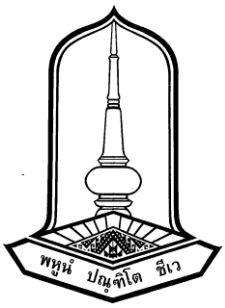

STRATEGIC TARGET COSTING EFFECTIVENESS AND GOAL ACHIEVEMENT: EMPIRICAL EVIDENCE FROM EXPORTING GEM AND JEWELRY BUSINESSES IN THAILAND

BY

PITACHAYA KANEKO

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Accounting at Mahasarakham University

October 2013

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The examining committee has unanimously approved this dissertation, submitted by Ms. Pitachaya Kaneko, as a partial fulfillment of the requirements for the Doctor of Philosophy degree in Accounting at Mahasarakham University.

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ABSTRACT

This research attempts to integrate the influences of strategic target costing effectiveness and goal achievement in a new model under the global competitive business environment and competitive advantage approach. The main objectives of the research is to investigate both the direct and indirect relationships between six dimensions of strategic target costing effectiveness (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness), and goal achievement compared with four mediator variables (profit planning proficiency, customer profit analysis capability, asset usefulness, and value enhancement). Additionally, it also examines the role of a collaborative climate as a moderator variable on the relationship among six dimensions of strategic target costing, and their consequence variables of exporting gem and jewelry businesses in Thailand. The underlying resource-based theory, the collaborative planning theory, and the contingency theory are fundamental to this research. A questionnaire was utilized for data collection, and 348 accounting executives of these firms are the sample of this study. The effective response rate was approximately 37.30%. The Ordinary Least Squares (OLS) regression analysis is a method for testing the hypotheses.

The results indicate that six dimensions (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness) are suitable representatives of strategic target costing effectiveness, have strong positive impact on

goal achievement, profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement. Likewise, profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement have strong positive impact on goal achievement. All of the antecedent variables (market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence) have impact on six dimensions of strategic target costing effectiveness. Moreover, this research shows the evidence that collaboration suitably plays a role as an antecedent variable on goal achievement and also plays a role as a moderator variable. However, collaboration climate also has both positive and negative impact on the relationship between six dimensions of strategic target costing effectiveness and their consequence variables. The results imply that strategic target costing effectiveness is one of cost management tools which can help firms to increase their performance and achieve their target goal.

In summary, this research concentrates on new dimensions of strategic target costing effectiveness that provides a significant expansion on previous knowledge, and relevant strategic target costing effectiveness in managerial literature. It also gives direction and suggestions for the firms to identify and justify key components of strategic costing effectiveness that may help them to be successful in the long term. It is a tools for data collection from different groups, and both future research direction and limitation. This research reveals that competitive force and uncertainty environment situation, variables which focus on market orientation (e.g. competitive information richness, customer needs awareness, market culture orientation), and information technology (IT capability) are the most important reason for strategic target costing effectiveness and decision-making to achieve goal rather than cost reduction (cost accounting system quality) and new product development (product management flexibility). Firms will use their suitable strategies with concern market orientation and information technology to increase their performance and capabilities in order to reach the organizational goals and maintain competitive advantage. According to the results of moderating effects mostly are not significant and the negative effects are not as predicted. Future research needs to re-investigate constructs and also may apply new construct and new methods such as in-depth interviews and case studies.

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CHAPTER I

INTRODUCTION

Overview

The global competition in both local and international market increases with the evolution of innovation and information technology, including customer demand with suitable prices and superior quality products or services. The impact on the surrounding environment causes the company to change its operation management continuously. These changes influence the firms' behavior especial the cost management with new modern strategies, re-organizing with new suitable techniques or innovative technology, focusing on market orientation and culture, and combining more cost management systems in order to get useful information for decision-making and competing in quality, cost, and time of their products for the market aspects. This keen competition forces firms to deal with the dynamic and changing economy with appropriate strategies that lead to competitive advantage (Eisenhardt and Martin, 2000).

Companies still need to survive and sustain their business growth by review and revise their strategies, especially in terms of cost management system. The main objective of management is to enable people to be capable of their joint performance through common goals, common values, and the right structure. Additionally, cost management is also one of the means trying to improve competitive advantage for firms that have significant assets (Lapasinskaite, 2005), guides managerial actions, motivates behaviors, and supports and creates the cultural values essential to achieving an organization's strategic objectives (Chaikambang and Ussahawanitchakit, 2012; Zengin and Ada, 2010). However, the results of measuring cost performance (cost information) by comparing incurred costs to standards based on capabilities are no longer sufficient. In a global competitive business environment, organizations are rarely able to pass in current costs for environmental requirements onto customers in the form of a price premium (Horvath and Berlin, 2012). Thus, the costs of environmental requirements need to be integrated into the comprehensive cost management of the entire product.

Management is satisfied when the incurred costs are lower than the traditional standard costs management which is not appropriate for decision-making to reach its target goal.

Moreover, firms must set market-based standards for providing a true measure of competitiveness by using target costing which is a top-down cost that reflects the demands of the marketplace and the company's goals to achieve competitive advantage in competitive turbulence. It is set for specific products by subtracting a desired profit margin from a price estimated to be competitive in the marketplace. Target costing is a type of cost system, but different from the types of full costing, standard costing, direct costing or activity-based costing (ABC). It is a useful process for firms to create new product development for customer needs (both price and quality), and to apply to other strategies such as kaizen costing, activity-based costing (ABC), activity-based management (ABM), and supply chain management. It is, in fact, a method that focuses on the internal capabilities of an organization, since the target cost is set at a level that can be achieved with appropriate design engineering, is concerned with a more external market-base, and has much in common with design-to-cost and its acknowledgement.

