

## REVIEW ON THE CUSTOMER LIFE TIME VALUE IN THE CONTEXT OF CUSTOMER RELATIONSHIP MANAGEMENT

Dr. Shahnaz Sultana\*

---

### ABSTRACT

*In marketing, customer lifetime value (CLV), lifetime customer value (LCV), or user lifetime value (LTV) is a prediction of the net profit attributed to the entire future relationship with a customer. A number of customer metrics allow estimating customer profitability with methods such as the Customer Lifetime Value (CLV). However, investments in customer relationships carry the potential risk to destroy value and reduce profitability when based on incorrect estimates of customer profitability. Therefore, estimating future customer value correctly is essential to allocate marketing expenditures in the most effective way. Besides the financial perspective of the CLV, non-financial perspectives such as customer advocacy, innovation and learning should be identified which has an impact on customer profitability. To properly estimate a customer's value taking all relevant value creating factors, financial as well as non-financial, into account is the need of the hour.*

*Keywords: customer lifetime value, customer profitability, non-financial values, customer relationship management*

---

\*Assistant Professor/ Economics, School of Social Sciences and Humanities, B.S. Abdur Rahman University, Vandalur. Chennai – 600048

---

## INTRODUCTION

As the CLV is estimated over a number of transactions, that are likely to occur throughout the customer lifetime, it cannot be seen in an isolated way but rather in the long term relationship context that CRM suggests. The CLV can therefore be seen as a tool that allows the calculation of potential customer value only if a (long-term) relationship exists. The contextual settings, such as long-term relationship, customer satisfaction, customer learning and others that are suggested by the CRM approach are crucial, as CLV estimates will only be calculated correctly if contextual settings support the compliance of customer metrics. Expected lifetime, retention rate and others are CLV determining elements that are strongly influenced by the contextual settings. Hence, an overview of the CRM approach is necessary to understand the contextual settings that are required for the calculation of the CLV.

## REVIEW OF LITERATURE

Developments in technology have enabled companies to see customer relationships more holistically provoking this change from transactional to relationship marketing (Alt et al., 2005). Although technologies play a crucial role in CRM enabling the aggregation of customer data and the recognition of patterns, they are not subject of this research and will not be discussed here. The central idea behind engaging customers in long-term relationships is to increase company and customer value by systematical management of existing customers. Kim et al. (2003) summarize the following potential benefits of CRM; Increased customer retention and loyalty, Higher customer profitability, Creation value for the customer, Customization of products and services, Lower process, higher quality products and services

The tangible effects of companies commitment to retaining customers were first published by Dawkins and Reichheld (1990) who claim that higher retention rate leads to higher net present value of customers (Ahmad & Buttle, 2002). The selection and acquisition of customers based on the purely financial CLV become critical to the long-term customer profitability. The CLV as the measure for customer profitability possesses a fundamental role as it serves within the customer analysis as a deciding feature. The correctness of the CLV in terms of long-term overall customer profitability consequently turns out to be essential for the most efficient employment of marketing expenditures. A formalized ontology building process is suggested by Pinto and Martins (2004). They state specification, conceptualization, formalization, implementation and maintenance as the usually accepted stages. As this research focuses on the CLV as a customer profitability measure no attempts to develop a

CRM ontology are made. Though, the aggregation of specifications that have been mentioned throughout academic literature might contribute to the development of CRM ontology. The importance to distinguish different stages in a customer's relationship is highlighted by Reinartz et al. (2004).

There are three primary dimensions, which are relationship initiation, maintenance and termination, which are further divided into sub dimensions. The performance of CRM activities critically depends on situational factors that influence the type of relationship. The recognition of the fact that relationships evolve with distinct phases leads to the insight that customers have to be treated differently in accordance with the stage in their lifecycle. At the beginning of a relationship customers are more valuable due to the future potentials that they offer (Ryals, 2002). The underlying question in a non-contractual setting will always be whether customers are still with the firm or whether they have defected to competitors or have abandoned the technology. The above mentioned aspects are important issues to be taken into account when applying the CLV. An adequate structure of the CRM concept in order to organize them is needed though. A comprehensive framework that differentiates between broad perspectives and then narrows down dividing each one into further categories would help to understand more accurately what is meant, in what context and at what level when referring to CRM.

