

A CONCEPTUAL FRAMEWORK ON CUSTOMER LIFETIME VALUE, ITS COMPONENTS AND METRICS

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Faced with stiff competition in the mature markets of today, corporations can gain success only if they have the ability to build and maintain loyal and valued customer relationships. Since acquiring a new customer costs a lot more than retaining one, it is wise to concentrate on acquiring profitable customers and retaining them. The starting point of relationship management is to understand and measure the true value of customers and their profitability for the firm. Customer Lifetime Value (CLV) is the tool that helps company to identify and evaluate the worth of each customer and how much possible cash flows from this customer could be generated in the future against the cost incurred by the firm. By taking profitability as segmentation base companies can build refined strategies to increase the satisfaction and loyalty of its customers. Thus, CLV provides a basis to measure the performance of the marketing campaigns undertaken by the company which can be subsumed as Return on Marketing Investment. Also CLV at an aggregative level for all the customers together can serve as an indicator of firm value. As customers are the major source of revenue and profits for the company, the profitability of the firm can best be reflected in the profitability of its customers' base.

The present paper is an attempt to understand the concept of Customer Life Time Value, its components and the metrics for the calculation. With the extant literature review the paper presents the model for understanding the concept and its components. Different metrics for CLV calculations are suggested by the authors which a firm may use depending upon the nature of the firm and also the nature of the customer relationship with the firm, i.e., whether contractual or non- contractual type. Based on the discussions, the paper brings out certain critical implications both for the researchers and the marketers and especially in Indian context where the use of CLV concept is still in its infancy stage.

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Introduction

Fundamental changes in the market environment force marketers to reconsider marketing strategies. A transaction-oriented marketing strategy encounters more and more difficulties in finding an appropriate answer to challenges such as increasing number of product varieties, shortening of product life cycles (Webster, 1993) and higher customer expectations (Treacy & Wiesema, 1993). These developments require sellers to be more market-oriented and thus more customer-oriented (Narver & Slater, 1990). Technological developments in data collection and data processing as well as in communicating and interacting with customers provide opportunities to meet these requirements. Thus, more and more companies shift their focus from transaction-oriented to relationship-oriented or customer based marketing (Gronroos, 1994). In a relationship-oriented marketing the focus of the companies is to achieve a level of satisfaction and loyalty of customers which is higher than their competitors. In doing so companies become customer obsessed rather than customer focussed and, generally offer additional products features and services to their customers. Though, this increases the measures of satisfaction and loyalty but is often accompanied by declining profits, especially when the increased functionality and services are not accompanied by increase in price or order volumes. In the words of Robert Kaplan (2001), "...the most profitable 20% of customers generate between 150-300% of total profits. The middle 70% of customers about Break Even, and the least profitable 10% of customers lose 50-200% of total profits, leaving the company with its 100% of total profits. And often, some of the largest customers turn out to be the most unprofitable".

Companies incur heavy expenditures on maintaining strong relationship with its customers. They need information on potential value and, therefore, profitability of maintaining the relationship. If companies understand individual customer profitability and drivers of customer profitability, they could take a variety of actions to transform unprofitable relationships into profitable one. Concept of Customer Lifetime Value (CLV) is a useful tool for measuring profitability. In customer based marketing, lifetime value of the customer can be used for assessing the strength of a customer relationship and to decide which customer to retain and which one to drop.

The main aim of this paper is, therefore, to understand the concept of CLV metric as a useful tool for measuring customers' profitability. To highlight the importance of CLV in the competitive scenario the paper presents the use of CLV in practice and opportunities and challenges related to its use. In the following discussion, the concept of CLV and the

components of CLV metric are explained. The paper also discusses some of the formulations proposed by researchers as well as the practitioners. The implications of knowing the customer life time value for both the marketers and the researchers are discussed at the end.

CLV in Practice – Opportunities and Challenges

Customer Lifetime Value is gaining increasing importance as a marketing metric in both academics and practice. The use of CLV as a metric has been proved to be a valuable resource for firms across many industries to simultaneously maximise firm's profits and shareholder value as well as customer satisfaction and loyalty. Companies like IBM, ING, AT & T, MetLife, Johnson & Johnson, Intercontinental Hotel group, AIG, Capital One, LL Bean and many others are routinely using CLV as a tool to manage and measure the success of their business.