Prior research (Ellram, 2006) explains the implementation of target costing as a strategy in the United States, Japanese firms, and other western firms which can explore how the target costing process is used in practice and compared with the popular theoretical model of target costing including the overlooked role of the purchasing function in successful target costing efforts. It is of great interest, in part, because of its potential to improve the cost and functionality outcomes of the new product development (NPD) process and supply relationship management. The determination of a direct target cost is based on the average selling price, while the determination of strategic target costing is based on total revenue. Thus, adherence to the demand of the marketplace in both cases and planning is a common characteristic of all target costs to support goal achievement.

In general, strategic target costing is a cost management technique used during the NPD process which focuses on a cost target, setting for a new product and the NPD team, and be motivated to attain that target before product launch (Everaert et al., 2006). However, it is limited to a new product. Thus, strategic target costing is one of modern cost management systems which help firms gaining their effective strategic management under the complexities of today's organizational environment by focusing

on the creativity of their operational strategies for maintaining the desired profitability in their operations (Chaikambang and Ussahawanitchakit, 2012), increasing productivity, relevant cost information, profits, and cost reduction to achieve goals and succeed in continuous performance improvement (Kaneko and Ussahawanitchakit, 2012). Moreover, the relevant cost information of innovation and technology (IT) affects business results through incoming and outgoing elements of the production process or provision of services (Ilic, Milicevic and Cvetkovic, 2010), because IT constitutes a large part of the firms' discretionary expenditures, and managers need to understand the likely impacts and mechanisms to justify and realize the value from their IT and related resource allocation processes.

Thus, firms need to enhance their ability to differentiate themselves from their competitors with the relevant cost information in all functional and strategic decisions, create new product development in order to create new value for their customers (Fu, 2007), and require increased revenues and decreased costs, although the business environment and the conditions under which a business can be undertaken have changed (Jinga et al., 2010). The level of strategic target costing effectiveness is concentrated by researchers as a key in order to increase firm performance and firm capabilities to achieve effectiveness of target costing (Ellram, 2006)

Strategic target costing effectiveness is needed and more appropriate for increasing or managing profit expectations as opposed to being used as a strategic methodology for costing (Thomson and Gurowka, 2005), an alternative strategic cost management, which is the one important key to provide cost information to support the achievement of the firm’s objectives and strategic goals (Ilic, Milicevic and Cvetkovic, 2010). This is because it is much more beneficial than measuring and reporting costs by using traditional cost information that follow accounting standard and is suitable in the competitive environment. It is also a philosophy, an attitude, and a set of techniques designed to create more value at lower costs. Strategic target costing effectiveness is referred to the success of target cost process implementation as one of the organization’s strategies that enables achieving a target product profit margin by launching new product development while realizing customer requirements, a strong relationship with suppliers, a cross-functional team based efficiency and performance effectiveness of resource utilization integration; and representatives from procurement,

marketing, manufacturing, process engineering, quality assurance, and research and development (R&D), (Ellram, 2002).

Based on the literature reviewed, there are few empirical studies on the dimensions of strategic target costing effectiveness by integrating theory to describe the complete phenomena. This research attempts to extend the literature by using the resource advantage theory (Hunt, 2012), the contingency theory, and the collaborative planning theory. The resource advantage theory explains firms' resources which include market culture orientation, heterogeneous firm resources, comparative advantages and disadvantages in resources. It also includes firms' ability to attempt and develop resources for competitive advantage capabilities and superior performance (Kanchanda and Ussawanitchakit, 2012).

Meanwhile, the collaborative planning theory is employed to explain a moderator variable and the impact on the relationship between strategic target costing effectiveness and its consequences, the relationship between mediator variables and goal achievement, and the relationship between strategic target costing and goal achievement. Following the resource advantage theory, this research attempts to study six parts of strategic target costing effectiveness, including cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness (Ellram, 2002; Grant, 2001; Hunt, 2012).

Likewise, the contingency theory suggests that the development of strategies that may arise from structure and resources to meet the needs of the environment which will result in increased performance as driven by the needs of a particular company due to the lack of resources, creating a single winner. Then, the company may be selected by another company that specializes in an alignment of appropriate environmental resources which are better for survival. Based on this theory, it can be anticipated that the industry itself will have a major impact on the ability of resources to achieve a competitive advantage that will help resolve any issues about finding which sources are involved in the company (Hunt, 2012). Thus, it applies to describe environmental competitive turbulence which is an antecedent of strategic target costing effectiveness and collaboration climate which is a moderator in this research. It generates a significant study in the literature on strategic target costing effectiveness.

Firstly, it expands the theoretical contributions to previous knowledge and literature of strategic target costing in six dimensions and combines marketing orientation from marketing literature and managerial accounting literature reviews. Secondly, it explains how the antecedents and consequences of strategic target cost effectiveness are offered by this research in different ways, and it tests the mentioned relationships by comparing the direct and indirect effects of strategic target costing effectiveness and goal achievement. Prior research (e.g. Ellram, 2006; Dekker and Smith, 2003), shows that target costing effectiveness has an impact on profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement. Thus, this research employs four variables as mediator variables on goal achievement.

Finally, strategic target costing is frequently identified as a link to firm strategy as a defining factor of cost management tools (Hibbets et al., 2003). The output from implementation reflects the effectiveness of strategies used in that business environment. However, the nature of the relationship between strategic target costing effectiveness and firm strategy as goal achievement has been less empirically investigated.

In this research, the analysis is based on the sample of exporting gem and jewelry businesses in Thailand because Thailand has been one of the world's highest classes of producers, importers and exporters of quality gem and jewelry for more than 50 years. These products are concerned with customer quality, especially product differentiation, by launching new product designs and suitable prices with the target cost which process focuses on a cost target (more value with lower price), considers the voice of the customer (Fu, 2007), involves concurrent engineering, utilizes cross-functional teams, and focuses on creating new products that are both desirable and affordable to the customer and profitable to the producing organization.