A strong concentration on the financial aspects of the CLV has been determined in the reviewed articles. However, other aspects such as customer advocacy, customer innovation or customer learning have been recognized, even though, by far not with the same attention. The reasons for less attention to other than financial aspects are diverse. First, factors that are commonly considered being important are missing, second, practical mainstream methods that would allow assessing a concrete financial value to non-financial aspects do not exist, and third, the potential of non-financial aspects to impact indirectly on financial factors is not recognized adequately. That is consistent with Gupta and Zeithaml (2006) citing Ittner and Larcker (1996) who state that customer metrics are perceived less important than financial measures because they are not clearly defined. The original CLV concept is based on the idea to justify marketing expenditures by applying the net present value (NPV) method to investments made in customer relationships. More recently, acknowledgments in academic literature of the importance of non-financial effects have led to further research investigating the accountability of non-financial effects. This suggests a multidimensional customer profitability measurement rather than one single silver metric. Yet, the challenge is to

overcome measurement difficulties of non-financial effects and to determine their impact in a quantifiable way. The CLV states the present value of a customer relationship over the lifetime with a company. Customer equity refers to the total lifetime value of a company's customer base (Hogan et al., 2004). Kumar and Rajan (2009) define the CLV as: "The sum of cumulated cash flows-discounted using the weighted average cost of capital (WACC)-of a customer over his or her entire lifetime with the company".

It has been suggested that constant margins and retention rates be used in order to simplify calculations and in order to overcome the need for intensive data. Zhang et al. (2010) state that the CLV formula can be simplified to a great extent when margins and retention rates are assumed to be constant and lifetime estimated to be infinite. In the case of assuming infinite lifetime the retention rate automatically accounts for reduced probability to continue the relationship. This reduces the complexity of the CLV to a great extent and adequately reflects reality. An extensive discussion of different mathematical models for computing the CLV in selected scenarios has been given, for example, by Berger and Nasr (1998) and Jain and Singh (2002) and will therefore not be repeated here. However, the quantification and the weighting of indirect non-financial measures are important pending and also difficult task. Not taking account of indirect non-financial effects means estimating the CLV incorrectly and consequently failing to address customers with the adequate individual marketing effort (Lee et al., 2006). "If marketing expenditures are an investment, and the creations of marketing are assets, then it is of utmost concern that these assets be valued by metrics in use. Likewise, should the metrics be misleading, this can lead to a plethora of problems, including rash investments based on inaccurate heuristics; or the canceling of certain programs that are deemed unsuccessful by virtue of the misleading measure". (Seggie et al., 2007: page 835).

CRM is the intent to understand each customer and then deliver a consistent message or service to that customer (Urban, 2005). The CLV is a tool that helps estimating the financial potential of customers, but to put together the big picture more information is needed. By helping customers find the appropriate product or service, companies can build up trust and learn what customers really want. For example, neglecting customers attitudes and aggressively cross-selling to them when not requested might result in customer defection. In contrast, having gained customers trust through honest behavior might provide enduring advantage as competitors struggle to convince customers to take the risk and switch to a different company (Urban, 2005).

