat buying.
Gould (1995)	Semantic Scholar	The author places an analysis on why customer loyalty and satisfaction are important for the long-term profitability of any business. The paper also discusses ways in which loyalty of customers can be measured.
Hallowell (1996)	Google Scholar	It is an empirical study that analyses the relation between customer satisfaction and loyalty on CLV.
Hennig-Thurau and Klee (1997)	Semantic Scholar	The author assesses the relation between customer satisfaction and customer retention and also develops a model.
Bolton (1998)	Research Gate	The author develops a model of the duration of provider-customer relationship which explains the relation between customer satisfaction and retention.
Sivadas and Baker-Prewitt (2000)	Emerald	The study examines the relation between customer satisfaction, service quality and store loyalty in the retail store. The study finds that it is customer satisfaction that makes a customer repurchase or recommend a product/service.
Bowen and Chen (2001)	Google Scholar	The paper describes the relation between customer satisfaction and loyalty and develops a model that can help increase loyalty.
Mittal and Kamakura (2001)	Research Gate	The authors develop a conceptual model that relates customer satisfaction with repurchase behaviour.
Srinivasan et al., (2002)	Google Scholar	The paper reveals the relation between customer loyalty and WOM and willingness to pay more which is related to CLV.
Reinartz and Kumar (2002)	Research Gate	The article talks on how customer loyalty is not managed well and discusses ways in which it can be managed.
Reinartz and Kumar (2003)	JSTOR	The article develops a framework for measuring CLV. It also discusses about

		variables that affect customer relationships.
Hwang and Suh (2004)	ScienceDirect	The authors develop a model of customer value by taking customer loyalty as a measure and suggest ways in which customers can be segmented accordingly.
Gustafsson et al., (2005)	Research Gate	The study explains the relation between customer satisfaction and affective commitment on customer retention.
Ho et al., (2005)	Research Gate	The authors develop a new model of CLV by incorporating customer satisfaction in it.
Carpenter and Fairhurst (2005)	Emerald	The authors discuss about the relation between customer satisfaction, loyalty and WOM.
Meyer-Waarden (2007)	Science Direct	The paper examines the relation between loyalty programmes and customer lifetime duration.
Macintosh (2007)	Emerald	The study empirically explains the relation between customer loyalty and positive WOM.
Heskett et al., (2008)	Research Gate	The article puts a discussion on ways to increase profitability in service businesses.
Smith and Chang (2009)	Research Gate	The authors discuss the important role that customers play in increasing the firms value
Tsao et al., (2009)	Google Scholar	The study analyses the relation between customer loyalty and promotion programmes on retention rates.
Blattberg et al., (2009)	Google Scholar	The paper discusses some conceptual and generalised questions with regard to CLV.
Aurier and N'Goala (2009)	Springer Link	The paper uses trust, commitment and satisfaction to study their role in developing customer relations.
Chang (2010)	Research Gate	It is a study on the factors that affect customer loyalty and CLV towards a particular brand.
Marshall (2010)	Google Scholar	The study explores the key determinants in the relation between customer loyalty, commitment and CLV.
Zhang et al., (2010)	Google Scholar	The paper financially measures the impact of loyalty on CLV in the consumer packaged goods industry.
Chen (2012)	Semantic Scholar	This thesis conceptualises in detail how