Additionally, it provides both theoretical and managerial contributions for theoretical contributions**.** It explains a new perspective in strategic target costing effectiveness dimensions which are investigated at the organizational level and focus on market perspective. Moreover, this research attempts to investigate the antecedents and consequences of strategic target costing effectiveness, including a moderator effect in the new model, and also attempts to capture and measure these constructs by using questionnaires for data collection. For managerial contributions, increasing in the level

of strategic target costing effectiveness improves profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement which leads to goal achievement as a strategic cost management tool.

Purpose of the Research

The main purpose of the research is to investigate the relationships among six dimensions of strategic target costing effectiveness and goal achievement. Therefore, the specific research purposes are as follows:

1. To investigate the relationships between the dimensions of strategic target costing effectiveness and goal achievement.

2. To investigate the relationships among the dimensions of strategic target costing effectiveness on profit planning proficiency, customer profitability analysis capability, asset usefulness and value enhancement.

3. To investigate the influential effects of profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement on goal achievement.

4. To investigate the influential effects of market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence on the dimensions of strategic target costing effectiveness.

5. To examine the impacts of collaboration climate on the relationship between the dimensions of strategic target costing effectiveness among profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement and goal achievement.

6. To examine the impacts of collaboration climate on the relationship among profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement.

Research Questions

The key research questions of this research are firstly, how do six dimensions of strategic target costing effectiveness have an impact on goal achievement? Therefore, the specific research questions are presented as follows:

1. How does each dimension of strategic target costing effectiveness affect goal achievement?

2. How does each dimension of strategic target costing effectiveness affect profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement?

3. How do profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement affect goal achievement?

4. How do market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence affect the dimensions of strategic target costing effectiveness?

5. How does the collaboration climate affect the relationship among the dimensions of strategic target costing effectiveness and profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement?

6. How does the collaboration climate affect the relationship among the profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement and goal achievement?

Scope of the Research

This context draws a base from the resource advantage theory, the collaborative planning theory, and the contingency theory, and proposes theory interaction to explain the relationships of each variable that concentrate on examination, and to answer the research questions and objectives. The resource advantage theory explains that firms with more resources and abilities in operation management, they will have more competencies to develop new products and services, new resources for

competitive advantage capabilities and superior performance (Kanchanda and Ussawanitchakit, 2012). This theory explains the relationship among six dimensions of strategic target costing effectiveness (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness) and their consequence variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement).

The contingency theory explains the influences of internal and external constraints in organizations. The effectiveness of a decision procedure depends upon a number of aspects of the situation or constraints: the importance of the decision quality and acceptance; the amount of relevant information possessed by the leader and subordinates; the likelihood that subordinates will accept an autocratic decision or cooperate in trying to make a good decision if allowed to participate; the amount of disagreement among subordinates with respect to their preferred alternatives (Thipsri and Ussahawanitchakit, 2009). Thus, this theory explains that the influences of internal and external constraints as antecedent variables (market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence) have impact the decision making of the level of strategic target costing effectiveness and the level of collaboration climate.

Meanwhile, the collaborative planning theory is employed to explain a moderator variable and the impact on the relationship between strategic target costing effectiveness and its consequences, the relationship between mediator variables and goal achievement, and the relationship between strategic target costing and goal achievement

Moreover, it focuses on the effects of strategic target costing effectiveness on goal achievement in the context of the exporting gem and jewelry businesses in Thailand. Thailand has been one of the world's highest classes of producers, importers and exporters of quality gem and jewelry for more than 50 years. These products are concerned with customer quality, especially product differentiation, by launching new product designs and suitable prices with the target cost which process focuses on a cost target (more value with lower price), considers the voice of the customer (Fu, 2007), involves concurrent engineering, utilizes cross-functional teams, and focuses on

creating new products that are both desirable and affordable to the customer and profitable to the producing organization. The data collection employs questionnaires survey as the main research instrument. The accounting executives of exporting gem and jewelry businesses in Thailand are the key informant. The Ordinary Least Squares (OLS) regression analyses are processed to test all postulated hypotheses.

With respect to the research objectives and research questions, there are many variables in the research. Strategic target costing effectiveness is an independent variable. It refers to the successful process of implementation as one of the organizational strategies focus on a market perspective that enables achievement of a target product profit margin by creating new product development (Afonso et al., 2008). This process is undertaken by a cross-functional team based in conjunction with other value-adding processes such as early supplier involvement, value analysis, and value engineering (Ellram, 2002). It includes the all the successful resource utilization integration and representative teams from a variety of agencies (procurement, marketing, manufacturing, process engineering, quality assurance, and research and development). It presents a new perspective in strategic target costing effectiveness which consists of six dimensions consisting of cost data mining effectiveness, product flexibility management, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness.

According to the literature, the consequences of strategic target costing effectiveness are profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement. The dependent variable is goal achievement which is defined as a firm's strategy to direct its followers towards achieving organizational goals by linking the organization's mission, vision, and implement their plan and policy to succeed in their goals (Zaccaro and Klimoski, 2011) which is set and accepted by top leaders. It is a strategy which includes challenging statements and ideas that can lead to effective implementation in all functions (Hunt and Madhavaram, 2006), and influences the firm's competencies to achieve their target goal in the marketplace (Koste and Malhotra, 2000), and leads the followers towards achieving the goals (Zaccaro and Klimoski, 2011).

Additionally, it also investigates the antecedents of strategic target costing effectiveness, and the various antecedent factors consisting of market culture orientation,

inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence. To complete the relationship, a moderator influences the relationships of the conceptualization model, based on the literature review, named "collaboration climate."

In the conceptual model (see in chapter 2), it hypothesizes to be positively associated with consequences and the moderator variable. Within the relationship in the conceptual model, *goal achievement* is the dependent variable of the research. Firm age and firm size are two constructs of control variables as dummy variables which were used in this research.