Approaches towards defining indirect customer value and gauging its monetary value have been made by a number of researchers. Ryals (2008) explored the process of valuing indirect benefits from customer relationships analyzing advocacy, learning and innovation benefits. Von Hippel and Katz (2002) explored the implications of toolkits for user innovation. Bermejo and Rodriguez-Monroy (2010) analyzed the factors of an equation presented by Stahl et al. (2003) to measure the customer value in a B2B environment taking into account the base, growth, networking and learning potential. Hogan et al. (2003) focused on indirect social effects such as WOM and Kumar et al. (2010) proposed the customer engagement value (CEV) including the CLV, the customer referral value, the customer influencer value and the customer knowledge value. In particular, advocacy with a focus on WOM has received considerable attention in academic literature. The learning and innovation potentials that customers offer, have received less attention from researchers in the context of the CLV. Customer led innovations offer multiple benefits such as reduced time-to-market, reduced cost-to-market or increased fit-to-market (Piller, 2006). Those benefits do have an impact on financial measures, even though they might impact in an indirect way. The same is valid for the learning potential. Better resource allocation and increased market intelligence also result from customer learning (Iyengar et al., 2007). The quantification of non-financial effects is needed in order to make them comparable to financial measures. This would allow deciding if financially unprofitable customers might offer advocacy, learning or innovation potentials that would offset their unprofitability and make them indirectly profitable. Or, if already profitable customers, in financial terms, might prove even more profitable through the utilization of their advocacy, learning or innovation potential.

Generally, referrals lead to lower acquisition costs and in addition existing loyal customers refer new customers that are more loyal themselves (Reichheld, 1996 quoted in Ryals, 2002). Therefore, outsourcing the customer acquisition process will lead to a competitive advantage if conventional marketing efforts would be reduced maintaining the customer acquisition rate or if additional customers would be attracted with the same marketing efforts. Customer advocacy may be defined as any interaction between customers and their environment in a direct or indirect manner. Bughin et al. (2010) estimate WOM to be the primary factor behind 20 to 50 percent of all purchasing decisions with greatest influence on customers that buy a product for the first time or when products are relatively expensive. Nevertheless, there is a wide range of other sources besides direct customer-to-customer communication from which customers can obtain information. An increase in communication between customers, due to

the developments in information technology, has amplified and accelerated WOM marketing drawing increasing attention to customer advocacy. Bughin et al. (2010) mention experiential, consequential and intentional as three forms of WOM. Concerning the quantification of customer advocacy Kumar et al. (2007) developed an approach to calculate what they call the Customer Referral Value (CRV)

However, the CRV can only estimate the value of consequential referrals that have been triggered by marketing campaigns and there is also the issue about double counting as one customer's CLV is potentially similar to the CRV of the customer who made the referral. Voluntary referrals are more challenging to comprehend. What make them so powerful are their origin and their impact. To better understand on what the impact of recommendations depend, it has to be determined who recommends what and where or in which context the recommendation is made. Kumar et al. (2007) found in their analysis of a telecommunications firm that the most loyal customers meaning customers with the highest financial CLV were not its strongest advocates. Customers that they call advocates were, despite having a low CLV, almost as valuable as customers with high (financial) CLV taking referrals into account. This demonstrates that indirect values can offset direct low profitability. Drivers that have been identified in the literature to have an impact on the above mentioned factors include the following. The identity of the person who spreads WOM influences whether the receiver of the recommendation trusts the sender and believes that the sender knows the product or service in question. Bughin et al. (2010) found that across most product categories important product or service features have to be addressed in order to influence customer decisions. It is crucial to understand which product features are considered important as addressing product features with no significance to the customer does not create any attraction and is therefore unnecessary. Lastly, the environment where WOM is spread determines the impact of the referral. Referrals with less reach have a greater impact than those spread through far-reaching networks. The reason might be the correlation between the number of people one trusts and the number of network members one values. WOM has been shown to be a potential source of additional sales and cost reduction. Marketing activities result more effective through lower acquisition costs and moreover referrals help to reduce post purchase cognitive dissonances through the confirmation of purchase decisions. WOM also makes the decision-making process for new customers simpler and faster which leads to faster market penetration (Stahl et al., 2003).