There are several factors that account for the growing interest in this concept. First, there is an increasing pressure in companies to bring financial accountability in their marketing decisions and actions. Traditional marketing metrics such as brand awareness, attitudes, or even sales and market share are not enough to show a return on investment in marketing programmes. In fact, marketing programme that improves sales or market share may actually harm the long run profitability of a brand (Yoo & Hanssens, 2005). Secondly, recent studies have found that not all customers are equally profitable and, therefore, knowing the life time value of their customers, firms would be able to better differentiate among its customers. Firms may find it more desirable to 'fire' some customers or allocate different resources to different group of customers (Blattberg, Getz, & Thomas 2001; Gupta & Lehmann 2005; Rust, Lemon & Zeithaml, 2004; Gupta, Hanssens, Hardie, Kahn, Kumar, Lin, Ravishanker & Sriram, 2006). Thirdly, in the long term the capability to differentiate among customers would enable companies to segment customers on the basis of their value to the firm (Mukerjee, 2007). Fourthly, with the ability of the firm to find out who are the valuable customers, the firm can focus on them and ensure that their needs are being met as well as they are being satisfied (Mukerjee, 2007). Since, the targeted marketing efforts could involve customization of products and services and so the satisfaction of valued customers, as a fifth reason, it would help the firm in retaining them. For the firm there is an increase in the retention of profitable customers as well as building of their customer loyalty. Sixthly, by using CLV in ROI calculations for marketing campaigns, the company can

have a much more accurate measure of campaign performance. And Lastly, the aggregate value of current and future customers (also called Customer Equity or CE) can be used as a good proxy of overall firm value (Gupta, Lehmann & Stuart, 2004).

Successful implementation and use of CLV by the companies is guided by the firms specially organised to provide solutions to various business problems. To name a few, ICC, Fine centric, Cincom, Satyam and many more firms develop softwares for management of customer value (CVM) which are customized according to the specific needs of the industry. Some of industry experiences of management of customer value by the use of CLV metric are discussed here to further highlight the significance of its use.

- IBM adopted a CLV based framework as developed by Reinartz & Kumar. It resulted into optimal re-allocation of resources to profitable customers and, therefore, tenfold increase in their revenues the following year.
- A B2C fashion retailer implemented the same CLV based framework to analyse their profitability both at the customer level & store level. On customer level they observed that the top 20% of their customers accounted for 95% of profits, and they were actually losing money with the bottom 30% of customers. They also realised a 42% increase in store revenue for the bottom 10% stores in one year and 30% increase in stock price or shareholder value compared to other B2C firms in this industry.
- Johnson & Johnson vision care, the producers of Acuvue contact lenses has now identified that the “tweens” (aspiring teenagers aged 9 to 12 years) can serve as an important segment based on CLV calculations (Cincom, 2003).
- One of the top 10 European banks found that 10% of its most profitable customers could generate a further 60% in revenues through up-selling and cross-selling. And top 20% of profitable customers could generate 80% of revenues. By carrying out this type of segmentation, it is easy to see where cost reductions and efficiency increases can be made. It enables financial service providers to not only develop revenues quickly but profitably also (Cincom, 2003).
- Wireless phone service providers like Verizon Wireless and Nextel Communications have active programs to improve customer profitability. Tools include churn

prediction models that allow the companies to determine when a customer is likely to leave and models to identify which customers are likely to take offers. These models allow wireless companies to avail opportunities to communicate with customers at key times, hence reducing churn and increasing value (Legg Mason Capital Management, 2004).

- Consumer electronics Best Buy estimates up to 20% of its customers are unprofitable. As a result, the company identified profitable customers and trained its sales staff, and reconfigured roughly fifteen percent of its stores to better tailor to their needs. According to Best Buy CEO Brad Anderson, the pilot stores are “clobbering” the conventional stores, with twice the rate of same store sales and higher close rates (Legg Mason Capital Management, 2004).
- The CEO of Harrah's Entertainment Gary Loveman use customer data to better manage the business. With this database Harrah's can trace over three-quarters of its revenues to specific gamblers. One of the surprises was that 26% of the gamblers that visited Harrah are generated over 80% of the revenues. The casino found that high rollers, historically coveted, are often unattractive customers. Harrah's now calculates customer lifetime value broadly and proactively encourages its best customers to come back while discouraging unattractive gamblers (Legg Mason Capital Management, 2004).

