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21P. Customer-centric Model for Performance Management in Banking Industry Using Soft System Methodology

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Abstract

This research uses soft system methodology in exploring a real world problem in managing the performance of banks' branches. In the first step, a rich picture is drawn based on the semi-structured interviews with experienced personnel and managers of Iranian commercial banks. Extracting a rich picture about the problem situation and roots of the problem, and based on literature review and well-known theories including resource-based view of the firm and service-profit chain, the paper proposes a conceptual model for customer-centric performance management system (PMS). The proposed model suggests an integration of customer relationship management system and PMS using customer lifetime value metric in managing the bank's performance. The paper also discusses the benefits of this metric. In practice, the model has a potential to provide more strategic use of information system (IS) by increasing the use of managerial knowledge and strategy making being extracted from IS.

Keywords

Soft System Methodology, Performance Management System (PMS), Customer Relationship Management (CRM), Customer Lifetime Value (CLV), Rich Picture.

[1] This paper was written while this author was visiting Sauder School of Business, UBC

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1. Introduction

Financial service firms and banks are faced to increasing competition which is growing faster all the time (Marr, 2007). This makes the customer relationship management (CRM) and performance management (PM) as two important issues in this industry which can increase customer loyalty, customer retention, business productivity and hence profitability. However, Marr (2007) believes that irrelevant unrelenting pressure and misleading performance indicators may distract the business of accurate performance observation and the performance and goals alignment. He introduces strategic performance management as a key solution. Moreover, various researchers state that current performance measurement and management systems and available measures are not capable to draw the reality of business performance (Busi & Bititci, 2006; Folan & Browne, 2005; Rodriguez *et al.*, 2009; Wouters, 2009; Wouters & Wilderom, 2008). It means that new approaches to PM which define new measures close to customer are necessary (Folan & Browne, 2005) These approaches should have a potential to clear the operational status of the business, and facilitate the strategic performance management (Sapri *et al.*, 2005). Iran's banking sector is not an exception and strives for new approaches in performance management addressing its intense rivalry.

Until 1979, there were 36 operating banks in Iran including 8 state-owned banks, 16 private-owned banks and 12 banks with mixed ownership. In 1979 with the change in the constitution and government policies, existing banks were merged and 6 state-owned commercial banks and 4 specialized banks came into operation. With changes in the regulations and removing some constraints in 1996, two credit institutions have been established in the country and joined the domestic financial market. In the meantime, financial and credit cooperatives were also emerged. By regulating the private banking at the end-1990s, establishment of private banks started in 2001 via founding two commercial private banks and a specialized bank. Afterwards, the growth of commercial private banks through transforming credit/financial institutions to private banks and privatizing state-owned banks experienced a soaring rate (see figure 1). Meanwhile, the regulation for founding virtual banks is also ratified and 7 banks are in the process of obtaining the license and funding.

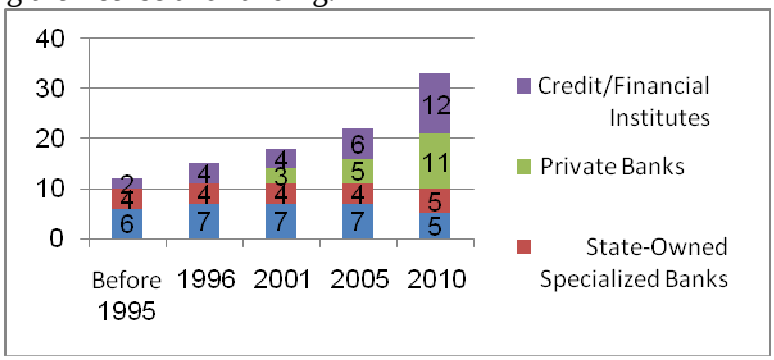

Figure 1: The increasing number of Iranian commercial banks and financial institutions

Noteworthy, despite of private banking growth, intense regulations applied by Central Bank and banks should obey the rules determined by Central Bank.

