Customer Profitability Analysis in Accounting
(Relevant to PBE Paper II – Management Accounting and Finance)

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Introduction

Customer profitability analysis (CPA) helps companies to better understand customer service activities and cost drivers, and to determine the profitability of each customer or customer category. Customer service encompasses all activities related to completing a sale and satisfying the customer, including advertising, promotion, delivery, billing, collections, service calls, inquiries, and other customer services. CPA helps managers to:

- present profitable new products and services;
- analyse profitable customers;
- administer each customer's costs-to-serve;
- suspend unprofitable products, services, or customers;
- change a customer's purchase mix, typically aiming to sell higher-margin products and service lines;
- deal with discounts to achieve more sales with lower operating costs; and
- select the types of after-sales services to provide for customers.

Sufficient analysis of the company's current and potential customers' profit potential can help companies to increase profits and enhance their competitiveness. This process begins with an analysis of the customer costs.

Customer Costs

Not all customers need similar before- or after-sales services. Individual customer-specific service costs are:

- selling and marketing;
- order processing;
- billing, collection and payment processing;
- accounts receivable processing; and
- customer service.

In management accounting, CPA associates revenues with costs to analyse customer profitability and identifies actions for enhancing customer profitability. CPA offers valuable information for the assessment of customer value. In addition, companies need to consider other relevant factors before deciding on the appropriate actions to take for each customer. Such relevant factors can be:

- the growth potential of the customer, especially cross-selling potential between the company and the customer's company;
- possible customer reactions to changes in sales terms or services; and

- the importance of having the company as a customer for future sales references, especially when the customer may play a key role in introducing new business.

Customer Lifetime Value

Many companies see the importance of considering the long-term value of the customer, as well as the expected contribution to profit over the long-term, in deciding whether the company should keep the customer. This concept is known as customer lifetime value (CLV). CLV is a way for companies to assess the value of a customer or customer category and to analyse how marketing and support services should be allocated to customers in order to improve the company's overall profitability. There is a significant level of judgment involved in estimating the variables used in the calculation, and it is also important to compare different calculations of CLV made with different assumptions about profit forecasts and discount rates.

CLV is calculated as the net present value of estimated future profits from the customer for a specified time, which may be three to five years. Present value is adopted because the profits from the customer are expected to be generated over a number of years. To obtain a comprehensive and relevant measure of the value of the customer, CLV considers the company's expectations about the future potential growth in profits arising from a customer.

The following example demonstrates the calculation of CLV. HK Company buys supplies from MCC Supply Company. MCC considers the CLV of the supplies by projecting the profits from HK Company. Suppose the forecast is for $20,000 profit per year for the next 3 years. If MCC uses a discount rate of 7% (the relevant discount factor is 2.624 from the present value table), then

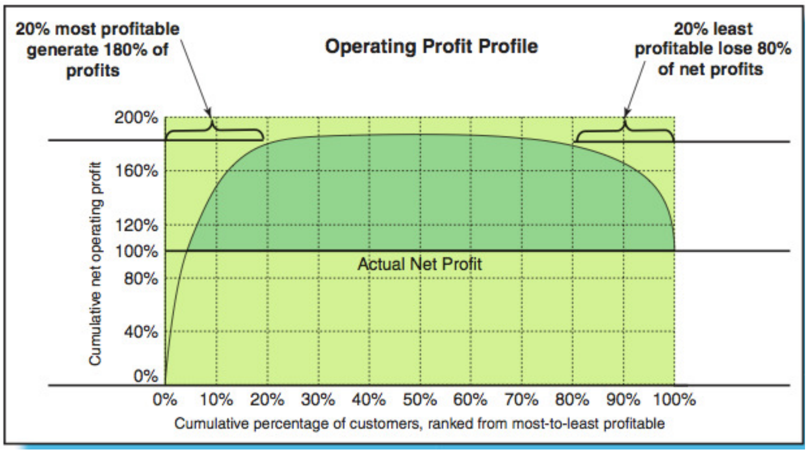
CLV = $52,486 = $20,000 × 2.624.

Whale Curve

To maintain market share, companies need to address different customer needs. Sometimes, sales to one customer category may result in a loss. This loss should be compensated for by the profitable sales from another customer category.

In the sales history below, a profit curve shows that the top 20% of the profitable customers generate roughly 180% of a company's profit. The bottom 20% generate losses of around 80% of the company net profit. The middle 60% of customers represent a breakeven situation. Thus the company has 100% of the net profit. This profit curve, as shown in Figure 1, is called a whale curve.

Figure 1. Whale Curve



CPA can be used to identify which customer categories comprise the top 20% and the bottom 20% respectively. It can also be employed to help companies to identify:

- the proportion of resources used for different customers;
- the most profitable customers;
- the total cost of servicing a customer, including advertising, after-sales services and returns; and
- the customer sector(s) targeted by the company's competitors.