Organization of the Dissertation

This research is structured in five chapters. Chapter one provides an overview of the research, purpose of the research, research questions, scope of the research, and organization of the research. Chapter two reviews the relevant literature on strategic target costing effectiveness, explains the theoretical framework to describe the conceptual model, and develops the related hypotheses for testing. Next, chapter three explains the empirical examination of the research methods, including the population selection and data collection procedure, the variable measurements of each construct, the instrumental verification, the statistics and equations to test the hypotheses, and the table of definitions and operational variables of the constructs. Then, chapter four demonstrates the empirical results and discussion. Finally, chapter five details the conclusion, theoretical and practical contributions, limitations, and suggestions for future research directions.

CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The definition of strategy has evolved over time. During the 1980s, the principal developments in strategy analysis focused upon the link between strategy and the external environment. Prior research (Grant, 2001; Eisenhardt and Martin, 2000; Tuntrabundit and Ussahawanitchakit, 2010) provides one of the earliest and often cited definitions as "the determination of the basic long-term goals and objectives of an enterprise, the adoption of a course of action and the allocation of resources necessary for carrying out these goals, has internal characteristics to emphasize industry structure and competitive position, and back to the firm's internal resources by match an organization makes between its internal resources and skill, the opportunities and risks created by its external environment. Additionally, strategy has also been viewed from a perspective or descriptive frame of reference, in which the process of strategy formulation may be deliberate, rational, and conscious named (Intended Strategy), or implicit, where strategy evolves incrementally and unconsciously named (Emergent Strategy), (Teece, 2007; Gordon, 2009).

Strategic target costing has frequently been identified as a link to firm strategy as a defining factor of cost management tools (Hibbets et al., 2003). The output from implementation reflects the effectiveness of strategies used in that business environment. The effectiveness of implement target costing as a strategy is a special topic for increasing firm performance and reach target goal. However, prior research, the nature of the relationship between strategic target costing effectiveness and firm strategy as strategic goal achievement has not been empirically investigated.

The previous chapter describes the overview situation of strategic target costing effectiveness and goal achievement with research objectives, research questions and scope of the research. Therefore, this chapter emphasizes the constructs of a conceptual model and a review of previous research and relevant literature. The core concept of this research is the strategic target costing effectiveness that is an alternative choice of strategic cost management and its relationship identified by the resource advantage theory, the contingency theory, and the collaborative planning theory. The

first section explains the theory support, the conceptual model and the definition of all constructs. The second describes the relevant previous literature, and the last section develops the hypotheses from the literature.

Theoretical Foundation

The literature review shows that theories help explain why some firms adopt the strategic target costing effectiveness concept to succeed in goal achievement and is intended to provide an understanding of the founding fields of the proposed conceptual framework. Following chapter one, the core construct of the conceptual model in this research is strategic target costing effectiveness which is designed as six key components including cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness. It provides empirical evidence regarding among six dimensions of strategic target costing effectiveness and investigates the direct relationship between the dimensions of strategic target costing effectiveness and goal achievement, and the relationships between the antecedents and consequences of strategic target costing effectiveness.

This chapter is organized into three major sections. The first section introduces the theory that backs up the conceptual model in this research. The second describes the literature review of all constructs of the conceptual framework and the definitions and previous studies on the subject of strategic target costing effectiveness in the context of exporting gem and jewelry businesses in Thailand. The final section presents the conceptual model and details the development of the hypotheses.

The Resource Advantage Theory

The Resource-Advantage (R-A) theory is a general theory of competition that describes the process of competition which contrasts with the neoclassical theory – including traditional industrial organizational economic views. It has been developed since Hunt and Morgan (1995), and is interdisciplinary in the sense that it has been developed in the literatures of several different disciplines including marketing, management, economics, economic sociology, law, ethics, supply chain management, and general business (Hunt, 2012). The resource-advantage theory is a combination of

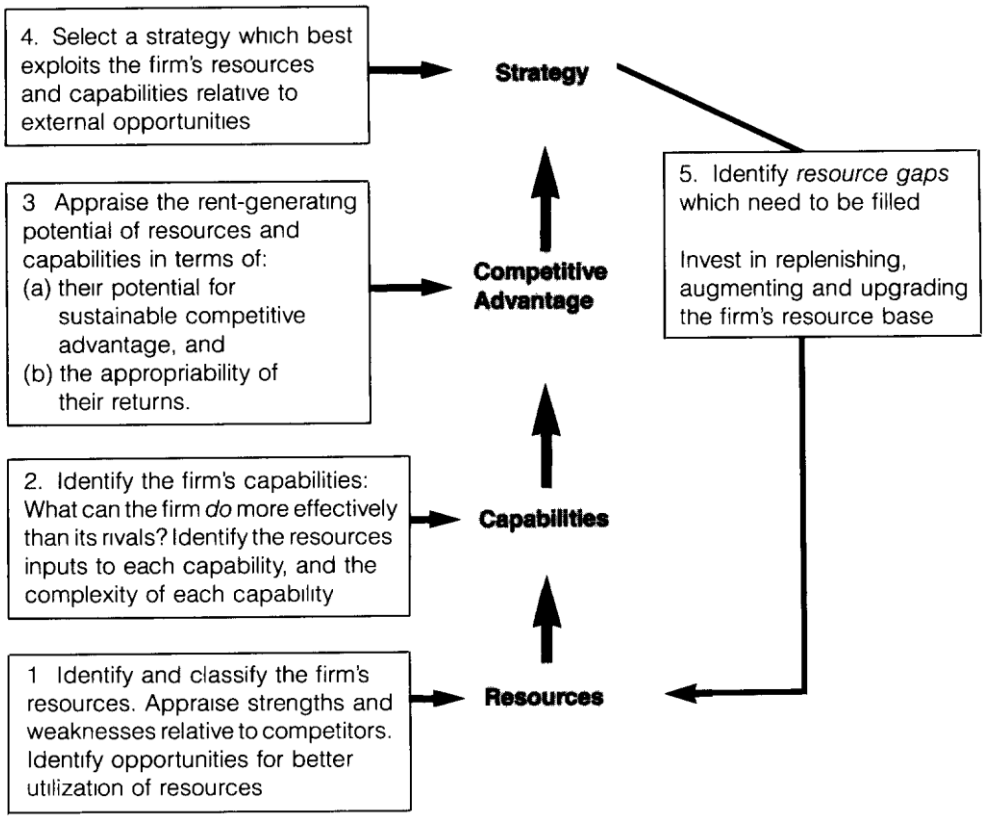
two theories which are 1) the heterogeneous-demand theory or comparative advantage theory of competition focus on market orientation and strategy, explanation of the greater abundance in market-based economies on the basis that rewards, time; and is efficient and effective by expanding the kinds of resources to include such intangible ones as organizational culture, knowledge, and competencies, and 2) the resource based view theory of the firm (Hunt and Madhavaram, 2006a). In the resource based view focus, the presence of competitive advantage is normally inferred from sustained above-average periods (Reed and DeFillippi, 1990) in which strategists and scholars must look for the source of sustainable competitive advantage.

