

Unlocking Profit Potential: A Study on Target Cost Management Guidelines for Micro, Small, and Medium-Sized Enterprises

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Abstract: - The purpose of this research was to examine the guidelines for target cost management. Data was collected from 400 Micro, Small and Medium-sized Enterprises in Thailand by questionnaire mail survey. The key informants were accounting executives. Structural equation modelling (SEM) was employed as a statistical technique to test the research relationships. The results revealed the guidelines for target cost management. The highest means consisted of customer orientation, design process management, product life cycle cost management, value chain management, target price strategy, and teamwork development. The analysis results of the structural equation model were satisfied through the evaluation criteria with the following parameters: Chi-square probability of 0.134, relative Chi-square of 1.133, correlation index of 0.961, and root index of the mean square of the error estimate of 0.018. To improve and increase the benefits of target cost management, executives need to determine how to implement target cost management in a business. Thus, firms need to create a business vision, be aware of competitive forces, and manage organizational changes through outstanding restructuring, redesign, and re-engineering of their practices, operations, functions, and strategies in order to meet target cost management implementation requirements. Further research is needed to expand and validate the benefits of this study. Investigating other populations, especially in Southeast Asia, is necessary to confirm the findings' applicability. Different results in future studies may limit the study's generalizability. With an empirical verification of the research relationships, this study attempted to conceptualize of TCM. This research also confirmed existing literature of dynamic capability theory in which firms implement TCM as a valuable source of their business competitive. This study underscores the importance of Target Cost Management (TCM) as a strategic tool for pricing and cost control, providing valuable insights for firms in volatile markets, particularly in Thailand.

Key-Words: - Profit Potential, Cost Management, Micro, Small and Medium-sized, Enterprises, Investigating

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1. Introduction

To achieve advanced economic performance, businesses strive to utilize modern production strategies to gain a competitive edge. This involves adopting new production organization methods and cost analysis techniques, directly impacting labor productivity, turnover, profit, stock costs, production cycles, and ongoing expenses, while enhancing capital turnover. Economic performance is increasingly globalized, prompting firms to adapt to new competitors emerging worldwide [1]. Consequently, firms must quickly refresh their capabilities to adapt to evolving business environments and achieve strategic objectives. These changes necessitate adjustments in cost management and control practices. To meet quality, quantity, cost, and flexibility goals, firms are restructuring both internally and externally. Continuous performance improvement is essential for all processes and capabilities across economic entities [2].

A traditional costing system operates in an environment where competitive trade and productive activities are absent. In this system, initial costs are determined for product design and development, followed by mass production at established costs. A portion of these costs is then added to the expected profit, resulting in a specific market price—a method known as "cost-plus" pricing. This approach is characterized by management efficiency in productive processes, with little consideration for customer input or customization. Profit estimates are based on managerial preferences and standards. Consequently, both profit and cost are influenced by management performance, making selling price a dependent variable. This system minimizes competition pressure and lacks flexibility [3].

In target costing management (TCM), the price is regarded as an independent variable. Market price determination relies on marketing research and enhancing product functions, features, and quality. Executives then set desired profits based on predetermined standards. Inventory costs are adjusted to meet target costs. TCM starts with market analysis and ends with product development (Ansari, Bell, & Swenson, 2006). Companies today use TCM to produce high-quality goods with desired features, satisfying customers while meeting profit goals. TCM sets market price first, subtracts expected profit, leaving product cost. Competitive products must balance cost, flexibility, efficiency, and quality, varying by product and market [4]. TCM is a cost management approach that shifts its primary focus from production units to goods. One assumption of TCM is that once production design is complete, costs are fixed unless product redesign occurs.

Factors such as materials, part count, and assembly time are determined during design, prompting cost management to intervene before production to ensure products are sold at predetermined costs and evaluate desired profits. TCM encompasses the entire value chain of a business, emphasizing customer value creation at one end and fostering stakeholder engagement at the other [5]. TCM is a multidisciplinary, multifunctional approach integral to the business model, aimed at creating value for customers and securing sustainable competitive advantages for firms [6].