		certain customer relationship characteristics affect CLV in the Taiwanese banking industry.
Hasnelly and Yusuf (2012)	Research Gate	The paper empirically measures the impact of customer satisfaction, loyalty and value.
Kahreh and Kahreh (2012)	ProQuest	The paper discusses about the impact of customer loyalty on CLV based on evidences from the banking sector.
Qi et al., (2012)	Google Scholar	The paper presents a detailed discussion if customer satisfaction and loyalty are drivers of CLV in the telecommunication sector.
Chen and Chen (2014)	Google Scholar	The study is about the brand image and satisfaction that students have with their colleges that affect their CLV.
Qi et al., (2015)	Google Scholar	The authors develop a conceptual model that relates customer loyalty and satisfaction with CLV to inspect the effect of consumer characteristics (self-construal, demographic) in the relation between customer loyalty and CLV.
Kaul (2017)	Research Gate	This is a review paper that discusses about the impact of CRM on customer satisfaction and ultimately CLV.
Barbu and Tiganoaia (2018)	Research Gate	The paper discusses about customer loyalty and CLV.
Dandis et al., (2021)	Research Gate	The authors examine the different factors that impact CLV.

Source: Compiled by authors

The above literatures have studied on the relation between customer satisfaction and loyalty with certain components of CLV like customer retention and repurchase. Accordingly, in our study, the relation of behavioural factors with CLV is done using certain components that affect customer value. Figure 2 below presents the theoretical model that shall be studied in this paper.
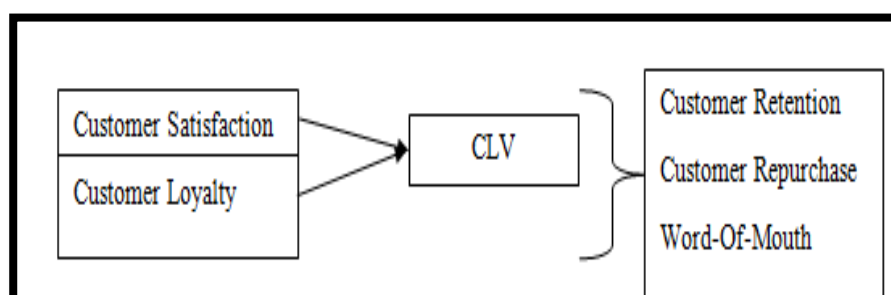
Source: Compiled by authors

4. Analysis:

The study of satisfaction and loyalty has occupied significant places in the literatures of marketing. Prior studies have been made in different directions of customer satisfaction and loyalty. Below, we describe briefly the association between the two behavioural components with CLV.

4.1 Relation between customer satisfaction with CLV

One of the key elements of CLV is customer retention. It is only when a customer is retained long into the business that his lifetime value turns out to be profitable. Kotler (1994) sums up his research stating that "the key to customer retention is customer satisfaction." Oliver et al., (1992) conclude that satisfaction is an antecedent of quality judgement and then loyalty. Henning et al., (1997) develops a conceptual model of the satisfaction-retention link in their study that critically re-assesses the effect of satisfaction and relationship quality on retention. Their established model presents that the association between satisfaction and customer relationship is moderated by constructs of relationship quality. The authors have found that three constructs affect the quality of relation between customers and marketers-the perception of product and service quality by the customer, the trust of customer, and his/her commitment towards the business. A satisfied customer is also loyal (Heskett et al., 2008). This will lead towards customers re-purchasing and therefore, service industries are very much focused towards measuring customer satisfaction. Heskett et al., (2008) explain how service Company Xerox measures customer satisfaction and focuses on achieving satisfied customers by improving services. By focusing on customer satisfaction, Xerox was able to turn most of its customers profitable.

Sivadas and Baker-Prewitt (2000) recommend that satisfaction influences repurchase and recommendation behaviour of customers, although it has no relation with loyalty. Many studies have found customer satisfaction to be a good predictor of their future purchase behaviour (Kasper, 1988). Zeithamal et al., (1996) indicates that it is the customers who are highly satisfied that make repeat purchases in the future. Kotler (1988) states that customer satisfaction is the best indicator of a customer's future profits. A customer who is satisfied has greater likelihood of repurchasing (Jacoby et al., 1978). Satisfaction is also tied with customer retention in many studies (Mittal & Kamakura, 2001). CLV estimation involves predicting customer's future flow of revenues and customer's retention rate. In a review of literatures of retail industry made by Kaul (2017), it is found that a firm's CRM techniques have a direct impact on customer satisfaction. The review concludes that customer satisfaction has a straight relation with repeat purchase and customer retention, which is a basic consideration in CLV estimation. The author develops a conceptual model based on the review made which co-ordinates the relationship between CRM, customer satisfaction, repeat purchase and customer retention probabilities that ultimately enhances customer value. The

study concludes that satisfied customers make more repeat purchases at the retail industry which increases their value and industries should therefore focus on developing relationships with such customer base.