The key of the resource based view approach to strategy formulation is to understand the relationship between resources, capabilities, competitive advantage, and profitability, and understand the mechanisms through which competitive advantage can be sustained over time. The organizing framework in Figure 1 shows the outline of a five-stage procedure for strategy formulation: 1) analyzing the firm's resource-bases; 2) appraising the firm's capabilities; 3) analyzing the profit-earning potential of firm's resources and capabilities; 4) selecting a strategy; and 5) extending and upgrading the firm's pool of resources and capabilities.

The resource advantage theory consists of the value of 1) market segments; 2) heterogeneous firm resources; 3) comparative advantages and disadvantages in resources; and 4) marketplace positions of competitive advantage or disadvantage (Hunt and Madhavaram, 2006b). A schematic of the resource-advantage theory of competition is shown in Figure 2 and the competitive position matrix proposing the correlation between relative resource-produced and relative resource cost is shown in Figure 3.

Figure 2 provides schematic depictions of R-A theory's key constructs, which is an evolutionary, disequilibrium-provoking, process theory of competition, in which innovation and organizational learning are endogenous, firms and consumers have imperfect information, and in which entrepreneurship, institutions, and public policy affect economic performance. The entities can serve as the units of selection in an evolutionary process, must be relatively durable, can exist through long periods of time and heritable, and can be transmitted to successors. For R-A theory, both firms and resources are proposed as the heritable, durable entities of selection, and competition for

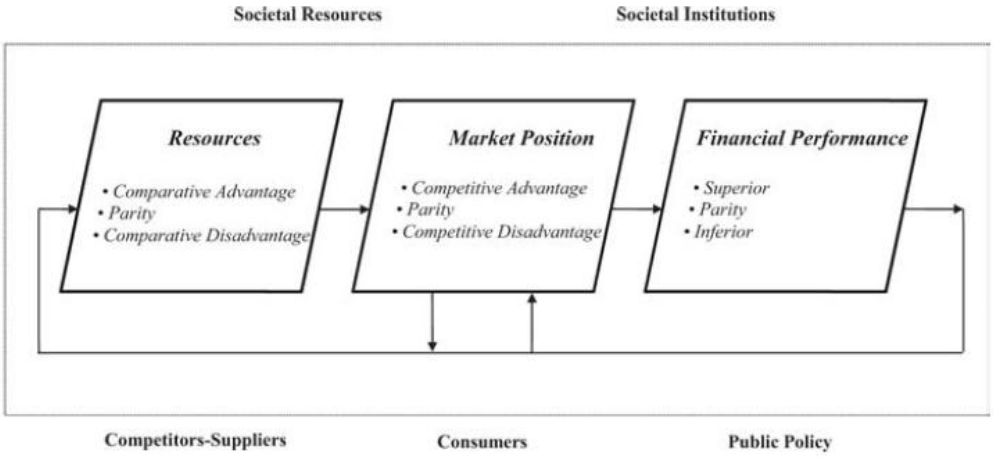
comparative advantages in resources which constitutes the evolutionary selection process (Hunt, 2012).



Source: Grant. (1991: 115)

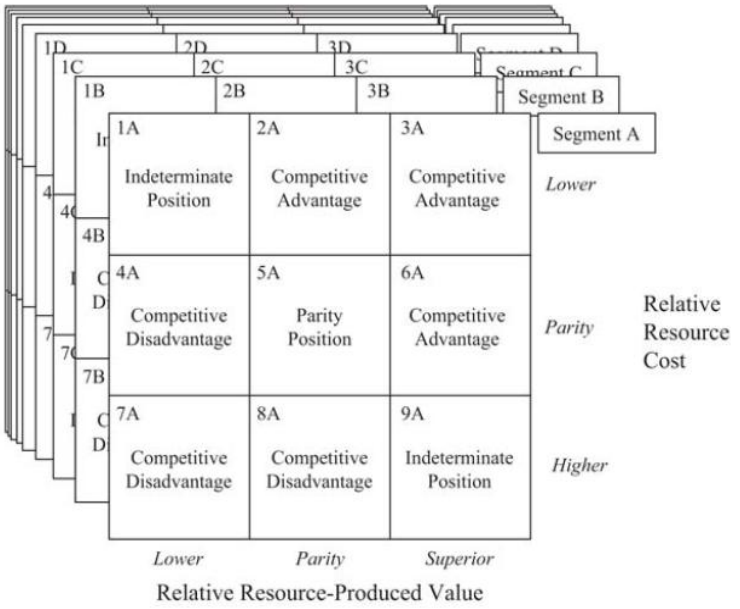
Figure 1 Five-Stage Procedure for Strategy Formulation: A Practical Framework