In this research, we concern the issues in current banking performance management system which is addressed in research literature and in business practice. For this purpose, soft system methodology (SSM) is selected in order to achieve a better understanding of the problem situation in the real world setting and to perform the required interaction (hard and soft steps) to provide the solution. SSM primarily is used in analyzing complex situation as a tool to facilitate transformation in such a way that the views of those engaged with the transformation can be captured and conflicting expectations and views can be highlighted (Morcos & Henshaw, 2009). In Iranian banking situation, exploratory interviews with banking experts showed that divergent views including increasing/decreasing the number of branches, reducing/amplifying branches' decision power, transforming to customer-centric business practice, quantifiable branches' controlling and monitoring toward customer value have been mentioned for improving the situation of commercial banks and their performance. The ability of SSM to build a conceptual model from diverse perspectives of different stakeholders, which can also be compared with real world situation or their perceptions of the real world situation, was the primary objective using this method in the research. In other words, while there was no clear and precise perception of the situation and head office managers and branch managers did not hold a common view, SSM stages in requirements analysis including rich picture, provide appropriate tool for better understanding of problem situation not only for the researcher but also for interviewees to know the situation and various and conflicting views. It can help them in understanding the future stages including the conceptual model and its advantages in solving the problem. Moreover, according to Busi & Bititci (2007) and Folat et al (2007), the performance management systems should transform from individual to collaborative systems. SSM can provide system perspective in analyzing the performance of the bank branches considering the bank as a unified whole and branches as group of individuals with interrelated elements.
This paper presents the rich picture of the problem and discusses a customer-centric conceptual model as a possible solution.

2. A rich picture of bank branches' performance management system

In order to draw the rich picture (Figure 2), semi-structured interviews were conducted with branch experienced personnel and managers (9 persons), managers of branch affairs and administration (7 persons), experts and managers of bank's head office (6 persons) in two phases. In the first phase, the problem was introduced and an early rich picture was drawn, and then presented to interviewees in the second phase to complete. The rich picture is presented in the figure 1 and the main extracted challenges are summarized in table 1, which shows the views of the customer and owners for each extracted issue.
There are similarities and differences between the views of both clients and actors/owners. Both groups believe that despite of customer-oriented mindset of the management in head office, back office operations and processes including performance management are not reflecting customer centric approach with no influences on front office processes. However, many of head office managers believe that most of branches' managers just have a focus on their own branches, while the head office should have a view of all branches as a whole. Because of that, some of them believe that marketing programs, innovations, and promotions are proper to target the objectives of the bank rather than its separate branches. At the same time, head office managers believe that a better understanding of each branch and its potential to improve strategy alignment, return on investment (particularly marketing investment) and customer retention is crucial. Finally,

clients, actors and owners agree that branch managers have knowledge about customers. From owners' view, it is important to transform this knowledge to an organizational asset.

Table 1: Summarized results of interviews about performance management issues and performance effective parameters

Issue/ Impact on PM	Clients' View (branches)		Actors& Owners' View	
	Agree	Disagree	Agree	Disagree
Geographical location impact	8	1	9	4
Supportive operation impact	9	-	8	5
Lack of support for branches' innovations	7	2	7	6
Inappropriateness of marketing and branch needs	7	2	7	6
Not considering customer satisfaction	7	2	12	1
Not considering value of customers	8	1	12	1