In the early stages of the innovation process uncertainties have to be eliminated in order to overcome market and technology risks. Customers that gain specific knowledge from experiencing products or services in broad ranges of contexts might be seen as sources of need and solution information that can help to reduce uncertainties. In the open innovation concept innovations are seen as the result of loosely coordinated and open networks of a number of users and customers (Piller, 2006). The success depends on the ability of companies to establish networks with external actors (suppliers, customers, competitors, and external Research and Development (R&D) institutions) along the innovation process. Potentially, a reduction in time to market is achieved by reducing cycle time in the trial and error process due to constant feed-back in the early stages of the development process. Access to a greater number of resources presents extended solution finding and cost saving potentials (von Hippel and Katz, 2002) and further, the participation of potential customers seems to increase the fit to market and their willingness to pay (Franke et al., 2010). Other results from innovative activities with external partners might be product or process innovations which could lead to increases in revenues and cost reductions. A key driver for successful customer or user innovation is the supply of an adequate arena that unites different sources and knowledge perspectives in an interactive and directed problem-solving-process (Piller, 2006). Solving the interface problem by the development of appropriate toolkits provides access to sticky information and offers therefore the chance to better define customer needs through a “learning by using” process and the conceptualization of available customer owned information. Informations stickiness can be reduced by converting tacit knowledge into explicit knowledge (von Hippel and Katz, 2002).

Iyengar et al. (2007) investigated consumer learning for service quality and usage in wireless service. They found that consumer learning can result in a win-win situation for both customers and the company due to less minutes spent by the customers and an increase of 35% of the overall CLV. Learning can boost product/service and process improvements and innovations which increase efficiency and quality and reduce uncertainties. Rather than reducing acquisition costs or increasing the number of customers the learning potential is a source of knowledge. It offers the opportunity to improve the understanding of customers; latent and overt needs or problems, products true performance, competitor’s capabilities and strategies or technological trends. The intimacy of the customer relationship permits to develop, test and refine different types of knowledge, such as market conditions, technologies and business processes or future trends (Stahl et al., 2003). The knowledge acquired through

the learning process can be converted into more reliable forecasts and plans to better understand customer needs and improve product and process quality. Iyengar et al. (2007) found the level of quality of service encounters to provide a strong signal for the overall service quality in wireless services. Therefore, customers needs can be positively influenced by satisfying what matters to customers. At the same time wasteful spending on non-critical factors recognized through learning might be reduced or eliminated.

## CONCLUSION

The reviews of the CRM approach and the CLV framework have shown that they are not fully conceptualized and commonly understood. CRM lacks a systematical approach and commonly accepted definition. Nevertheless, a trend towards seeing CRM as a holistic philosophy that helps implement marketing strategies, rather than seeing CRM itself as a strategy, is evolving. Investments in customer management are subjected to be profitable. This requires measures, so that resource allocations can be compared and justified.

## REFERENCES

1. Ahmad, R.; Buttle, F. (2002). Customer retention management: a reflection of theory and practice. *Marketing Intelligence & Planning*, 20(3): 149-161. <http://dx.doi.org/10.1108/02634500210428003>
2. ALT, R.; Puschmann, T.; Osterle, H. (2005). Erfolgsfaktoren im Customer Relationship Management. *Zeitschrift für Betriebswirtschaft*, 75(2): 185-208.
3. Berger, P.D.; Nasr, N.I. (1998). Customer lifetime value: Marketing models and applications. *Journal of Interactive Marketing*, 12: 17-30. [http://dx.doi.org/10.1002/\(SICI\)1520-6653\(199824\)12:1<17::AID-DIR3>3.0.CO;2-K](http://dx.doi.org/10.1002/(SICI)1520-6653(199824)12:1<17::AID-DIR3>3.0.CO;2-K)
4. Bermejo, G.; Rodriguez Monroy, C. (2010). How to measure customer value and its relationship with shareholder value in a business-to-business market. *Intangible Capital*, 6(2): 142-161. <http://dx.doi.org/10.3926/ic.2010.v6n2.p142-161>
5. Bughin, J.; Doogan, J.; Vetvik, O. (2010). A new way to measure word-of-mouth marketing. *McKinsey Quarterly*, April.
6. Dawkins, P.M.; Reichheld, F.F. (1990). Customer retention as a competitive weapon. *Directors and Board*, 14: 42-47.
7. Franke, N.; Schreier, M.; Kaiser, U. (2010). The "I designed it myself" effect in mass customization. *Management Science*, 56(1): 125-140. <http://dx.doi.org/10.1287/mnsc.1090.1077>