Before the 1990's AT&T spent hundreds of millions of dollars per year trying to attract prospects to use its long distant phone service. Most prospects received similar offerings regardless of their specific needs. As a result, AT&T sent out millions of pieces of largely undifferentiated direct mail solicitations several times a year, yet less than 5% of the cases resulted in conversions and even worse, many of these conversions were lost again due to a high rate of churn (Grant and Schlesinger, 1995). Today, AT&T carefully analyses its relationship with its customers and tracks in particular retention and termination characteristics. Through conscientious modelling efforts, AT&T attracted in 1994 seven times as many customers as it did in 1990. even more important, these customers have a very different quality in their retention behaviour. By analysing the factors that drive retention, AT&T is more efficient in (a) keeping customers who are at risk of defection and (b) AT&T can better pinpoint in its acquisition campaigns those customers who are likely to be long life customers (Li, 1995).

Customer Lifetime Value (CLV)

Customer is the greatest asset for every business and it is the customer who is primarily responsible for the survival of the business in today's cut throat competition. The importance of customer is known to everyone in business, but only a few know the value of the customer in terms of rupees. Value of the customer is the lifetime value of the customer, where, 'Life time' does not mean a person's whole life but rather the amount of time that he/she remains as a customer. CLV provides information regarding what type of customers is most valuable, where their value comes from and how to maintain long term relationships. In each case, the focus is to determine optimal levels of overall marketing spending and to guide the most effective ways to allocate spending to maximise long term profit. In financial terms it denotes the return on investments which has been put to attract, retain and expand profitable and loyal customers.

Larry Filler partner at Boire Filler group(2007) says that CLV is "...based on the age old idea that knowing, understanding and building trust among customers is the best method of developing a sustainable competitive advantage which in turn leads to longer retention and higher profit margins."

First espoused in the 1930's, the CLV metric was originally designed to assess the Net Present Value of a customer's future spending. But after that various marketing gurus added their own take on CLV throwing more conceptual items into the mix.

"The net profit or loss to the firm from a customer over the entire life of transactions of that customer with the firm"
- Berger & Nasr (1998)

"The present value of all future profits generated from a customer over his/her life of relationship with a firm".
- Gupta & Lehman (2003)

"A lifetime value analysis is a basis for setting the annual marketing budget".
- Arthur Middleton Hughes (2009)

CLV, thus, constitute the measure of Return on Investment (ROI) or to be better referred as Return on Customer or ROC which could be used as an indicator of the overall profitability of an enterprise, In today's customer oriented market where a firm focuses all its strategies and energies around customers as the key for increasing profits, the use of some CLV metric is a matter of consideration.

From ages firms are using one or the other technique to predict the loyalty of their customers. Some of them are RFM (Recency, Frequency and Monetary value) metrics, Past Customer Value (PCV), Share of Wallet (SOW) metric etc. According to V. Kumar (2008) CLV is comparatively new and better metric for estimating the profitability and loyalty of the customers. The following part of this section will give a brief explanation of the traditionally used metrics for estimating profitability of the customer.

RFM approach – Customer's profitability is predicted on the basis of the past records of customer relating to the last purchase made by him/her and number of times each customer has purchased in a given period and so on. It is assumed that:-

- a) Customers who had purchased recently were more likely to buy again versus customers who had not purchased in a while.
- b) Customers who had purchased frequently were more likely to buy again versus customers who had made just one or two purchases.
- c) Customers who had spent the most money in total were more to buy again.

The customers are ranked on the basis of three attributes (bought most recently, most frequently and spent the most money). The customers who are listed on top were considered to be the most responsive to future offers.

Past Customer Value (PCV) – It is based on the assumption that past performance of a customer is an indicator of future level of customer profitability. The future value of the customer is estimated using each customer's PCV. Since the contributions are made at different points in time during the customer's tenure, all contributions have to be adjusted for time value of money. The cumulative contribution until the present period represents PCV of a customer.

Share Of Wallet (SOW) – It measures the amount of money that the customer is spending on a particular brand versus other brands, thereby indicating brand preference. Since SOW is a good predictor of a customer's preference it could also be used as an indicator of loyalty to a firm's brand. Being a measurement of consumption behaviour, it is presumed to be more reliable than attitudinal measurements such as satisfaction.

Why CLV is better?

Although RFM, PCV and SOW are commonly used for computing a customer's future value they suffer from several drawbacks (Reinartz & Kumar, 2003). A major

shortcoming in the traditional metrics is that they are not forward looking and hence do not consider whether a customer is going to be active in the future. They consider only the observed purchase behaviour and extrapolate it to the future to arrive at the future profitability of a customer. RFM fails to take in to account other factors that help in predicting the customer's future worth to the firm i.e. whether or not a customer is loyal, when a customer is likely to buy next or how much profit he is likely to give. PCV does not incorporate the expected cost of maintaining the customer in the future. Similarly SOW is unable to provide a clear indication of future revenues and profits that can be expected from a particular customer. CLV on the other hand, overcomes these issues and incorporates both the probability of a customer being active in the future and the marketing dollars to be spent to retain the customers.