Potential Benefits of Customer Profitability Analysis

The immediate benefits of CPA lie in the insights that it provides into the uneven distribution of costs and revenues across the company's customers. The information on the spread of costs among customers is particularly valuable, as the distribution of revenues is generally already known to the company.

Implementation of Customer Profitability Analysis

CPA requires that revenues and costs be attributed to customer categories or to their respective individual customers, such that the profitability of those categories and/or customers can be calculated. There are six steps.

The first step in the CPA implementation process is to find out the active customers in the customer database in order to ensure that costs are allocated to active customers only. Historical analysis of customer profitability should be done retrospectively, that is, by using historical cost and revenue data for the analysis of previous purchase patterns. Active customers shall therefore be defined as those customers that have placed at least one order during a given period of time under consideration.

The next step is the design of the customer profitability model. The company's operations are to be examined to see what activities are performed, and what drive(s) the costs of these activities. The calculation of customer profitability amounts relates to activity-based costing (ABC). ABC identifies the cost pools, such as procurement, manufacturing, and customer services in the company. Cost drivers are units in which the resource use of the cost pool can be conveyed, such as units produced, the number of purchase orders, or the number of service calls. Costs are then assigned to cost objects based on the extent to which these objects use cost driver units. Finally, all costs can be assigned to activities, and for each activity, relevant cost drivers can be identified.

The third step is to perform a customer profitability calculation. This calculation is conducted by supplying data to the customer profitability model. Discounts, rebates and customer relationship costs, such as sales commissions, service costs and distribution costs, are subtracted from the individual customer's sales revenues. Using sales activities as an example, data have to be collected on the costs of all sales activities, such as the number of sales visits paid to respective customers.

The fourth step is to interpret the results. The profitability figures depend on the choices offered to customers. The rough calculations probably produce unexpected profitability figures that may be met with a fair amount of subjective judgment. The largest customer may be one of the least profitable. Substantial discounts may be offered to them. These discounts may greatly affect the company's profit margin, and significant differences may be found across customer types. These results may also help in the adjustment of the model. The allocation of costs to cost drivers and customers may also be affected by the oversimplifications or inaccurate estimates. The CPA working group has to review these discount decisions to reach a more accurate cost distribution.

In the fifth step, the results of the CPA are used to improve customer relationship management, as well as cost management and pricing programs. Profit figures may indicate that service levels for certain customers or customer categories need to be reduced after considering the current revenues and costs. In addition, certain customers may be revealed to be very profitable, such that allocating additional expenditure for maintaining those customers is worthwhile.

The sixth step is the establishment of the infrastructure for the continued use of CPA. Integrating CPA into the daily operations of marketing, goods distribution and accounting is likely to initiate changes in sales planning, changes in responsibilities, and changes in accounting information systems.

Discussion

There are both advantages and disadvantages to implementing CPA.

The advantages include the following:

- Enhanced profitability may be realized by excluding non-profitable customers and maximizing sales to profitable customers.
- The analysis enables identification of the true costs of each customer segment, including taking into account implicit opportunity cost when

defining profitability. These costs may be more important than production costs.
- CPA offers a method of identifying customer categories who are of long-term value to the company, and who are worth retaining.
- The process also facilitates enhanced strategic decision-making by offering useful information for customer-related decisions, including pricing, discounting and marketing decisions.

As for the disadvantages of CPA, many companies may lack the detailed customer databases necessary to produce an accurate assessment of customer segmental revenues and costs. Some of the limitations related to adoption of CPA include the following:

- There may be practical difficulties in computing the costs attributable to each segment.
- CPA may overlook the combinations of products or services purchased by customers. In reality, customer profitability depends on the mix of products or services accepted. Thus, the greatest drawback of CPA is that the analysis is used only on specific products, and may overlook the impact of sales of other products to the customer.
- Some expenses may not be considered in calculating the customer lifetime value. The costs of enticing and keeping a customer should be compared with the lifetime earnings and not only with the annual earnings attributable to the customer.

Conclusion

Customer profitability analysis deals with sales revenues and costs generated by customers. Managers are interested in forward-looking analyses of customer profitability. Prospective CPA calculates the net present value of future expected revenues and the costs associated with serving customers over the entire future customer lives. To estimate future costs and revenues, a retrospective analysis of customer profitability is valuable and essential.

References

Atkinson, A. A., Kaplan, R. S., Matsumura, E. M., & Young, S. M. (2012). *Management Accounting: Information for Decision Making and Strategy Execution: Readings and Cases* (6th ed.), Chapter 6, 242–275.

Van Raaij, E. M., Vernooij, M. J. A., & van Triest, S. (2003). The implementation of customer profitability analysis: A case study. *Industrial Marketing Management*, *32*, 573–583.