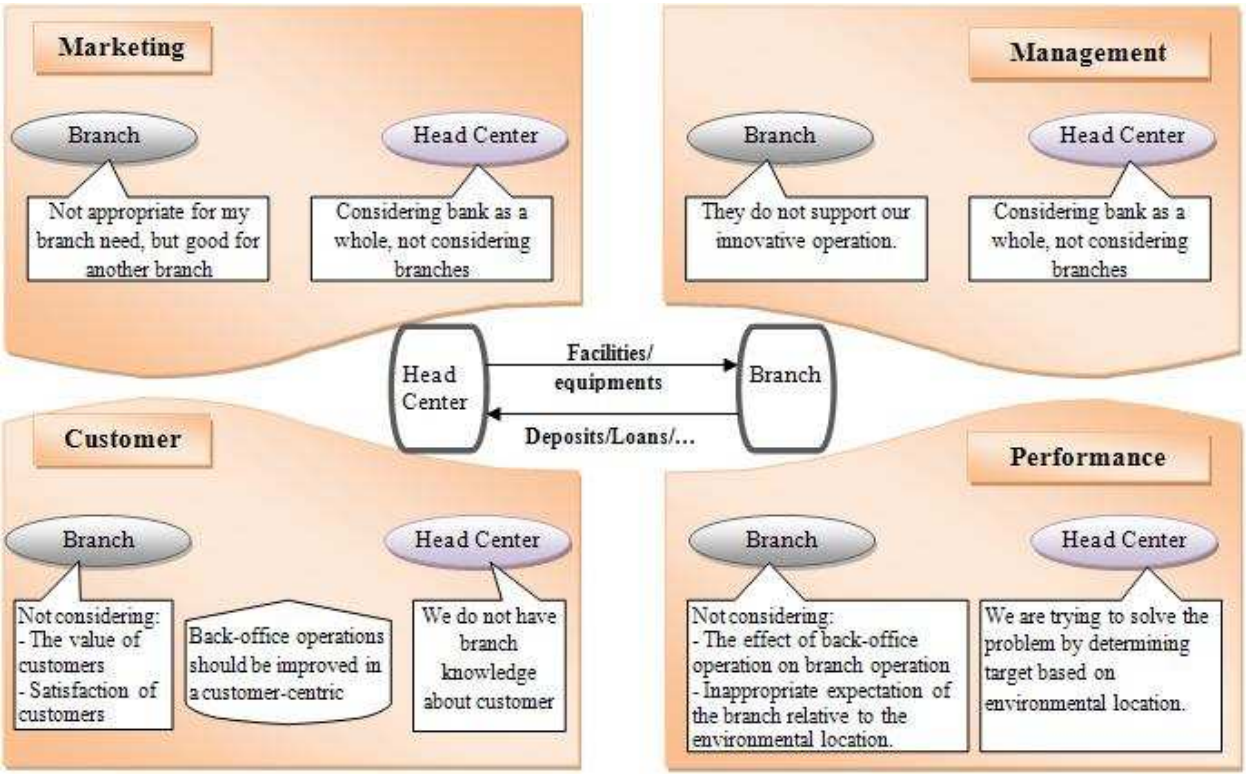

Figure 2: Rich picture of PMS of banks' branches

3. Conceptual model

In the next step of SSM, service-profit chain is considered to provide a conceptual model for responding the needs of interviewees for their concern in customer satisfaction and customer loyalty. Service-profit chain concept suggests a direct significant link between profit, growth, customer loyalty, customer satisfaction, customers' perceived value, and employees' performance and satisfaction. It states that the quality of internal services leads to employees' satisfaction, which in turn improves productivity and loyalty of employees. Loyal and profitable employees produce valuable outcomes for external customers. Hence, customer satisfaction leads

into loyalty, which in turn increases income and profitability. In this concept, it is emphasized that performance evaluation should not assess the performance only from one aspect, but it is necessary to investigate several aspects together as members of a chain (Chenhall & Langfield-Smith, 2007; Manandhar & Tang, 2002).

However, various researches have shown different results for relation between customer satisfaction and bottom-line performance. Some researches have found that customer satisfaction has a positive influence on all profitability measures such as net income and return on investment. Others have discussed that sometimes the improvement of service quality leads to customer satisfaction and hence profit. Finally, there are researches that have reported a negative result between profitability and customer satisfaction. In fact, this relationship depends on time frame. The firm should spend a lot of money in advance, which may cause a decrease in profit in a short period (Bernhardt *et al.*, 2000). Therefore, a new approach to assess customer satisfaction is required. The proposed approach should have the potential to link the relation between customer satisfaction and business performance more precisely.

In this trend, we focus on the literature in two areas. First, according to the resource-based view theory, firms which can produce more economically and fulfill better satisfying customers' needs, and then achieving higher performance relative to their competitors, are holders of a competitive advantage (Armstrong & Shimizu, 2007; Melville *et al.*, 2004). In their review paper, Armstrong and Shimizu (2007) discuss that it is necessary to utilize longer-term performance metrics to articulate the impacts of resources on sustained competitive advantage (Armstrong & Shimizu, 2007).

The second area is customer-centric measures in performance management system as mentioned in the introduction (Folan & Browne, 2005). Although there are many researchers reported in the literature about the impacts of information technology and information systems including CRM on performance improvement (Melville *et al.*, 2004; Shang & Lin, 2005; Shanks *et al.*, 2009), quantitative/financial customer centric metrics are not practiced in PMS for several reasons. Although concepts of customer lifetime value (CLV) and customer equity (CE) have introduced for more than a decade ago, the lack of general model, computational complexity, and even lack of required data make it difficult to be implemented in practice. Today, progress in hardware, software and customer databases provide the potential to rely on financial value of customers more than traditional metrics such as return on investment and return on marketing investment, as Peppers and Rogers (2005) introduced return on customer (ROC) based on CLV (Peppers & Rogers, 2005).