In the diagram in Figures 2 and 3, the R-A theory stresses the importance of market segments, heterogeneous firm resources, comparative advantages/disadvantages in resources, and marketplace positions of competitive advantage/disadvantage. Market segments are defined as “intra-industry groups of consumers whose tastes and preferences with regard to an industry’s output are relatively homogeneous.” Resources are defined as “the tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segments.” Thus, resources can be categorized as group of financial (e.g. cash resources, access to financial markets);



Source: Hunt (2012: 10)

Figure 2 A Schematic of the Resource-Advantage Theory of Competition



Source: Hunt (2012: 11)

Figure 3 Competitive Position Matrix

physical (e.g. plant, equipment); human resource (e.g. skills and knowledge of individual employees); legal (e.g. trademarks, licenses); organizational (e.g. competences, controls, policies, culture); informational (e.g. knowledge from

consumers and competitive intelligence); and relational (e.g. relationships with suppliers and customers).

In Figure 3, the marketplace position of competitive advantage is identified as Cell 3A, for example, in the segment. A result from the firm, relative to its competitors, has a resource assortment that enables it to produce an offering that (a) is perceived to be of superior value by consumers in that segment A, and (b) is produced at lower costs than rivals. Specifically, as shown in Figures 2 and 3, when firms have a comparative advantage in resources, they will occupy marketplace positions of competitive advantage for some market segments.

The R-A theory places great emphasis on innovation, both proactive and reactive. The former is innovation by firms that, although motivated by the expectation of superior financial performance, is not prompted by specific competitive pressure – it is genuinely entrepreneurial in the classic sense of the entrepreneur. Additionally, marketplace positions of competitive advantage then result in superior financial performance and can achieve their target goals and success for an organization. However, success for an organization will depend on the degree to which the corporate culture fosters and maximizes organizational capability and the success for this will obviously depend on the capability of both the management and the employees (Hunt, 2012).

Two basic strategies, survival and advancement of knowledge, have different parts to play in a role unique to the organization, and to provide a competitive advantage. Survival strategies rely on the effective utilization of existing assets and resources which include both short-run and long-run, the existing level of knowledge, its attempts to gain success in the organization's known business environment, and advancement strategies that are directed towards securing future profitability (Miller and Ross, 2003). A short-run strategy of survival focuses on current profitability at a level which is higher than the average for the industry and by spelling out the near term results to be achieved, while a long run strategy of survival will aim to position the organization for future profitability and strength in a market (e.g., building future strengths, making strategic moves to strengthen weaknesses) which is likely to be considerably different from the existing market environment. Thus, a creative approach will need to be adopted including a survival thinking mode and a concentration on the

needs, immediate returns to stakeholders, and the development and the implementation of strategies. Similarly, the fundamental basis of the long-run success of a firm is the achievement and maintenance of a sustainable competitive advantage, which is considered to be the fundamental issue in a marketing strategy (Ray, Barney and Muhanna, 2004), a value-creating strategy, and will be sustained when other firms are unable to duplicate the benefits of these strategies.

This research applies the resource advantage theory in the context of strategies used to achieve a competitive advantage and achieve organizational goals which explain the relationship in the conceptual model that is applied to Grant's model shown in Figure 1 (Grant, 1991). Especially, in the context of a competitive advantage construct following the resource advantage theory and literature review of resources (e.g. Grant, 2001; Ellram, 2002; Hunt, 2012), it is used to explain the dimensions of strategic target costing effectiveness, consequence variables named profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, the antecedent variables named market culture orientation, cost management system excellence, IT capability, and the dependent variable (goal achievement).

Contingency Theory

The contingency theory hypothesizes that organizational structure is a function of context, a context that is simultaneously determined by both external and internal environments including organizational factors (Anderson and Lenen, 1999; Lawrence and Lorsch's, 1967). This theory is a classic in research organizations, which has developed gradually since 1950's. It is popular in management research, and is applied in the organizational structure to a function of context which is determined by an external and internal environment. Organizational structure refers to strategies that can increase the efficiency of the organization which depends on the variety context of internal and external management of environment factors within the organizational culture, technology, and size of the company, and with the most common internal factors that have been examined in relation to management accounting (Chenhall and Morris, 1995; Chenhall, 2003). External factors are the environmental factors such as competition and environmental uncertainty, whereas internal factors are the

organizational factors such as resources, technology, and culture (Chaikambang and Ussahawanitchakit, 2012).

In prior contingency-based management accounting research, the following aspects of external environment are investigated: uncertainty (Lawrence and Lorsch 1967), turbulence, hostility, diversity, complexity, and competitive situations (Khandwalla, 1977). Similarly, the contingency theory is a classic concept that has evolved for more than 60 years in accounting research. This theory is usually used to explain the theoretical framework and business environment. The contingency theory declares that a firm's strategy, structure, and managerial process must fit together so that the organization performs well (Dubois, 2003). It also suggests that performance improvement is a function of alignment between cost-system functionality and a firm's operating environment (Chenhall, 2003).

The basic assumption of this theory is that it fits between a strategy and its context, such as its external environment or an organization's structure that has a significant implication for performance (Hunt, 2012). Organizations usually adjust their aims and shape in order to suit themselves to the market and other environmental characteristics (Korbangyang and Ussahawanitchakit, 2010). Market environment is also an influential factor that determines the suitability of management practices for organizations. Based on the contingency theory, the literature indicates that factors such as technology, organizational vision, and a competitive environment affect the design and functioning of the firms. Firms will adapt the contingency approach to achieve a fit with the changing competitive environment (Lewin and Volberda, 1999). Additionally, it is very useful for identifying the importance of environmental pressure in organizational life and in balancing out a more subjective approach towards organizational adaptation.