In another study by Hallowell (1996) to determine the relation between customer satisfaction, loyalty and profitability in a retail banking context, it is found that customer satisfaction is inherently related to customer retention. The author concludes that when other things are kept constant, an increase in customer satisfaction leads to an increase in profits.

Another study was made by Qi et al., (2012) to enquire if customer satisfaction is a driver of CLV. The authors opine that it is important to understand its influence on CLV so that firms can adopt appropriate marketing strategies to increase CLV. The authors made a cross-culture comparative study with telecommunication industry between the US and China. For CLV components, relationship duration and revenue streams of customers were chosen. Average monthly spending by the customers and future relationship time were respectively used in the study to measure customer revenue and relationship duration. Customer satisfaction was measured using a standard questionnaire. Results of structural equation could not detect any significant relation between customer satisfaction and CLV components. The results of the study is found consistent in all the three samples tested, that is, Chinese sample, US sample and the total sample.

Chen (2012) had made a study to empirically investigate the relationship between CRM constructs, CLV, customer satisfaction and customer loyalty in a banking industry of Taiwan. The Structural Equation Modelling (SEM) analysis of the data supports that customer value has a positively significant relation with customer satisfaction in the banking industry. In another study made by Boltan (1998) on customers of cellular telephone industry, it is found that customers who had high cumulative satisfaction with the cellular services of the company, tend to have longer lifetime durations. The study also develops a model of duration of provider customer relationships. The model measurements also indicate a statistically significant relationship between duration times and satisfaction ratings. Another study made by Gustafsson et al., (2005) on customers of a Swedish telecommunication industry also concludes that satisfaction influences the retention rates of customers. Chen and Chen (2014) made a study on college students to study the impact of brand image and satisfaction with CLV with regard to the higher education institutions of Taiwan. Results show positive association between both brand image and satisfaction, brand image and CLV, satisfaction and CLV.

Gould (1995) addresses the concern over why it is more important to enhance the satisfaction of a specific group of customers than enhancing the number of satisfied customers. To get good results, companies should try to make customers more than just being satisfied. The role of lifetime value of customers may have an important part to play here in identifying those specific groups of customers. Several authors have found satisfaction to be a strong antecedent of customer retention. Findings indicate that an increase of customer retention by 5% leads to increasing customer profitability by 80% (Gould, 1995).

Ho et al., (2005) develop a formal methodology of incorporating customer satisfaction in the CLV model developed by Schmittlein et al., (1987). Their research was established on two premises. It was assumed that a customer who is satisfied has a higher lifetime value than a customer who is not. Also that customer satisfaction can be enhanced by investing in better technology and service. The authors have extended the basic CLV model in three ways- by allowing customer satisfaction to impact the average expenditure on every visit which will mean that a customer who is satisfied in his/her previous visit is going to spend more in the current visit, allowing customer departure processes to be contingent on satisfaction and also by allowing satisfaction of a customer to correlate over time such that past satisfaction may influence present customer satisfaction. Serial correlation of customer satisfaction was modelled using a Hidden Markov Model and transition of customer satisfaction over time was captured by a two-state Markov chain. Based on their extended model, it is found that customers prefer to purchase more when they are satisfied. The numerical formula developed by the authors permit to measure the marginal value of customer satisfaction such that businesses can weigh this value against the cost of providing a better service. It is found by the authors that when a company invests more in satisfaction, it gets increasing marginal revenue. Results from the formula developed by the authors for determining the total dollar spending from a customer base over a time period show that CLV has an increasing return to scale in the probability of receiving good service. With better services comes higher customer satisfaction. Details of the model extensions and numerical analysis are found in great details in the paper developed by Ho et al., (2005). Table 3 below gives a gist of the results found from literature review.