8. Gupta, S.; Zeithaml, V. (2006). Customer Metrics and Their Impact on Financial Performance. *Marketing Science*, 25(6): 718-739. <http://dx.doi.org/10.1287/mksc.1060.0221>
9. Hogan, J.; Lemon, K., Libai, B. (2003). What is the True Value of a Lost Customer? *Journal of Service Research*, 5(3): 196-208. <http://dx.doi.org/10.1177/1094670502238915>
10. Hogan, J.; Lemon, K.; Libai, B. (2004). Quantifying the Ripple: Word-Of-Mouth and Advertising Effectiveness, *Journal of Advertising Research*, 44(3): 271-280. <http://dx.doi.org/10.1017/S0021849904040243>
11. Ittner, C.; Larcker, D.F. (1996). Measuring the impact of quality initiatives on firm financial performance. Soume Ghosh, Donald Fedor, eds. *Advances in the Management of Organizational Quality*, JAI Press, Greenwich, CT, 1: 1-37.
12. Iyengar, R.; Ansari, A.; Gupta, S. (2007). A Model of Customer Learning for Service Quality and Usage. *Journal of Marketing Research*, 44: 529-544. <http://dx.doi.org/10.1509/jmkr.44.4.529>
13. Jain, D.; Singh, S.S. (2002). Customer Lifetime Value research in Marketing: A review and future directions. *Journal of Interactive Marketing*, 16(2): 34-36. <http://dx.doi.org/10.1002/dir.10032>
14. Kim, J.; Suh, E.; Hwang, H. (2003). A Model for evaluating the effectiveness of CRM using the balanced scorecard. *Journal of Interactive Marketing*, 17(2): 5-19. <http://dx.doi.org/10.1002/dir.10051>
15. Kumar, V.; Petersen, J.; Leone, R. (2007). How valuable is Word of Mouth? *Harvard Business Review*, October: 139-146.
16. Kumar, V.; Rajan, B. (2009). Profitable Customer Management: Measuring and Maximizing Customer Lifetime Value. *Management Accounting Quarterly*, 10(3): 1-18.
17. Kumar, V.; Aksoy, L.; Donkers, B.; Venkatesan, R.; Wiesel, T.; Tillmanns, S. (2010). Undervalued or Overvalued Customers: Capturing Total Customer Engagement Value. *Journal of Service Research*, 13(3): 297-310. <http://dx.doi.org/10.1177/1094670510375602>
18. Lee, J.; Lee, J.; Feick, L. (2006). Incorporating word-of-mouth effects in estimating customer lifetime value. *Journal of Database Marketing & Customer Strategy Management*, 14(1): 29-39. <http://dx.doi.org/10.1057/palgrave.dbm.3250033>
19. Magro, D.; Goy, A. (2008). Towards a first Ontology for Customer Relationship Management. *Proceedings of the 5th International Conference on Soft Computing as Transdisciplinary Science and Technology*: 637-643. <http://dx.doi.org/10.1145/1456223.1456352>