The contingency theory is the theory used to support antecedent variables and moderating variables. In this paper, it is also adopted for the conceptual model and is suitable for explaining strategic target costing effectiveness and the antecedent of strategic target costing effectiveness (competitive turbulence). In the environment of competitive turbulence, firms will use suitable resources and suitable strategies in order to achieve target goals. Moreover, the contingency theory can explain collaboration

climate (a moderator variable) as an internal variable focused on teamwork members which play a role in a firm's strategy to help them achieve their target goals.

Collaborative Planning Theory

Collaborative planning, developed by the planning theory, is fundamentally all-inclusive (Hayes, 2002) and has a relationship with trust. The grand aim of collaborative planning is to involve all stakeholders in the processes of planning for achieving consensual policy outcomes after a debate under the conditions of communicative action (Kumar and Shafabi, 2011). Additionally, collaborative planning which is defined as an interactive and interpretative process that comes from planning knowledge and the interaction among the stakeholders is essential as planning in this theory (Fullerton and Watters, 2004). Combined with the transaction cost theory of planning which offers an alternative account of planning in both the public and private sectors, this theory offers an explanation of why planning is undertaken in spite of the obvious limitations of plan rationality, and accounts for another relatively neglected, but critical aspect of planning: the coordinative and strategic functions of planning (Gordon, Loeb and Tseng, 2009).

Collaborative planning acknowledges that there are competing interests and, like mediation, collaborative planning acknowledges that these different interests must be engaged in a negotiation process to seek mutually acceptable outcomes. The differentiate of operation management between collaborative planning and more conventional participatory methods is that collaborative planning uses a higher level of collaboration by directly delegating control of the planning process to stakeholders who work together in face-to-face negotiations to reach a consensus agreement ideally in advance of disputes (Lange, Jackling and Gut, 2006)

All stakeholders' policy is to achieve formulation and implementation its goals. A new system of joining the structure together and creating networks of social exchange consists of: 1) key decision-makers for joint arrangements, strategic planning teams, strategic planning task forces, and community interests; 2) positively reciprocate efforts and protection aimed at preparing and implementing the joint structure plan; 3) full and frank information sharing; and 4) meeting of expectations from the joint structure plan (Kumar and Palvia, 2001).

This research uses the collaborative planning theory to explain a moderator variable (collaboration climate) as being strategic of firm's commitment to joint arrangements and has a positive impact on the relationship between strategic target costing effectiveness and its consequences, and the relationship between consequence variables and goal achievement.

Relevant Literature Review and Research Hypotheses Development

According to the theoretical framework, the probable relationship between several construct are visible. This research proposes a conceptual model for empirical investigation of the topic "Strategic Target Costing Effectiveness and Goal Achievement: Empirical Evidence from Exporting Gem and Jewelry Businesses in Thailand," which is adapted from the resource advantage theory, the contingency theory, and the collaborative planning theory.

Relevant literature is developed for the conceptual framework as shown in Figure 4 on the basis of remaining research. The framework includes one main construct, namely, strategic target costing effectiveness which is an independent variable consisting of six dimensions: cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness, while goal achievement is a dependent variable and plays a role as a strategy which firms need to meet competitive advantage to succeed in the organizational goal target. Consequence variables consist of profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement which play a role as firm competencies useful for competitve advantage and to succeed in the goal achievement.

Additionally, antecedent variables consist of internal environment factors (market culture orientation, inter-functional team quality, cost management system excellence, and IT capability), and external environment factors consisting of competitive turbulence, while collaboration climate plays a role as a moderator variable.