Table 3: CLV and Customer Satisfaction

CLV Components	CLV Driver	Analysis	Type of industry studied by authors
Retention	Customer Satisfaction	Customers are satisfied with the quality of service provided by the company. While customers are satisfied with the service quality, this generates a tendency amongst them to keep themselves attached with the company. Thus, satisfaction is found	Service industry, retail industry, banking industry, telecommunication industry

		to be highly impacting customer retention. A customer who is satisfied shall be retained long into the business.	
Re-purchase behaviour	Customer Satisfaction	Satisfaction has a major role to play in predicting customer's future behaviour. It is found that customers who are satisfied usually make re-purchases. Satisfied customers tend to make more repeat purchases, thereby, increasing their value towards the firm.	Retail Industry, telecommunication industry
Duration	Customer Satisfaction	It is found that satisfied customers have longer lifetime durations. With longer lifetimes, customers remain retained and thus this brings in more profits to the business.	Service industry, cellular telephone industry

Source: Compiled by Author

4.2 Relation between customer loyalty with CLV

Marketing literatures are often directed towards the impact of loyalty in consumers buying behaviour. There exists a positive relation between customer loyalty and profitability (Bowen & Chen, 2001). Retaining only 5% of a company's customers help increase profit margins by 25% (Reichheld & Sasser, 1990). A loyal customer is said to increase sales through reduced cost of marketing, are not likely to switch to competitors and usually purchase more variety of goods and services (Bowen & Chen, 2001). Pritchard & Howard (1997) define composite measurement of customer loyalty as a measure of customer's preference for

products, recency of purchase and the total value of purchase made. In a study made by Bowen & Chen (2001) on customers of a hotel at Boston, United States composite approach of loyalty was adopted. The results of the study support that there is a positive relation between customer loyalty and profitability. It is also found that loyal customers generate more word-of-mouth (WOM). The study also indicates that it is important to have very satisfied customers as that dramatically increase loyalty. Reichheld & Sasser (1990) predicts that with an increase of 5% of customer loyalty, profit generation of a firm enhances from 25% to 85%. Heskett et al., (2008) state that having loyal customers not only help increase company profits but reduces the cost that is involved in keeping the less loyal ones.

In the cross-culture comparative study made by Qi et al., (2012) with customers of telecommunication industry of US and China, relationship duration and revenue streams of customers were chosen as CLV components. The authors measured customer loyalty using a standard questionnaire. Results of structural equation suggest that relation between customer loyalty with the CLV components is significant. The results of the study is found consistent in all the three samples tested, that is, Chinese sample, US sample and the total sample. The study concludes that customer satisfaction has a direct impact on customer loyalty, which has a direct impact on CLV. The results of this study are supported by another study made by the authors in 2015. Qi et al., (2015) models CLV as a function of customer loyalty and the function co-efficients are related to customer satisfaction by a hierarchical Bayesian model. The model is made flexible to take self-construal characteristics and demographic features of customers for studying their moderating role between customer loyalty and CLV. The study finds a statistically significant relation between all the variables (satisfaction, age, sex, family, inter-dependent self-construal, independent self-construal) on the linear term of relationship between customer loyalty and CLV.