2. Literature

TCM originated in the Japanese automobile industry in the 1960s and was later introduced successfully to Western companies in the 1980s (Feil et al., 2004). Many large firms have adopted TCM to enhance cost management and bolster competitiveness [7]. In this research, target cost management refers to a system of profit planning and cost management that is price-led, customer-centered, design-focused, and cross-functional [8]. TCM involves planning in advance for product costs, price points, and margins for new products. If these targets cannot be met, the design project is canceled. TCM provides management with a powerful tool for monitoring products continuously from the design phase throughout their life cycles, crucial for ensuring consistent profitability in manufacturing [9]. TCM stands out as a valuable tool for planning a suite of highly profitable products, contrasting with the common approach of designing products solely based on the engineering department's perspective, often resulting in cost challenges relative to market prices [4]. Here, TCM serves as a unique, irreplaceable source of firms' capabilities, driving cost advantages, customer satisfaction, and sustainable competitive advantages. In this research, key principles of TCM encompass target price strategy, teamwork development, customer orientation, product life cycle cost management, value chain management, and design process management [10].

2.1 Target Price Strategy

Advances in technology have underscored the enhanced importance of targeted price promotions for customers. Given the increasing adoption of targeted price promotions by businesses and the significant emphasis on marketing's role in creating substantial value, researchers must pay closer attention to the value-creating potential of targeted

pricing. The notable push by manufacturers and retailers to embrace targeted pricing as a strategy, offering exclusive prices to select customers, is driven by ongoing developments in marketing technologies, which enhance firms' ability to target customers effectively. Overall, firms' targeted pricing strategies involve collecting and analyzing vast amounts of customer data to gain insights into their likely responses to promoted products, brands, and services [6].

Target pricing involves assessing a competitive market price and adding a standard profit margin to determine the maximum allowable cost for a new product. Design teams then aim to create a product with the required features within this cost constraint. Collaboration across the firm is crucial to meeting these cost targets. If the team cannot achieve the product within the cost constraint, the project is terminated. This approach ensures a company maintains reasonable profits across its product line, avoiding low-profitability products. However, setting the standard profit margin too high may limit the development of products within the cost constraint.

In conclusion, the target price strategy has proven effective in addressing customer requirements and fostering teamwork within organizations. Managers can leverage this method as a crucial tool for gaining competitive advantage by adhering more diligently to the aforementioned principles [1]. Therefore, the hypothesized associations are as follows:

Hypothesis 1: The target price strategy positively influences (a) teamwork development and (b) customer orientation.

2.2 Teamwork Development

Designers, R&D experts, procurement, cost accounting, marketing specialists, as well as suppliers, customers, traders, distributors, and other service providers outside the economic unit, are involved in the teamwork orientation [5]. Teamwork orientation entails employees collaborating to achieve the business's goals, with TCM requiring developments in product manufacturing processes and design without compromising value-added functions or features (George & Jones, 2005). This necessitates full company-wide effort and participation of all employees. Accordingly, [11] identified teamwork orientation as a critical success factor for TCM implementation. In Japanese businesses, cross-functional management allows members from various functions and knowledge backgrounds to collaborate, enabling them to achieve target costs while maintaining quality and functionality [12]. Quality teams, approved by

management, are functional units where members meet regularly to discuss and address quality and production issues affecting their work solutions [13]. Therefore, the following hypotheses are proposed:

Hypothesis 2: Teamwork development positively influences (a) customer orientation and (b) product life cycle cost management.

2.3 Customer Orientation

TCM emphasizes market-oriented management, aiming to satisfy and attract customers while enhancing the planning process. The target costing model assumes independence of customer preferences, leading to additive utility functions for optimizing cost structures based on customer preferences. Cost optimization is focused on components where costs exceed those of the minimum variant, justifying the preference independence assumption and facilitating more rational adjustments in costs per product component [10]. Customer orientation involves understanding target customers to continuously generate superior customer value. In highly competitive markets, products often have similar or better functions, and customer loyalty is fleeting. Customers wield the ultimate power in determining product prices based on their preferences and market conditions [14]. The price-led concept of TCM makes firms more adaptable to market and customer needs. Target costs are determined based on the expected selling price, which is derived from market analysis. Firms identify target customers, desired product attributes, and the price customers are willing to pay for each feature. Customer requirements such as cost, quality, and timely delivery are considered alongside product features to guide cost decisions. Therefore, the associations are hypothesized as follows:

Hypothesis 3: Customer orientation positively influences product life cycle cost management.

