

Customer Relationship Management Through Customer Profitability: A Case Study in Pharmaceutical Product Marketing Company

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ABSTRACT

This study aims to analyze Customer Relationship Management (CRM) through customer classification in a pharmaceutical product marketing company. The tools used to analyze CRM are Customer Profitability Analysis (CPA) and Customer Lifetime Value (CLV) methods. Unit analysis of this study is a branch office in Lampung Province of PT X, a private pharmaceutical product marketing company in Indonesia. Data analyzed in this study are primary data obtained from the Accounting Unit and Sales Administration Unit of the branch office and secondary data obtained from online media of both government and private institutions. This study uses purposive sampling that applies Pareto Approach for the calculation of Customer Profitability (CP); that is, 20% of total customers and 20% of total brand products, amounting 193 customers and 348 products that contribute the highest revenue to the branch office in 2018. Furthermore we categorized customers into four categories: high-value customers, declining customers, growing customers, and low-value customers. The result shows that 13.99% of sample customer is classified as high-value customers, 9.85% is classified as declining customers, 8.29% is classified as growing customers and 67.88% is classified as low-value customers. We conclude that combining CPA and CLV in CRM would be better for the company instead of only using one method. Both methods could help company to identify and prioritize customers as well as reduce operational cost.

Keywords: *Customer Relationship Management, Customer Profitability Analysis, Customer Lifetime Value, Customer Classification*

1. INTRODUCTION

In the era of open market competition, companies need to establish appropriate strategies to maintain relationships with customers. This must be done by every company to survive because customers are a source of life for the company (Weterings & Boschma, 2009). Good customer relations and customer trust are intangible resources owned by the company and can be used to obtain sustainable competitive advantage (Clulow, Barry, & Gerstman, 2007).

In establishing relationships with customers, companies cannot provide the same service to each customer because the resources owned by the company are limited, thus it would be irrational to treat all customers the same (Thakur & Workman, 2016). With these limitations, companies use Customer Relationship Management (CRM) to determine their strategies

toward customers. CRM is a comprehensive approach to managing customer relationships and creating shareholder value (Qi, et al., 2012). At the end, company might utilize the resource in efficient way and maximize the value of company.

Thakur and Workman (2016) stated that companies need to adjust their relationship with customers according to the value generated by customers. This is because each customer provides different benefits and, in fact, some customers do not provide benefits for the company. Hence, measurements related to profitability generated by the customer or Customer Profitability (CP) need to be done to determine further strategies required to maintain relationships with customers.

Measurement of CP is an important element in gaining knowledge of customers in CRM (Holm, Kumar, & Rohde, 2012). There are two methods for quantifying CP: Customer Profitability Analysis (CPA)

and Customer Lifetime Value (CLV). CPA is based on accounting concept of profit, while CLV is based on economic concept profit. Hence, the focus of these two methods is different. While CPA focuses on the historical data, CLV is more future oriented.

Based on prior research related to CP, CPA, and CLV methods have a positive impact on managing customer relationships. Research related to CPA conducted by Van Raaij, Vernooij, and Triest (2003) stated that CPA can be used to determine profit contributions provided by customer segments and/or customers individually. Helgesen (2007) discovered the importance of using CPA in a company for decision making related to customer management. CLV related research, among others, by Tukul and Dixit (2013), stated that the CLV approach can be used to improve business processes and customer relations. Shahin and Shahiverdi (2015) stated that CLV can be an effective method for allocation of company resources because it can avoid allocating resources to customers who do not provide value to the company. Unfortunately, the study about CPA and CLV is usually done alone and does not combine both methods. We propose that combining these two methods could help company much better in managing its customer.

PT X is a private company engaged in the distribution and marketing of pharmaceutical products and medical devices. In carrying out its business, the company's operations are divided into four regions, which include 27 branch offices spread throughout Indonesia. Of the 27 branch offices, the Lampung Branch Office has the largest customer growth.

In 2017, Lampung Branch Office had 923 customers, including pharmacies, hyper/supermarkets, institutions, clinics, local minimarkets, mother and baby shops, pharmaceutical wholesalers, government and private hospitals, local supermarkets, shopping stores, cosmetics stores, and drug stores. In 2018, the number of customers in Lampung Branch Office was 987. With the huge number of customer and passion for securing its position as the most profitable region, Lampung Branch Office has the urge to have a better CRM.