Kahreh & Kahreh (2012) made a study to examine the impact of customer loyalty on CLV. The study identifies eight factors of customer loyalty, namely, satisfaction, co-operation, trust, commitment, service quality, complaint handling, image and communication. Customer data from three Iranian banks were used for the study. Statistical results of the study indicate that the eight factors have significant positive relation with customer loyalty. To measure CLV, the study adopts the famous Recency, Frequency and Monetary (RFM) framework. With T-test and β co-efficient, the study confirms a significant positive relation between customer loyalty and CLV. Hallowell (1996) in his research divides loyalty into two dimensions, namely, retention (length of relation) and cross-sell (depth of relation). Within the context of a retail banking sector, it is found by Hallowell that loyalty of customers hugely impacts profitability.

A study was made by Chen (2012) to empirically investigate the relationship between CRM constructs, CLV, customer satisfaction and customer loyalty in a banking industry of Taiwan. The author finds a positive association of CLV with customer loyalty. The researcher further discusses that loyal customers enhance CLV due to a number of reasons like, their acquisition cost is reduced, more profits start coming from such customers, they tend to buy more often, they also tend to refer more to others and are likely to be less price sensitive. The study provides significant support in proving that customer satisfaction is a prerequisite for

customer loyalty and customer loyalty is a prerequisite for CLV. Hasnelly and Yusuf (2012) also find association between the three constructs, namely, customer value, customer satisfaction and loyalty in their study of organic products in Indonesia. Smith and Chang (2009) study the important role of customers in increasing firm value with the Taiwan banking sector. Out of the many variables studied, the researchers find that customer satisfaction is associated with customer loyalty and CLV both. However, the study finds no significant relation between customer loyalty and CLV. This indicates that long-term loyal customers may not necessarily be profitable to the business in a non-contractual setting.

Along with sales generated and the longevity of the customer, retention also plays a major role in CLV estimation (Reichheld, 2006; Reinartz and Kumar, 2000). Tsao et al., (2009) develops a model to estimate retention rates using two data that marketers can obtain easily, that is, 'market share' and 'loyalty.' Their study describes beautifully how loyalty affects retention rates. It is concluded in the study that with higher loyalty, retention rates of customers also increases.

Mittal and Kamakura (2001) relates the effect of satisfaction ratings on repurchase behaviour with the development of a conceptual model. The study shows how this impact between the two variables varies across a wide range of consumer characteristics. The study finds that consumers who are above the age of 60, who do not have children and also the female consumers have higher probabilities of becoming loyal. This means that at the same rate of satisfaction, these categories of customers would repurchase more than customers belonging to other strata.

Gould (1995) suggests that it is customer loyalty that is the ultimate goal for any company as a customer who is loyal will selflessly advocate about the company's products or services to others. Gould explains further in the paper as to how happy customers bring more profits to the business. These set of customers are likely to be less price-sensitive and it is easier to cross-sell or up-sell products or services with them. Gould holds the importance of calculating CLV of each customer for any business as with increasing customer relationship period, sales increase as well. The author explains in the paper how with customer loyalty, company's costs get reduced. With low defection, acquisition costs with customers get reduced. Also new customers who come with reference from existing loyal customers do not require extensive marketing spend.

The findings of Waarden (2007) indicate that customers with loyalty cards have longer lifetimes with grocery retailers. But with multiple cards from geographically close retailers, consumers tend to become more vulnerable. The study also supports that loyalty programs impact the consumer's Share-of-Wallet (SOW) at the store level.

In a recent study by Dandis et al., (2021) to identify the factors that affect CLV, it is found that many factors like brand credibility, confidence benefits, special treatment benefits have strong association with customer satisfaction and commitment, which ultimately, have a stronger association with the CLV of customers. In another recent study by Barbu and Tiganoaia (2018), it is found that for service providing companies like the cinemas, it is more profitable to have loyal customers as they generate more revenues and require less cost. The study compares customer's value based on two segments- attracting new customers and

increasing loyalty among existing customers. Results show that the CLV of customers who were in the loyalty phase is 25% more than those in the attraction phase.