2.4 Product Life Cycle Cost Management

TCM emphasizes controlling costs through production planning and effective product design, acknowledging that these upfront activities also incur costs. Additional costs may arise post-sale, such as warranty expenses and plant decommissioning. Profitability hinges on ensuring that total revenue exceeds total costs incurred before, during, or after production—a principle known as product life cycle cost management. Addressing costs at any stage of a product's life cycle can drive down TCM expenses. Product life cycle cost management provides a comprehensive [15] view of purchasing and operating costs associated with a product. It considers

expenses incurred throughout the entire life cycle—from initial investment through ownership, operation, and eventual decommissioning [9]. According to Enes and Kosan [16], the product life cycle is a management technique utilized to ascertain and manage costs throughout a product's entire life cycle, spanning research and development, design, manufacturing, marketing, distribution, sales, and after-sales services. An essential aspect of preparing product life cycle cost management involves identifying costs that could significantly impact the overall cost management [17]. When undertaking any investment or project, firms must consider both purchase and ownership costs in the decision-making process. Product life cycle costing management assists managers in determining whether the profits generated from a product will cover the costs of development or abandonment during the production period [18]. Therefore, the associations are hypothesized as follows:

Hypothesis 4: Product life cycle cost management positively influences value chain management.

2.5 Value Chain Management

The value chain is a vast organization that shares design and cost information, collaborating to establish cost-reduction objectives [19]. It comprises a network of relationships among trading partners, with the nature of these associations influencing the operational dynamics, including the ability to implement channel-wide target costing. Understanding these relationships is crucial for selecting the appropriate target costing approach for the chain. Value chain relationships are often characterized by interconnectedness, integration, or interdependence among trading partners [20]. An integrated approach to value chain management focuses on managing information, relationships, and material flow across organizations to reduce costs and enhance efficiency. Firms employing an integrated value chain management approach seek to integrate their procurement, logistics, operations, and marketing functions with other chain participants, facilitating smooth flow of information, materials, and finished products to end users, while offering low unit costs and high service levels [21]. Operating within an integrated value chain enables companies to gain competitive advantage while meeting customer demands for timely delivery and quality services and products. Such collaboration is based on shared goals, open communication, and information sharing among chain participants, all working towards value creation and competitive advantage [20]. Therefore, the associations are hypothesized as follows:

Hypothesis 5: Value chain management positively influences design process management.

3. Methodology

3.1 Value Chain Management

The population for this research comprised accounting executives of micro, small, and medium-sized enterprises (MSMEs) in Thailand, registered with the Office of Small and Medium Enterprise Promotion, totaling 776,977 firms. Questionnaires were distributed directly to 1,920 MSMEs in Thailand selected through a simple random sampling procedure. Out of these, 400 completed questionnaires were received, resulting in an effective response rate of approximately 21.89%. This response rate was deemed suitable for a mail survey, as it exceeded the threshold of 20% recommended by Wu, Luo [6]

3.2 Variable Measurement

The research utilized a rating-scale questionnaire, employing weighing criteria categorized into 5 Likert scales, as a tool for component analysis. The quality of the tool was assessed through various measures: Index of Item Objective Congruence (IOC) ranged from 0.60 to 1.00. Corrected Item–Total Correlation, analyzed individually for discrimination value, ranged from 0.51 to 0.80. Content validity analysis yielded a Cronbach's Alpha Coefficient of 0.87. These results indicate a high level of reliability and validity for the questionnaire utilized in the research.

3.3 Statistical Techniques

Descriptive statistics were employed using SPSS, while multivariate statistical analysis was conducted using AMOS for data analysis. The data-model fit was evaluated using the following criteria: Chi-square Probability Level: Greater than 0.05. Relative Chi-square: Less than 2.00. Goodness of Fit Index: Greater than 0.90. Root Mean Square Error of Approximation: Less than 0.08 (Arbuckle, 2006). These criteria served as benchmarks to assess the adequacy of the model fit to the data.