20. Payne, A.; Frow, P. (2005). A Strategic Framework for Customer Relationship Management. *Journal of Marketing*, 69: 167-176. <http://dx.doi.org/10.1509/jmkg.2005.69.4.167>
21. Peterson, J. A.; McAlister, L.; Reibstein, D.J.; Winer, R.S.; Kumar, V.; Atkinson, G. (2009). Choosing the Right Metrics to Maximize Profitability and Shareholder Value. *Journal of Retailing*, 85(1): 95-111. <http://dx.doi.org/10.1016/j.jretai.2008.11.004>
22. Piller, F. (2006). User Innovation: Der Kunde als Initiator und Beteiligter im Innovationsprozess. in: DROSSOU, O. and Krempl, S. (Authors): Open Innovation. Freier Austausch von Wissen als soziales, politisches und wirtschaftliches Erfolgsmodell. Hannover: Heise-dpunkt.
23. Pinto, H.S.; Martins, J.P. (2004). Ontologies: How can they be built? *Knowledge and Information Systems*, 6: 441-464. <http://dx.doi.org/10.1007/s10115-003-0138-1>
24. Reichheld, F.F. (1996). Learning from Customer Defection. *Harvard Business Review*, March-April: 56-69.
25. Reinartz, W.J.; Krafft, M.; Hoyer, W.D. (2004). The customer relationship management process: Its measurement and impact on performance. *Journal of Marketing Research*, 41: 293-305. <http://dx.doi.org/10.1509/jmkr.41.3.293.35991>
26. Richards, K.A.; Jones, E. (2008). Customer relationship management: finding value drivers. *Industrial Marketing Management*, 37(2): 120-130. <http://dx.doi.org/10.1016/j.indmarman.2006.08.005>
27. Ryals, L. (2002). Are your customers worth more than money? *Journal of Retailing and Consumer Services*, 9(5): 241-251. [http://dx.doi.org/10.1016/S0969-6989\(02\)00005-X](http://dx.doi.org/10.1016/S0969-6989(02)00005-X)
28. Ryals, L. (2008). Determining the indirect value of a customer. *Journal of Marketing Management Special Issue Marketing/ Finance Interface*, 24(7-8): 847-864. <http://dx.doi.org/10.1362/026725708X345542>
29. Seggie, S.H.; Cavusgil E.; Phelan S.E. (2007). Measurement of return on marketing investment: A conceptual framework and the future of marketing metrics. *Industrial Marketing Management*, 36(6): 834-841.
30. <http://dx.doi.org/10.1016/j.indmarman.2006.11.001>
31. Stahl, H.K.; Matzler, K.; Hinterhuber, H.H. (2003). Linking customer lifetime value with shareholder value. *Industrial Marketing Management*, 32(4): 267-279. [http://dx.doi.org/10.1016/S0019-8501\(02\)00188-8](http://dx.doi.org/10.1016/S0019-8501(02)00188-8)

32. Teo, T.S.H.; Devadoss, P.; Pan, S.L. (2006). Towards a holistic perspective of customer relationship management (CRM) implementation: A case study of the Housing and Development Board, Singapore. *Decision Support System*, 42: 1613-1627. <http://dx.doi.org/10.1016/j.dss.2006.01.007>
33. Urban, G. (2005). Customer Advocacy: A New Era in Marketing? *Journal of Public Policy & Marketing*, 24(1), 155-159. <http://dx.doi.org/10.1509/jppm.24.1.155.63887>
34. Von Hippel, E.; Katz, R. (2002). Shifting innovation to users via toolkits. *Management Science*, 48(7): 821-833. <http://dx.doi.org/10.1287/mnsc.48.7.821.2817>
35. Zablah, A.R.; Bellenger, D.N.; Johnston, W.J. (2004). An evaluation of divergent perspectives on customer relationship management: Towards a common understanding of an emerging phenomenon. *Industrial Marketing Management*, 33: 475-489. <http://dx.doi.org/10.1016/j.indmarman.2004.01.006>
36. Zhang, J.; Ashutosh, D.; Friedmann, R. (2010). Customer Loyalty and Lifetime Value: An Empirical Investigation of Consumer Packed Goods. *Journal of Marketing Theory and Practice*, 18(2): 127-139. <http://dx.doi.org/10.2753/MTP1069-6679180202>