The key drivers of CLV include acquisition, retention and expansion of customers as a result of various marketing efforts. These drivers help in the determination of the lifetime value of the customers and customer equity. Customer Equity (CE) represents aggregate of lifetime values of all current and future customers of the firm. It represents the total profits generated by the firm from its present as well as future customers. As proposed by Gupta, et al. (2006) the conceptual framework for modelling CLV in figure 1 shows that whatever the firm does as its marketing actions, it influences the customers behaviour in terms of their acquisition, retention, cross selling, their profitability to the firm and the value of Customer Equity (CE), which would eventually form a proxy for the firm value or its stock price.

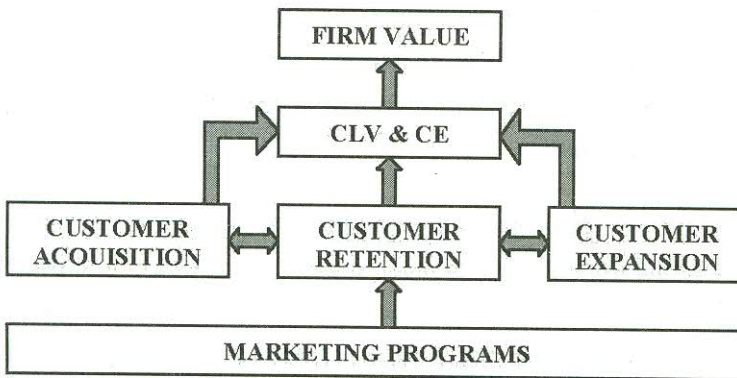


Figure 1: Conceptual Framework for Modelling CLV

As all customers are not equal in value, the firm identifies its best customers through **customer acquisition**. **Customer retention** or loyalty is the other important CLV driver because acquiring a new customer is far more expensive than keeping an existing one. A

third driver, **customer expansion** works through **add-on sales** which focuses on each customer's "untapped potential" from cross-selling and increasing purchase volume.

CLV Calculation: Its Components

Customer acquisition, retention and expansion- the three drivers of CLV, need to be operationalised to arrive at the lifetime value at an individual and aggregative level. An examination of the basic lifetime value models reveals that the incorporated variables/components for calculation of lifetime value are generally classified as: Revenue, Costs, and Retention rate (Reinartz & Kumar, 2000).

Revenue: The 'revenue' component is classified into four sub-categories: 'autonomous' revenue, 'up selling' revenue, 'cross-selling' revenue and 'contribution margins' resulting from referral activities of existing customers (Bauer, Hammerschmidt and Braehler, 2003).

Autonomous revenue is the basic revenue which is not directly influenced by the company or are only affected by standard marketing measures such as TV advertising.

Up selling revenue is yielded by the additional selling of the same product as a consequence of increased purchase frequency and intensity in long life relationships. This is the quantity effect of relationship management, as purchase amount per transaction is higher and also more transactions per period. Up selling revenue also emerges from price effect that is the selling of higher priced substitutes of the same category to loyal, long term customers that are less price sensitive (Reinartz & Kumar, 2000; Reichheld & Teal, 1996). Thus, up selling revenue symbolises the retention value of a customer.

In contrast to up-selling, **cross-selling** can be defined as selling of complementary products or product categories respectively which have not been bought from the vendor (Reichheld & Sasser, 1990). Selling of life insurance to an automobile insurance customer is one such instance of cross selling.

The *reference value* measures margins stemming from new customers who were won through the referral behaviour of existing customers. A positive and high value is considered good for the firm (Bauer, Hammerschmidt and Braehler, 2003). Its estimation can be accomplished with the help of the reference value model.

Costs: The basic methods for predicting customer costs are those which are commonly used in product-related accounting. The total cost structure is classified into four sub categories: 'Acquisition cost', 'Marketing cost', 'Sales cost' and 'Termination cost'.

Marketing costs represents costs of customer retention and development. It comprises all marketing measures which are aimed at an improvement of customer profitability. Promotional expenditures and costs for soliciting, mailing catalogues or sending personalised greeting cards belong to this category. Recovery costs are also considered as a part of marketing cost (Bauer, Hammerschmidt and Braehler, 2003).