4. Results

Table 1 presents factors in the guidelines for target cost management, showing high importance rated at 4.34. When considering each aspect of target cost management, the importance is evident across every factor, with customer orientation ranking highest at 4.43, followed by design process management at 4.39, product life cycle cost management at 4.36, value chain management at 4.33, target price strategy

at 4.31, and teamwork development at 4.24, respectively.

Table 1. Mean and standard deviation for Micro, Small, and Medium-Sized Enterprises

Guidelines for Micro, Small, and Medium-Sized Enterprises	\bar{X}	S.D.
Overall	4.34	0.41
1. Target Price Strategy (TPS)	4.31	0.51
2. Teamwork Development (TDE)	4.24	0.53
3. Customer Orientation (COR)	4.43	0.46
4. Product Life Cycle Cost Management (PLC)	4.36	0.50
5. Value Chain Management (VCM)	4.33	0.54
6. Design Process Management (DPM)	4.39	0.49

The evaluation of SEM of the guidelines for target cost management showed that the Chi-square probability (CMIN-p) level was at 0.000, relative Chi-square (CMIN/DF) at 1.755, goodness of fit index (GFI) at 0.843, and root mean square error of approximation (RMSEA) at 0.044 which still could not pass the criteria of the model as criteria shown in Table 2.

Table 2. Criteria for assessing the empirical of the model

Evaluating the Data-Model Fit	Criteria	Results
CMIN-p	Value > 0.05	0.134
CMIN/DF	Value < 2	1.133
GFI	Value > 0.90	0.961
RMSEA	Value < 0.08	0.018

The researcher adjusted the model based on modification indices as recommended by Arbuckle (2006), aligning the results with academic theory. Inappropriate observed variables were systematically excluded, and the model was evaluated iteratively until meeting basic assumptions. Eventually, the model was found to have: Chi-square probability (CMIN-p) of 0.134, indicating statistical insignificance as it exceeded 0.05. Relative chi-squared (CMIN/DF) of 1.133, falling below 2. Goodness of fit index (GFI) of 0.961, surpassing the

threshold of 0.90. Root mean square error of approximation (RMSEA) of 0.018, lower than 0.08. All these statistical results met the evaluation criteria, indicating a perfect fit of the structural equation model for the guidelines of target cost management to the empirical data, as depicted in Figure 1 and Table 3.

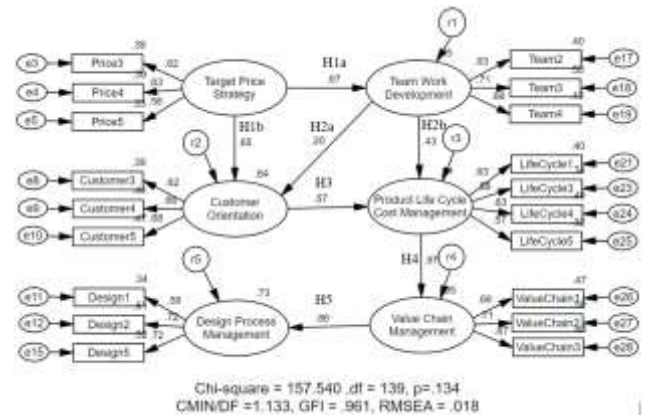


Figure 1. The structural equation model

In Figure 1, the structural equation model, after adjustment, comprises six latent variables: One exogenous latent variable: target price strategy. Five endogenous latent variables: teamwork development, customer orientation, product life cycle cost management, value chain management, and design process management.

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Table 3. Results of structural equation modelling after adjusted and hypotheses testing.