Research related to CP has been carried out separately between CPA and CLV. This research contributes to the development of research combining CPA and CLV. In addition, the research results can be used by the company as a reference for decision making related to customer management. Information related to customers based on financial data and market would support more accountable management decision making.

2. LITERATURE REVIEW

2.1. Strategic Management

Strategic Management discusses how to obtain and maintain competitive advantage (David, F. R. & David, F. R., 2013). A company has competitive advantage when it is able to implement strategies that cannot be duplicated or become too costly to be followed by its competitors (Hitt, Ireland, & Hoskisson, 2016). On strategic perspective, the fundamental need of all customers is to buy the product or service that provides value to them (Hitt, Ireland, & Hoskisson, 2016). With the capacity to provide value of product and service, a company might positively improve its relationship with the customers.

2.2. Value Based Management

Value Based Management (VBM) is a managerial approach that has the main purpose to maximize shareholder's value in the long run (Mella & Pellicelli, 2008). VBM is designed for decision making, analyzing strategy implementation, and required commitment to reach desired objective (Van Wyk & Smith, 2008). In VBM context, a company needs to have a shared fundamental understanding for all its element to maximize shareholder's value and establish collective goals. The understanding covers timeliness and personnel related to the goals.

The main feature of VBM is value according to a matrix that combines invested Cost of Capital and company profitability (Firk, Schrapp, & Wolff, 2016). Based on that initiation, VBM might be continuously used to change company's business portfolio while ignoring the profitability of company's project. Hence, VBM might assist a company to develop strategy, to allocate resources, and to establish financial target.

2.3. Resource Based View

Resource Based View assumes that an entity is comprised of a set of resources and unique capabilities (Mella & Pellicelli, 2008). To obtain continuous competitive advantage, the entity's resources must be valuable, rare, inimitable, and non-substitutable (David, F. R., & David, F. R., 2013; Acquaah, 2003; Rahman, Rodríguez-Serrano, & Lambkin, 2018). Those four characteristics of resources might positively assist the company to implement a strategy that stimulates its continuous competitive advantage.

According to the nature of resources, a company might distinguish its resources into two types: tangible and intangible (Nath, Nachiappan, & Ramanathan, 2010). The primary resources owned by the company are identified as intangible assets (branding and customer relationship) and capability (capacity and

knowledge) (Clulow, Barry, & Gerstman, 2007). Branding and customer relation is categorized as a primary resource due to inimitability and uniqueness. In contrast, tangible assets, even though they might have high value to company, they are easily duplicated by competitors.

2.4. Customer Relationship Management

CRM essentially has two approaches: strategic CRM and operational CRM (Elbeltagi, Kempen, & Garcia, 2014). Strategic CRM was defined by Buttle (2004) as a top-down perspective on CRM. Buttle (2004) viewed CRM as a core customer centric business strategy that aims at winning and keeping profitable customers.

Strategic CRM is they orientation to organizational direction and scope in the long run (Johnson, Scholes, & Whittington, 2008). In strategic CRM, the value of co-creation committed both by customers and the company has significant role (Elbeltagi, Kempen, & Garcia, 2014). Hence, management needs to have adequate customer knowledge.

Operational CRM facilitates the company to reduce cost by improving the accuracy of transaction, hence the company might decide to focus on operational CRM (Hughes, 2002). Buttle (2004) explained more specific perspective on operational CRM, commenting that operational CRM is a perspective on CRM that focuses on major automation projects within the front-office functions of selling, marketing, and service functions across a range of customer touch points and channels.

Buttle (2004) emphasized on front-office processes, such as selling, promotion, and service, and those activities have a significant role in improving company's performance. The purpose of operational CRM implementation is to improve the quality and rapidness of information flow and improvement of customer solution response (Xu & Walton, 2005).

2.5. Customer Profitability

The measurement of CP is a significant element in obtaining customer data for CRM (Holm, Kumar, & Rohde, 2012). CPA and CLV are methods in quantifying CP. CPA analyzes CP with retrospective data, calculating the expense and revenue per customer in particular accounting period (Pfeifer, Haskins, & Conroy, 2005). Van Raaij, Vernooij, and Triest (2003) stated that CPA can be used to determine profit contributions provided by customer segments and/or customers individually. Helgesen (2007) discovered the importance of using CPA in a company for decision making related to customer management.