The objective of this research is to investigate the use of CLV as a new metric in managing the performance of banks' branches. We consider CLV as monetary and non-monetary value to the firm's present and future direct and indirect contributions of customer over his/her life-time. Therefore, calculating the future value of customers, which extends the time frame of performance management, provides a longer-term performance metric which is also attached to the customer value generation. Additionally, the following reasons make CLV a proper measure:

- CLV can prove a schema of financial performance of the enterprise (though in a more extensive time frame), since it is calculated based on cash flow.
- CLV can predict the future performance, since it estimates the future value of customers. One of the critics to current measures is that they rely on the past performance. By considering environmental changes and increasing competition, it is necessary to propose measures which trace the future performance.

- CLV can demonstrate the nonfinancial performance of the business about its customers. In CLV calculation, nonfinancial value of customers including loyalty rate, referral value, and so on can be considered.
- CLV can integrate strategies for the performance improvement closer to each other. The evaluated performance based on CLV clarifies which customers should be acquired and which marketing strategies should be planned in customer acquisition and retention. Moreover, it considers the capability of strategic action in avoiding customer churn.
- CLV is the closest performance measure to the customer. One of the main requirements of a PM system is to investigate the performance based on a target. CLV can clarify customer-centric aspect (customer retention and customer loyalty), and shareholder value (based on several researches including (Payne & Holt, 2001)). In other words, CLV supports a multi-stakeholders view in performance measurement.

3.1 Customer centric PMS

Figure 3 presents the proposed framework. Each step in the figure is specified by a number to refer to its explanation.

In several researches (Chan, 2007; Hwang *et al.*, 2004; Kim *et al.*, 2006; Rosset *et al.*, 2002), CLV has been used for customer segmentation. Haenlien *et al.* (2007) used customer segmentation to calculate mean CLV for each of the homogenous segments. We used the same approach in this research. For customer segmentation, we defined three dimensions: customer-product groups (1A), demographic data (1B), and customer activity level (1C).

In the first part of step one (1A), we use customer-product instead of individual products. For customer-product groups, it is necessary to determine similar customers in a group who bought the same products from the bank. For example, we may extract from the bank database system that a group of customers has bought saving deposit, short-term deposits, and personal loans. Another group of customers may have bought long-term deposit, call deposits, and commercial loans. Thus, in this part, all possible combination of products would be extracted for customer groups.

In the second part of step one (1B), demographic data of customers will be used in segmentation. Demographic data for personal accounts will be age, sex, income, and home location. For commercial customers, type of business, age of business and its turnover are defined as demographic data.

Finally, third part of step one (1C) defines customer activity level, which can address the volume of customer transactions. In contractual business, it is easy to understand whether a customer is active or not. In non-contractual business such as retail banking, it is difficult to distinguish non-active, semi-active or active customers. For example, a customer may not be active any more but still she/he holds an account in the bank. This research suggests calculating the activity level based on four measures: the volume of customer's transactions, loyalty of customer, account balance, and time interval of the last transactions. Then we assign a rank between [0, 1] to each customer. Rank 1 means an active and 0 means inactive customer who has not been active for long time. Haenlien *et al.* (2007) just considered 0 and 1 for inactive and active customer, thus, they have not defined the activity level.