Hypotheses	Relationships	Standardized Regression Weights	Results
H1a	TPS → TWD	0.67**	Supported
H1b	TPS → COR	0.65**	Supported
H2a	TDE → COR	0.20*	Supported
H2b	TDE → PLC	0.43**	Supported
H3	COR → PLC	0.53**	Supported
H4	PLC → VCM	0.97	Supported
H5	VCM → DPM	0.86	Supported

* $p < 0.05$, ** $p < 0.01$

The target price strategy has a direct and significant influence on teamwork development ($\beta = 0.67$, $p < 0.01$) and customer orientation ($\beta = 0.65$, $p < 0.01$). This strategy involves assessing market prices and aligning them with the firm's profit margin to determine the maximum allowable cost for a new product. Subsequently, the design team collaborates to develop a product within this cost constraint. This approach fosters teamwork within the organization, ensuring that all team members work collectively to achieve cost targets. By employing this method, companies can ensure profitability across their product line while avoiding low-profitability products. Thus, Hypotheses 1a and 1b are supported, indicating that the target price strategy is instrumental in addressing customer requirements and promoting teamwork within the organization (Celayir, 2020).

Secondly, teamwork development has a direct and statistically significant effect on customer orientation ($\beta = 0.20$, $p < 0.05$) and product life cycle cost management ($\beta = 0.43$, $p < 0.01$). Previous studies, such as Huh et al. (2008), have highlighted the importance of teamwork orientation in successfully implementing Target Cost Management (TCM). In Japanese businesses, cross-functional management fosters collaboration among members from diverse backgrounds to devise unique strategies, enabling firms to achieve target costs while maintaining quality and functionality (Baharudin & Jusoh, 2020). Quality teams, endorsed by management, convene regularly to discuss issues related to quality and production, contributing to effective problem-solving (Al-Khateeb et al., 2016). Therefore, Hypotheses 2a and 2b are supported.

Thirdly, customer orientation directly influences product life cycle cost management ($\beta = 0.57$, $p < 0.01$). Customer orientation entails understanding target customers' preferences to continuously deliver superior value in a highly competitive market. Given customers' tendency to switch brands easily, firms must align their products with customer expectations and market demands to remain adaptable and competitive (Baharudin & Jusoh, 2020). TCM incorporates customer requirements, including cost, quality, and timely delivery, into product features, guiding cost decisions based on market analysis (Swenson et al., 2003). Hence, Hypothesis 3 is supported.

Fourthly, product life cycle cost management significantly influences value chain management ($\beta = 0.97$, $p < 0.01$). This management technique

involves controlling costs throughout a product's life cycle, from research and development to after-sales services (Blocher, 2010). Identifying costs that impact product life cycle cost management is crucial for effective decision-making (Cheung et al., 2007). By considering both purchase and ownership costs, firms can determine whether profits from a product will cover development costs (Contuk, 2018). Thus, Hypothesis 4 is supported.

Finally, value chain management directly affects design process management ($\beta = 0.86$, $p < 0.01$). Integrated value chain management optimizes information, relationships, and material flow to enhance efficiency and reduce costs (Surowiec, 2013). By integrating procurement, logistics, operations, and marketing functions, firms ensure smooth information and product flow from origin to end-user, achieving competitive advantage and meeting customer requirements (Surowiec, 2013). Therefore, Hypothesis 5 is supported.

5. Conclusion

In the accounting aspect, TCM that is one of valuable strategic tools improves firms to determine best price strategy for challenging the volatile environments and markets because it is a cost-control tool during product and process design for firms' new product introductions. Consequently, this research purposed guidelines for target cost management. In this research, 400 micro, small and medium-sized enterprises in Thailand were the samples of the study. The results indicated that key principles of TCM include target price strategy, teamwork development, customer orientation, product life cycle cost management, value chain management and design process management. Firms should offer right products at right prices and manage their costs to make profits and survive in today's competitive market. TCM is one of the important approaches developed to achieve this goal. TCM practices guarantee the quality and reliability standards desired by the customer from a product's design phase onwards, while helping enterprises reach the profit margin they prefer. Thus, firms need to implement TCM potentially to receive best business outcomes. To potentially expand and increase the existing research of TCM, the re-conceptualization of TCM, the data collection from other populations and countries and the uses of other valid statistical methods should be investigated for further study. Likewise, executives must pay attention to utilize and manage TCM well to achieve superior best business outcomes

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