Hwang & Suh (2004) brought out a LTV model that considers past profit contribution, potential benefit and defection probability of a customer. Their research suggests a new model of CLV and customer segmentation examining customer defection and cross-selling opportunity. Current value, potential value and customer loyalty were used as the three dimensions of customer defection. Customer loyalty was used to weight customer retention. The authors have used customer churn to calculate loyalty as churn indicates the percentage of customers who abandon relation. Customer loyalty was measured as:

$$\text{Customer Loyalty} = 1 - \text{Churn Rate}$$

Segmenting customers based on three values (current value, potential value and customer loyalty), the developed model was tested on six month raw data of a wireless communication company in Korea. For ease of understanding, customers were segmented into groups with loyalty values ranging between 0 to 1. Customer base was divided into two segments based on loyalty. Customers with scores greater than 0.5 indicated loyal customers while others were not. By segmenting customers based on the three values used for their model, the authors have also suggested respective use of marketing strategies at each segment that can enhance all the three values of customers. The authors have successfully accomplished the use of loyalty measures to calculate CLV and thus segmenting customers accordingly.

The study of Anderson et al., (1994) says that profitability at any particular point of time is positively affected by customer satisfaction. Enhanced satisfaction leads to enhanced customer loyalty and with an enhanced loyalty, chances that the customer will repurchase in the future also go high. Increasing customer satisfaction thus increases the future flow of cash stream from customers which directly affects future profitability (Anderson et al., 1994). The cost of acquiring customers also goes down with increased customer satisfaction (Fornell, 1992). Based on the results obtained from their study, Anderson et al., (1994) develops an analytical model that calculates the Net Present Value (NPV) of customers who are considered as assets for the firm. The equation is written as:

$$\text{NPV} = \sum_{t=1}^{T} \pi G(\text{Pr}\{\text{Loyal}|\text{Satisfaction}\}/(1 + \partial))^{t/\pi}$$

Their calculation measures "customer asset as a function of the likelihood or probability that a satisfied customer will remain loyal, Pr (Loyal| Satisfaction), G indicates the average gross margin per period, π indicates the length of the average repurchase cycle and ∂ is the discount factor."

Table 4 below briefly summarises the findings from the literature review done above regarding the association of customer loyalty with CLV.

Table 4: CLV and Customer Loyalty

CLV Components	CLV Drivers	Analysis	Type of industry studied by authors
Profitability,	Customer Loyalty	It is found that	Hotel industry,

revenue		loyal customers remain into the business for long, have lower costs of acquisition, tend to purchase more and make better referrals. Thus, loyalty helps in increasing business profits.	telecommunication industry, banking sector, organic products industry, service industry
Cost	Customer Loyalty	There is less cost involved in keeping loyal customers than the disloyal or less loyal ones. With lesser costs, come greater profits.	Service industry
Duration	Customer Loyalty	Loyal customers tend to remain associated long with the business. Loyal customer, thus, have longer lifetime durations	Telecommunication industry, grocery retails

Source: Compiled by Author

From the above discussion, we find significant associations between different CLV components with customer satisfaction and loyalty. However, some authors are of the opinion that no company should place special importance on the behavioural factors as that does not help increase in customer value. By using the customer databases of four companies, Reinartz and Kumar (2002) however, conclude that the relation between customer loyalty and profitability is not strong. Their analysis shows that customers who are loyal require more cost to remain loyal with companies. It is also found that the long-term experienced customers usually pay less than the newer ones. Their analysis also does not find a strong link between loyalty and positive WOM. However, when marked separately for both attitudinal and actual loyalty measures of customers, the study finds that customers with high scores on both recommend positively. Reinartz and Kumar (2002) suggests ways on how to segment customers into different groups, namely, 'strangers,' 'butterflies,' 'barnacles' and 'true friends' based on their loyalty and the profits they bring in. They advocate that loyalty of customers cannot be left alone when a company is concerned about its profitability. But it is important

for the companies to know in which segment the customers fall in and accordingly invest in them. The results of the study made by Marshall (2010) also indicate non-significant relation between loyalty and CLV. In the study, loyalty is studied in two context- behavioural loyalty and attitudinal loyalty. It is important to note here that the researcher finds no significant relation between both the types of loyalty with CLV. In another study made by Aurier and N'Goala (2010) on banking consumers, it is again found that the overall satisfaction of consumers with banking services has no role to play in customer retention.