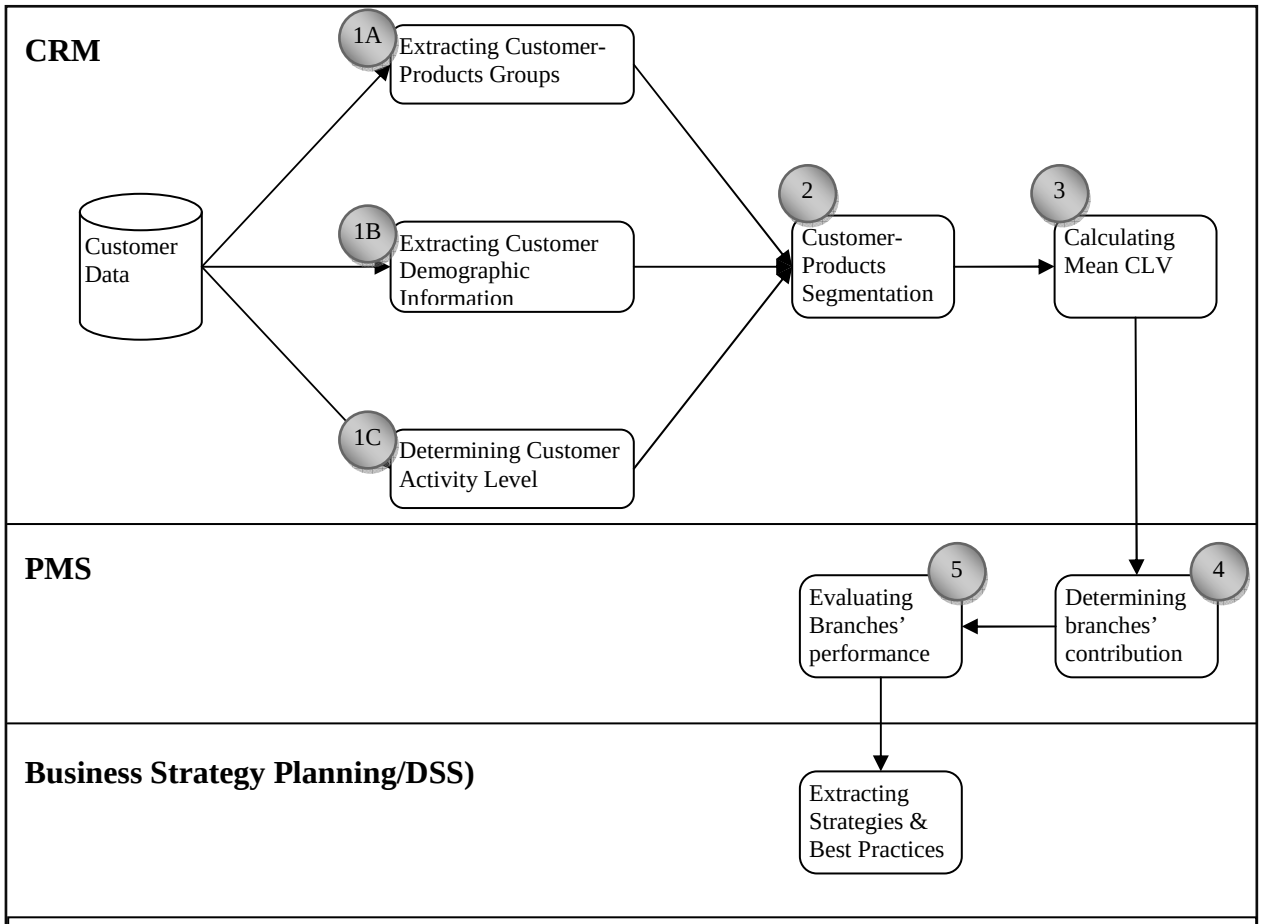

Figure 3-The proposed Conceptual Framework

By executing step 2, it defines customer-product segments which then can be used to calculate the mean CLV for each segment in step 3. When individual customer data is not available or it is costly to calculate CLV for each individual customer, it is recommended to calculate the mean CLV (Gupta *et al.*, 2006; Haenlien *et al.*, 2007; Kumar *et al.*, 2004; Pfeifer & Bang, 2005; Pfeifer *et al.*, 2005). For calculating the mean CLV, several models have been developed (Haenlien *et al.*, 2007; Pfeifer & Bang, 2005). However, it is possible to use developed models for calculating customer equity (CE), which is equal to sum of CLV for each segment. In the literature, various models have been developed to calculate CE (Bauer & Hammerschmidt, 2005; Bayon *et al.*, 2002; Blattberg *et al.*, 2001; Villanueva & Hanssens, 2007).

After calculating the mean CLV of each segment, we need to know what is the contribution of each branch of the bank to the value generated (mean CLV) for each customer-product segment (step 4). Equation (1) calculates the mean CLV of each branch, where Cbranch means the share of the branch from the each segment (segments 1 to n) and mCLV indicates the mean CLV of each segment defined in step 3. This value will be used instead of ROI in measuring the performance of each branch.

$$mCLV_{branch} = \sum_{segment=1}^{n} c_{branch}.mCLV_{segment} \qquad (1)$$

Step 5 suggests a performance management system using data envelopment analysis (DEA). The method is suitable for several reasons: its deterministic nature, its capability in considering qualitative indices, and no need to assume functional forms of inputs and outputs.

The model proposes an integration of a CRM system and PMS. Moreover, one can use it in strategy development for branch expansion and incentive planning using decision support system (DSS). The proposed model for assessing performance provides a good measure of customer-centricity of the branches, which aims to increase the CLV and in turn shareholder value. Indeed, using CLV for assessing performance has several advantages for the enterprises. First, it brings an enterprise-level vision of the performance and its effect on customer return (organizational knowledge). Second, it provides a measure for strategic decisions on improving performance, customer services, process reengineering and etc. Finally, it explores best practices, which potentially generate more value for customers and shareholders, simultaneously.