CLV is generally defined as present value of all future economic benefit generated from customers during a business period (Gupta, S. et al., 2006). Tukul

and Dixit (2013) stated that the CLV approach can be used to improve business processes and customer relations. Shahin and Shahiverdi (2015) stated that CLV can be an effective method for allocation of company resources because it can avoid allocating resources to customers who do not provide value to the company.

Both calculation methods are useful to determine the value given by a customer to the company. Unfortunately, the study about CPA and CLV is usually done alone and does not combine both methods. This study combines both methods to obtain more comprehensive figure.

3. METHODOLOGY

3.1. Design of the Study

This research is performed in two main steps. The first step taken is to calculate CP for research sample with CPA and CLV methods. Then, CPA and CLV values are used for customer classification.

3.2. Object of Study

The object of this study is a branch office of PT located in Lampung Province, Indonesia. The branch office had 923 customers in 2017 and increased to 987 customers in 2018 throughout Lampung Province. With an increasing number of customers, the company has no basis for CRM for its customers. Therefore, the profile of object of study suits the research.

3.3. Sample and Data Sources

Primary data obtained from Accounting and Sales Administration of Lampung Branch Office and secondary data obtained from public and private online sources are used. This study uses purposive sampling with Pareto Approach, which applies 20% of total customers and 20% of total product brands that contribute highest profit to Lampung Branch Office in 2018. In total, 193 samples of customer are obtained out of 983 customers and 348 samples of brand products are obtained out 1741 brand products. The sampling method is taken due to limited data recorded by the company.

3.4. Customer Profitability

There are two methods for quantifying CP: CPA and CLV. For their measurement, CPA relies on accounting concept of profit, while CLV relies on economic concept of profit. The equation applied on CPA and CLV calculation was taken from Sridhar and Corbey (2015):

$$CP_t = CR_t - (COGS_t + CTS_t + CSO_t) \quad (1)$$

CP = Customer Profitability;
 CR = Revenue from Customer;
 COGS = Cost of Goods Sold;
 CTS = Cost to Serve ;
 CSO = Customer Specific Overhead.

This study identifies Cost to Serve as Order Cost and Delivery Cost. Order Cost is incurred as sales representative routinely visit customer’s location. Delivery Cost is the cost incurred for product delivery made to customer.

CLV calculation is taken from Sridhar & Corbey [25].

$$CLV = \sum_{t=1}^n \frac{(Contribution\ of\ customer_A)^t}{(1+i)^t} \quad (2)$$

where

CLV calculation was taken from Sridhar and Corbey (2015).

$$CLV = \sum_{t=1}^n \frac{(Contribution\ of\ customer_A)^t}{(1+i)^t} \quad (3)$$

where

CLV = Customer Lifetime Value;
 Contribution Customer_A = Contribution Margin from customer A in period T;
i = Discount Rate;
 I = Cost of Capital; and
 T = Number of Period of CLV Observation.

CLV calculation period covers the next three years after 2018. The calculation of total revenue generated for next three years uses estimation derived from geometric mean of revenue growth for each product sold to customer. Cost of Serve growth estimation for next three years uses inflation rate in 2018.

After obtaining Contribution of Customer for next three years, Cost of Capital can be calculated. Cost of Capital is the cost incurred or paid by the company to obtain the capital, both derived from debt of equity (Ross, Westerfield, & Jordan, 2008). Cost of Capital is calculated as follows

$$WACC = \left(\frac{S}{S+B} \times R_S\right) + \left(\frac{B}{S+B} \times R_B \times (1 - t_c)\right) \quad (4)$$

where

WACC = Weighted Average Cost of Capital;
 S = Total Company’s Equity;
 B = Total Company’s Debt;
 R_S = Cost of equity;
 R_B = Cost of debt; and
 t_c = Tax Rate.

In calculating Weighted Average Cost of Capital, cost of equity (R_s) is calculated using the Capital Asset Pricing Model by Ross et al. (2008):

$$R_s = R_f + \beta \times (R_m - R_f) \quad (5)$$

where

R_S = Cost of Equity;

R_f = Risk Free Rate;

β = Beta; and

R_m = Market Risk.