4.3 Relation of CLV with Word-of-Mouth referral

Over the years, researchers have made efforts in identifying the exact components of CLV estimation. Several authors opine that Word-of-Mouth (WOM) significantly influences the future value of a customer (Singh & Jain, 2013; Lee et al., 2006). Considering WOM as an important component for estimation of future customer value, it is important to understand the influence of CLV drivers (customer satisfaction, customer loyalty) on WOM. Macintosh (2007) made a study on a sample of Canadian University employees who made arrangements with travel agents to study relation between satisfaction, loyalty and WOM. Results strongly indicate the existence of positive associations between satisfaction with loyalty and WOM. Results from another study conducted by Carpenter & Fairhurst (2005) indicate that there is a strong positive association between customer satisfaction and customer loyalty, customer satisfaction and Word-of-Mouth, and customer loyalty with Word-of-Mouth. Their study suggests that satisfaction of a customer generate WOM communications but there must be customer loyalty to mediate the relation between the two. In another study by Sivadas et al., (2000) on a department store, it is found that satisfaction positively increases the likelihood of a customer recommending the product/ service to others. The study also finds that loyalty affects repurchase intension. The study of Srinivasan et al., (2002) on online customers also finds significant association between e-loyalty and positive WOM communication by customers. The study also proves that increased loyalty surges the willingness of customers to pay more. Thus, it can be established that a customer who is satisfied will be loyal and shall promote more positive WOM.

5. Conclusion:

Literatures on CLV are more driven towards bringing out a correct measure of CLV estimation. However, without identifying the correct drivers, it is not possible to find out the best model. This paper makes a review of some existing literatures where it is analysed if customer satisfaction and customer loyalty are drivers of CLV. Through the analysis that is presented in the previous section, it is found that several authors establish positive association between the variables. In this article, we have discussed about the impact that a satisfied customer has over re-purchase intentions, retention rates, lifetime durations. It is found from the analysis that a customer who remains satisfied shall make more future

purchases. A satisfied customer does not switch between vendors and also tend to have longer lifetime durations. With greater re-purchases, retentions and durations, a satisfied customer tends to generate greater customer value. Similarly, we find that customers who are loyal do not move to other competitors, are not very price sensitive and require lesser amount of cost to remain retained into the business. A customer who is loyal makes more purchases in the future and are more likely to make positive referrals to others. Authors have established positive significant relationship across customer satisfaction and loyalty with CLV. However, a few researchers are of the opinion that customer satisfaction and loyalty should not be over prioritized. Some authors conclude that businesses should not spend too much on customer satisfaction and loyalty as that might not generate efficient results. We find that it is important for business marketers to understand in which category of satisfaction a customer lies in. It is, therefore, essential that marketers measure satisfaction ratings of customers to take measures appropriately. Also, business marketers should see loyalty scores of customers. All loyal customers may not prove to be profitable. It is important that business marketers understand the association between the amounts of loyalty scores and revenue streams. When used efficiently, businesses shall surely benefit and be able to generate greater lifetime values of customers.

The paper shall be of use to academicians working in this line in developing appropriate CLV models. It is quite important to estimate customer value correctly. This paper is also an attempt to help marketers understand the importance of satisfaction and loyalty in CLV estimation.

Limitations and Scope for future research

The paper adopts a theoretical approach. The articles analyses different research articles made in the past. Researchers in future can develop mathematical or statistical models incorporating the variable under study. Also, understanding the impact empirically with regard to a specific industry type would bring better results to conclude.

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