Sales costs include both the production costs of the goods sold and all costs of serving the customer, including the cost of order procession, handling, warehousing, and shipping.

Termination costs comprises of administrative expenses for closing the account of inactive customers or cost of taking back mature products. The inactive customer for the company is the one who stops buying the product of the company for a sufficiently longer duration. For example in the case of insurance company the policy holder becomes inactive when either he stops paying policy premium or does not go for renewal of policy on its maturation. The company has to incur termination cost in settling and closing his account (Bauer, Hammerschmidt and Braehler, 2003).

Retention Rate: As an observation serving an existing customer is some six times less costly than serving a new customer. The retention is, therefore, a significant tool to help companies to maximise the gains from the cost attributed to customer acquisition (Gupta, Hanssens, Hardie, Kumar, Ravishanker, Sriram, 2006). Retention rate is the probability that an individual customer remains loyal to a particular supplier and keeps yielding expected revenue as well as costs within a fixed period of time. On the basis of retention rates, the anticipated contribution margins are adjusted to the probability of their occurrence (Dwyer, 1997). Therefore, the convergence of churning to retention is significant (Schmittlein, Morrison and Colombo, 1987). Dutt (2009) explains the calculation of retention rate with the help of following illustration:-

Total (active) customers as on April 1, 2008 = A

No. of new customers added during the year = B

No. of customers as on March 31, 2009 = C

Inactive customers (X) = (A+B)-C

Time period = 1 year (from April 1, 2008 till March 31, 2009)

Retention rate = $(A-X)^1/A$

And Churn rate = X/A

Beside acquisition, retention and expansion the three basic components of CLV, churn rate, discount rate and the unit of time are the additional informational inputs required for calculating customer lifetime value.

Churn rate is the percentage of customers who end their relationship with a company in a given period of time. One minus the churn rate is the retention rate. Churn rate is usually assumed to be a constant figure to make the calculations easier.

Discount rate is used to bring the future payments into today's rupees. It could be the cost of capital, inflation rate or the interest rate of another investment.

Period is the unit of time into which a customer relationship is divided for analysis. Customer lifetime value is a multi-period calculation, usually stretching 3-7 years into the future. In practice, analysis beyond this point is viewed as too speculative to be reliable. The number of periods used in the calculation is sometimes referred to as the model horizon.

CLV Metric Formulation

The various components of CLV as discussed above are reconciled into a metric or a formula for the calculation of CLV. Kumar (2008) describes two approaches for calculation of Lifetime Value (LTV) of customers – Aggregate approach and Individual approach.

Aggregate approach – According to this approach the average lifetime value of a customer is derived from the LTV of a segment of the firm.

As suggested by Berger & Nasr (1998), the average CLV of a customer can be calculated from lifetime value of a segment by using the formulation given as:

$$CLV = \sum_{t=0}^T \left[\frac{CM}{(1+\delta)^t} r^t \right] - A$$

where r = retention rate; δ = discount rate; t = time period; T = no. of time periods considered for estimating CE; CM = average gross contribution margin per customer in

the time period t after taking into account marketing cost; A = average acquisition cost per customer.

The average CLV, however, has limited use as a metric for the allocation of resources across customers as it does not capture customer level variations in CLV.

Individual approach – CLV at an individual level is calculated as the sum of cumulated discounted cash flows generated by a customer over his or her entire lifetime with the company. The cash flows are discounted by using the weighted average cost of capital (WACC). CLV at an individual level is, therefore, the function of predicted contribution margin, the propensity for a customer to continue in the relationship, and the marketing resources allocated to the customer.

$$CLV_i = \sum_{t=1}^T \frac{(\text{Future contribution margin}_{it} - \text{Future cost}_{it})}{(1+\delta)^t}$$

Where i = customer index; t = time index; T = no. of time periods considered for estimating CLV; δ = discount rate

To know the future contribution from a customer, the probability that the customer being active with the firm at future time periods needs to be determined. The firm then ascertain average gross contribution margin (AGCM) (i.e. average revenue less average cost of goods sold). AGCM is obtained for all customers i and for the time period t for which the lifetime value is being estimated. The AGCM is adjusted with a discount rate δ and is multiplied with the probability of customer being active with the firm denoted by 'P'. The calculation of P (active) is as follows:-

$P(\text{active}) = \left(\frac{T}{N}\right)^n$ Where n = no. of purchases in the observation period; T = time period elapsed between acquisition and the most recent purchase; N = time elapsed between acquisition and the time period for which $P(\text{active})$ needs to be determined.