As the company is not public, Beta (β) used on this study is obtained from average beta of similar publicly-listed company in Indonesia. Based on the work of Arnaboldi, Azzone, and Giorgino (2014), Beta (β) calculation is performed as follows:

The first step is to calculate average of unlevered beta of related industries

$$\beta^U = \frac{\text{avg } \beta_{comparable}^L}{1 + (1 - \text{avg } t_{comparable}) \times (\text{avg } \left(\frac{D}{E}\right)_{comparable}} \quad (6)$$

where

β^U = Unlevered Beta;

β^L_{comparable} = Levered Beta of Related Industries;

avg t_{comparable} = Average Tax Rate of Related Industries; and

avg $\left(\frac{D}{E}\right)$ = Average of Debt to Equity of Related Industries.

The second step is to re-leverage of unlevered beta with considering the company’s own data

$$\beta_{target}^L = \beta^U \times \left[1 + (1 - t_{target} \times \left(\frac{D}{E}\right)_{target})\right] \quad (7)$$

where

β^L_{target} = Levered Beta;

β^U = Unlevered Beta;

t_{target} = Tax Rate; and

$\left(\frac{D}{E}\right)_{target}$ = Average Company’s Debt to Equity.

3.5. Classification

After CPA and CLV values of each sample are obtained, CPA and CLV values are combined into a matrix and the analysis can be made. The value of the CPA is the upper value of the y-axis and the value of CLV is the upper value of the x-axis. The matrix

explains the degree of customer classification. The matrix is presented as follows:

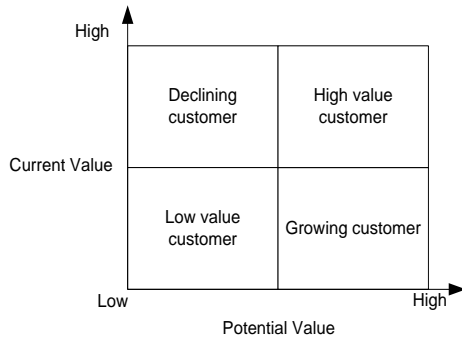


Figure I. Matrix of classification.

Current Value on the matrix is based on CPA value, while Potential Value is based on CLV value. Median that defines “Low” and “High” is derived from average of CPA and CLV. The classification based on the matrix is presented as follows:

Table I. Customer classification.

CPA	CLV	Classification
High	High	High Value Customer
High	Low	Declining Customer
Low	High	Growing Customer
Low	Low	Low-Value Customer

4. RESULT AND DISCUSSION

4.1. Customer Profitability Analysis

The result of CPA calculation shows:

1. The maximum value of CPA calculation is IDR333,430,602,- derived from Private Hospital Customer, while the minimum value is IDR987,713,- derived from Pharmacy Customer, and the average CPA for sample study is IDR30,407,088,-;

Table II. CPA descriptive value.

CPA Value in IDR		
Maximum	Minimum	Average
333,430,602	987,713	30,407,088

2. Higher CPA value than the average of CPA (>IDR30,407,088,-) is categorized as “High,” while the value lower than the average of CPA is categorized as “Low.” The result of classification of customer is presented as follows:

Table III. Customer type classification based on CPA value.

Customer Type	High CPA	Low CPA
Pharmacy	18	104
Private Hospital	14	20
Public Hospital	5	7
Hypermarket/Supermarket	3	0
Traditional Convenient Store	2	6
Licensed Pharmacy	1	3
Large Merchant	1	2
Local Supermarket	1	0
Traditional Drug Store	1	2
Health Care Institution	0	1
Medical Devices Distributor	0	1
Cosmetics Store	0	1
Total	46	147
Grand total	193	

CPA is a CP analysis method that applies retrospective approach by calculating cost and revenue for each customer in a particular accounting period. CPA can be utilized to determine profitable customer, company’s dependency to its profitable customers, and incurred cost in rendering service to customers. Table I shows that customers with High CPA value come from Pharmacy business, totaling 18 customers, and Private Hospital, totaling 14 customers.

4.2. Customer Lifetime Value

CLV is calculated using Contribution of Customers data for the next three years and Cost of Capital. The result of calculation shows:

1. The maximum value of CLV is IDR3,735,191,370,- derived from Public Hospital customer, while the minimum value of CLV is IDR10,752,395,- derived from Pharmacy customer. The average CLV is IDR383,073,456,-. The figure of descriptive value is presented in table as follows:

Table IV. CLV descriptive value.

CLV Value in IDR		
Maximum	Minimum	Average
3,735,191,370	10,752,395	383,073,456

- Higher CLV value than the average of CLV (>IDR383,073,456,-) is categorized as “High,” while the value lower than the average of CLV is categorized as “Low.” The result of classification of customer is presented as follows:

Table V. Customer type classification based on CLV value.