The proposed model is capable to cover the most issues mentioned by managers of head office and the branches, as they considered the proposed system in the second round of interviews. The expected effects of the proposed model on the issues raised in exploratory interviews are listed in table 2.

The proposed model brings several advantages in performance management and value management area. First, it makes common understanding of the customers and their value management for head office and branches' managers. Second, because of considering the potential value of customers in calculating CLV, the performance management time frame will extend from present to future. Third, the loyalty rate of customers is considered in calculating CLV, which has a positive relation to customer satisfaction based on the literature. Fourth, it makes possible to customize individual marketing programs for each branch based on their required segments, since customers' segments and the share of each branch in each segment would be determined. Fifth, based on the customer value management and determining the customers' segments for each geographical location, devising a strategy for each region and segments migration will be facilitated. In fact, the head office will define the branch target based on the existed customers' clusters and their values. Finally, although this model has a less contribution in improving the supportive operation, assimilating the customer knowledge can provide more amity between head office managers and branches' managers. Moreover, it could facilitate the transformation of back-office operation to a customer-centric business which improves the overall banking operations and also the branch operation.

Table 2: The effects of the Model on the mentioned issues

Issue/ Impact on PM	The proposed Model Effect on the Issue
Geographical location impact	**Addressing potential clusters of customer in various geographical locations.**
Supportive operation impact	**Transforming to a customer-centric business based on implementing the model. The knowledge extended from the proposed model can also improve back-office operation.**
Lack of support for branches' innovations	**The head office and the branches have a common knowledge of the customers.**
Inappropriateness of marketing programs and branch needs	**- The head office and the branches have a common knowledge of the customers. - Clarifying customer segments in each branch and their share in total customer value, it could be possible to customize advertisements for required segments of customer for each branch.**
Not considering customer satisfaction	**- According to the literature, the customer loyalty which is considered in the calculation of CLV has a positive relation to customer satisfaction.**
Not considering value of customers	**- In the model, not only the present value of customers are considered, but also in CLV calculation the potential value of customers will be calculated.**

4. Conclusion

A soft system method in investigating a real world problem related to performance management of banks' branches leads to an integration of a CRM and a PMS system using a customer-centric metric (CLV) in performance management.

In fact, a rich picture of problem situation discovers the lack of customer-centric view in back-office operation of the banks including PMS. The rich picture gathers divergent views of the problem situation in four perspectives: marketing, management, customers and performance.

In the next step of SSM (modeling), the paper employs three concepts in the literature: service-profit chain, need of customer-centric metrics in PMS, and resource-based view of the firm. These three concepts result in using CLV as a metric for PMS which was illustrated as a new conceptual model as the theoretical contribution of this stage of the research. The effect of the model on the issues (table 2) and its contributions are discussed. However, this model fills the gap between performance management systems and CRM system. Moreover, it extends the depth and the time frame of performance measurement to a systematic goal-based performance management, in which increasing the value (the sum of all segments' m-CLV) is considered as the goal of the system and all its organs are serving for achieving this goal and their performances will be evaluated based on the level of achievement. This approach has a potential to be used in performance management for any geographically distributed service industry. In continuation of this research, the implementation of the proposed model in an Iranian commercial bank which has been recently transformed from a state-owned commercial bank to a private one is also in progress and the authors plan to publish the results of implementation of each phase of the model in their future works. The target implementation project owners in the bank are interested in gaining more competitive advantages versus other rival private banks by converging all branches' efforts toward an augmented customer value.

It is also possible to combine the proposed CLV-based approach with other measures such as employees' value in the future theoretical direction of this research. The research now takes another empirical step implementing the proposed model in a limited number of branches of a bank in an action-research approach, which also encounters with many challenges. Lack of empirical experience for many CLV models is a main limitation. Estimation methods can help to develop more acceptable outputs. However, there are various challenges in implementing CLV models. One of the main issues is to migrate from conventional product-centric approach to customer-centric business in the mindset of branch managers. In addition, calculating CLV requires a rich database of customers' transactions and business activities. Many businesses do not have a rich database of customers' transaction with all required details. Moreover, most of the time, there is a lack of integration between customers' need and business processes, particularly in marketing bank's products suitable for each branch. Finally the bank found it challenging to carry out the proposed model for each branch convincing all branch managers to compete for higher gain in CLV share for their branch.

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