Thus, net present value (NPV) of the expected gross contribution (EGC) is empirically represented as:

$$NPV \text{ of } EGC_{it} = \sum_{t=1}^T P(\text{active})_{it} \times \frac{AGCM_{it}}{(1+\delta)^t}$$

Where $AGGC_{it}$ = average gross contribution margin for customer in time period t based on all prior purchases; i = customer index; t = time period for which NPV is being estimated; T = no. of time periods beyond t ; δ = discount rate; $P(\text{active})$ = probability

that customer is active in time period t .

The cost includes acquisition cost (A) and marketing cost (M) incurred at future time periods. The marketing cost is discounted with appropriate discount rate (δ). The discounted marketing cost and acquisition cost are then subtracted from the NPV of ECG to arrive at the CLV of a customer.

The formulation and selection of a CLV metric, however, depends first on the nature of the relationship between the customers and the company, and secondly on the type of transaction related data maintained by the company. The nature of relationship can be categorised either as contractual or non-contractual. The examples in which customers have contractual relationships with the companies are banking, insurance, telecommunication etc, while the retail stores are best example for having a non-contractual relationship with the customers. The formulation of CLV metric can also be modified on the basis of the time horizon. Some researchers have used an arbitrary time horizon or expected customer lifetime (Reinartz & Kumar, 2000; Thomas, 2001), where as others have used an infinite time horizon (Fader, Hardie, and Lee 2005; Gupta, Lehmann, & Stuart 2004).

Implications

In its attempt to explore the concept of CLV and the related metrics for its calculation, the present paper submits certain conclusions for the purpose of both the marketers and the researchers.

In today's business environment, maintaining long term relationships by building loyal and satisfied customer base is a significant part of attaining core competence for the firm in the market. Calculating customer value for the firm is a root to build long term relationship with customers as it provides basic information for working out more targeted and personalized strategies. In this paper we explored the concept of CLV to highlight the point that not all created customers are equal in value for the firm, as some may have higher revenue generating potential against the cost incurred by the firm. On the basis of differences in its customer value the firm can segment the customer market and sharpen the marketing initiatives to the target segment characteristics. Thus, it is the effect of marketing strategies on target customer life time value which could reasonably be construed as a basis for measuring return on marketing investment on a continuous basis.

In order to sharpen the strategic initiatives and built return on marketing investment, a marketer requires understanding of components of CLV. Literature suggests acquisition, retention and expansion as the three prime components or drivers of CLV. In the context of a target market the marketer thus decides to build the component(s) by selecting an appropriate marketing mix strategy. In the course of building customer base through acquisition, retention and expansion, the aggregate of customer life time value across the targeted customers can be used as a proxy to the measurement of value of the firm and its share prices.

But, there are issues which need particular attention, *First*, the use of a particular metric to calculate CLV, and *secondly* the maintenance of data base. This paper has provided the summated view on various CLV metrics and suggests that the selection mainly depends upon the nature of customer relationship whether in contractual or non-contractual setting. Also, the kind of data the company maintains is another factor to decide about use of a certain CLV metric. In the course of time, the firm may however built its data base to make the CLV calculations more comprehensive. Firm's comfort level and expertise in the use of a particular metric is another important factor in facilitating the use of CLV.

Inspired of recognising the importance of CLV; many organizations, however, resist the implementation of CLV as an effective tool for measuring the firm's performance. There may be many reasons for showing resistance. The *first* reason might be treating CLV as a technical development rather than strategic progression (Rachel Thompson and Melanie Cunningham, 2008). The *second* reason might be the fear of the company to shift the orientation of the company from finance to marketing. It will call for a total cultural change within the organization (Rachel Thompson and Melanie Cunningham, 2008). The *third* reason may be the lack of the data (Melaney Smith, 2004). The calculation of CLV requires detailed data regarding the customers purchase behaviour relating to a sufficiently long period. For this the company has to maintain a good data base of its customers. The *fourth* reason is the selection of the most suitable metric or formula for calculating CLV (Melaney Smith, 2004). It is again a difficult task to decide the components of the CLV metric that will suit a particular type of industry as the composition of components will differ in an industry in which the nature of customer relationship is contractual than an industry where this relationship is non contractual. *Lastly*, the lack of staff having expertise in the implementation of the concept successfully may be restricting the companies to adopt the concept.

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