Customer Type	High CLV	Low CLV
Private Hospital	18	16
Pharmacy	17	105
Public Hospital	4	8
Hypermarket/Supermarket	3	0
Traditional Convenient Store	1	7
Licensed Pharmacy	0	4
Large Merchant	0	3
Local Supermarket	0	1
Traditional Drug Store	0	3
Health Care Institution	0	1
Medical Devices Distributor	0	1
Cosmetics Store	0	1
Total	43	150
Grand Total	193	

According to Table V, the majority of customers that contribute high profit to Lampung Branch Office come from Private Hospital, amounting for 18 hospitals or 9.32% of the total sample. The CLV result is different from CPA result. Curry et al. (2003) stated that the minority customers deserved to obtain compensation from the majority of customers who contribute high revenue to the company. Based on that argument, the company needs to focus on service to High CLV value customers.

4.3. Customer Classification

Customer classification in this study is combining CPA and CLV of each customer. The classification is described in a matrix as follows:

1. Customer Distribution Matrix

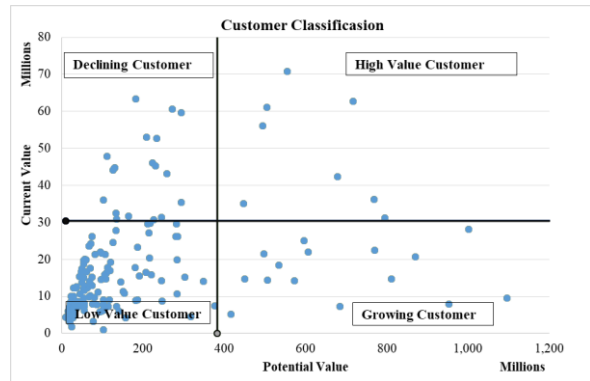


Figure I. Customer distribution matrix.

Figure I. shows the distribution of Customer according to it classification. It shows that Lampung Branch Office is dominated by Low-Value Customers with CPA and CLV below the average.

2. Customer Classification

Table VI. Customer classification.

Customer Type	Customer Classification			
	High Value Customer	Declining Customer	Growing Customer	Low-Value Customer
Private Hospital	12	2	6	14
Pharmacy	9	9	8	96
Hypermarket/Supermarket	3	0	0	0
Public Hospital	3	2	1	6
Licensed Pharmacy	0	1	0	3
Healthcare Institution	0	0	0	1
Medical Devices Distributor	0	0	0	1
Large Merchant	0	1	0	2
Local Supermarket	0	1	0	0
Traditional Convenient Store	0	2	1	5
Cosmetics Store	0	0	0	1
Traditional Drug Store	0	1	0	2
Total	27	19	16	131
Grand Total	193			

Table VI shows the customer classification according to retrospective value (CPA) and prospective value (CLV) derived from each customer. High Value

Customers come from Private Hospital, accounting for 12 customers or 6.21% of the sample. This identification could help management to identify which customers will be declining in revenue contribution and which have the potential to increase in contributing revenue

5. CONCLUSION

To maintain its position in strict market competition, a company needs to apply the right strategy for CRM. The customers are significant life-support for a company. In managing relationships with customers, a company with its limited resources cannot afford the same treatment and service to each customer. This encourages the need of CRM to establish the marketing strategy.

This study shows that alternative methods can be applied for the CRM decision making. This study presents CP method with the combination of CPA and CLV.

This study develops the customer classification matrix as follows:

1. High-Value Customer for customer that has CPA and CLV value above the average of customers.
2. Declining Customer for customer that has CPA value above the average of customers but has CLV value below the average of customers.
3. Growing Customer for customer that has CPA value below the average of customer but has CLV value above the average of customers.
4. Low-Value Customer for customer that has CPA and CLV value below the average of customers.

Initiating customer classification, the company may establish the focus of service to High Value and Growing customers because customers in those categories contribute the highest profit for the company by considering the current value and future economic benefit for the company. CPA explains customer profitability in a certain past accounting period, thus CPA value contributes to evaluate effectivity of investment made by the company. CLV is able to depict the profitability projection from customers into the future. By combining both methods, management may have more comprehensive figures related to its customers, hence might be able to make better decisions on CRM and improve the value of the company.

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