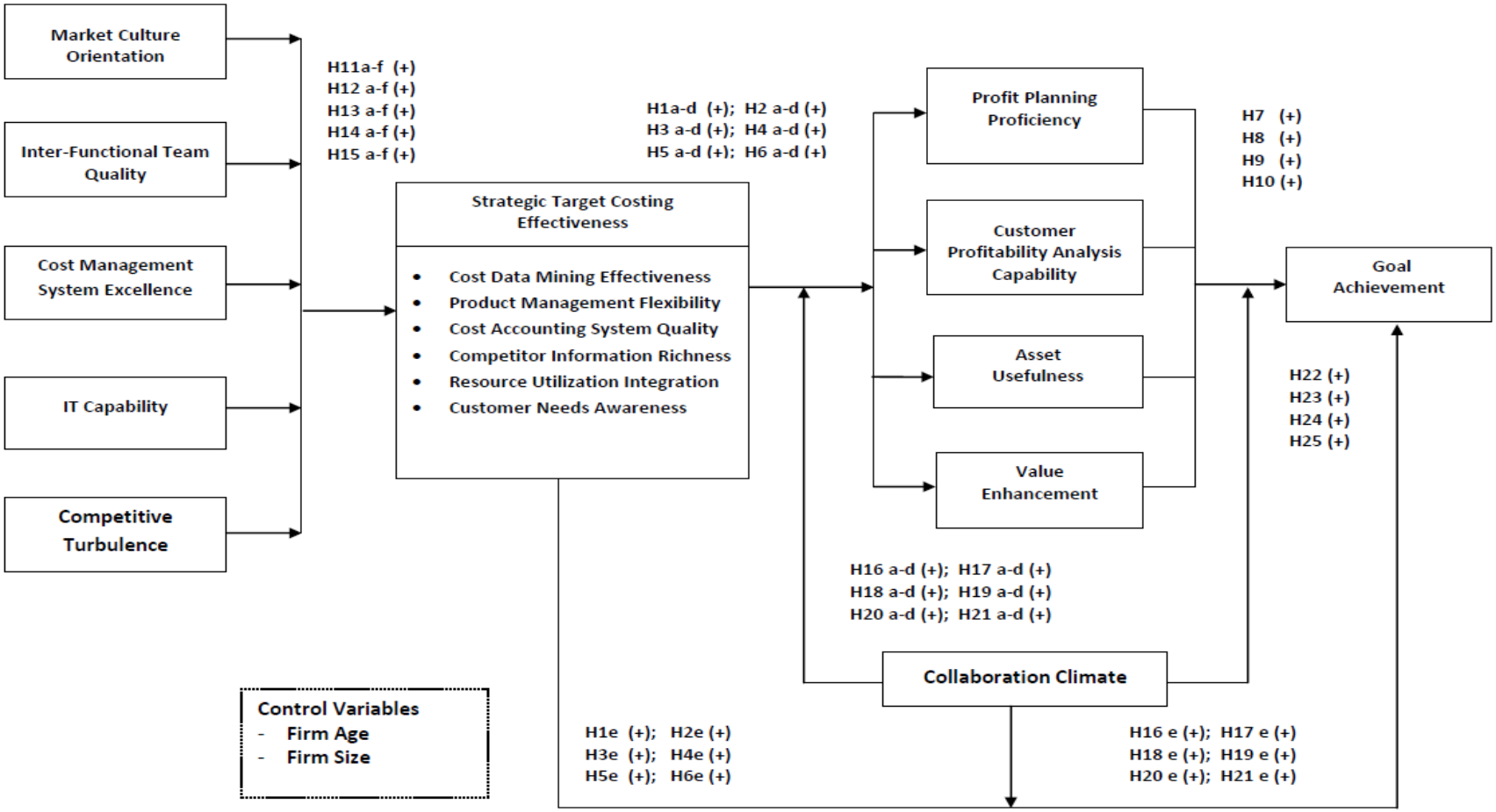


Figure 4 Conceptual Model of Strategic Target Costing Effectiveness and Goal Achievement: Empirical Evidence from Exporting Gem and Jewelry Businesses in Thailand

Strategic Target Costing Effectiveness

In a global competitive business environment, organizations are rarely able to pass in current costs for environmental requirements onto customers in the form of a price premium (Horvath and Berlin, 2012), and have to respond to the trends and changes in business with newer and better approaches to managing their businesses. Thus, the cost of environmental requirements needs to be integrated in a comprehensive cost management of the entire product while the cost and management control system (CMCS) as used in practice has lost relevance.

Cost management with traditional standard costing is not appropriate to decision-making in achieving target goals. The principal concern of the critics of competition impact and uncertainty environment was that these systems had failed to keep up with changes in the business environment (Ax, Greve, and Nilsson, 2008). The information resulted in frequent inaccurate and misleading. The modern cost system approaches are being initiated and implemented such as total quality management, activity-based costing, activity-based management, attribute costing, and target costing system. These approaches have been presented and have become the new topics of managerial accounting research, because these philosophies require firms to be responsive, agile, and flexible in profitably providing value-added products and services to customers at competitive prices.

The contribution of strategic cost management is the successful determination of strategic goals and has contributions to explain the phenomenon in related topics in which researchers are interested, in this area (Chaikambang and Ussahawanitchakit, 2012; Ilic, Milicevic and Cvetkovic, 2010). Target costing is one method of the strategic cost management approaches which support and focus on the product design stage that enables the achievement of a target product profit margin while realizing customer requirements and in which allowable product costs are calculated (Ellram, 2002).

This strategy has been touted as a process that can significantly enhance performance improvement of the new product development (NPD) process by considering the voice of customers, strong relationships with suppliers, concurrent engineering, and the efforts of using cross-functional teams such as: accounting, marketing, engineering, purchasing, QC, and operation management divisions. It is of

great interest in part because of its potential to improve the cost and functionality outcomes of the new product development process. The summary of the definitions and the characteristics of strategic target costing are shown in Table 1. Additionally, the target costing process was developed based on a review of the target costing literature (Ellram, 2006) as shown in Figure 5.

Table 1: Summary of Definitions and Characteristics of Strategic Target Costing

Author(s)	Definitions and Characteristics of Strategic Target Costing
Sakurai (1989)	Target costing can be defined as a cost management tool for reducing the overall cost of a product over its entire life cycle with the help of production , engineering, R&D, marketing and accounting departments.
Morgan (1993)	Target costing needs to be broken down into individual cost items so as to enhance the control activity based on one of the following three methods: 1); profit planning 2) engineering planning; 3) a combination of profit and engineering planning (Sakurai, 1990).
Koons (1994)	In general, target cost is a top-down cost that reflects the demands of the marketplace and the company's goals and is set for specific products by subtracting a desired profit margin from a price estimated to be competitive in the marketplace.
Yoshikawa, Innes and Mitchell (1994)	Target costing must be viewed as a broader concept that includes target costing as well as other techniques inspired in Japanese cost management practices such as Kaizen cost management and FCA.

Table 1: Summary of Definitions and Characteristics of Strategic Target Costing (Continued)

Author(s)	Definitions and Characteristics of Strategic Target Costing
Monden (1995)	Target costing is defined as a companywide profit management activity during the new product development stage that includes: 1) planning products that have customer-pleasing quality; 2) determining target costs (including target investment costs) for the new product to yield the target profit required over the medium to long term given the current market conditions; 3) devising ways to make the product design achieve target costs while also satisfying customer needs for quality and prompt delivery.
Cooper and Slagmulder (1997)	Target costing (TC) is a systematic process of planning new product offerings, establishing market sales prices and target profit margins for new products, and reducing the overall cost of new products over their lifecycles (while still meeting customer requirements), by examining all ideas for cost reduction in the product planning, research, and development process.
Shank and Fisher (1999)	The target cost is a financial goal for the full cost of a product, derived from estimates of the selling price and desired profit. The purpose of target costing is to identify the production cost for a proposed product such that the product, when sold, generates the desired profit margin. The focus of target costing is to reduce the cost of a product through changes in its design.
Cooper and Slagmulder (1999)	To document the “Japanese” approach to target costing, authors visit seven companies with natural and effective target costing systems and document their procedures in depth. Target costing to be effective, must be a highly disciplined process (market-driven costing; product-level target costing; component level TC).

Table 1: Summary of Definitions and Characteristics of Strategic Target Costing (Continued)

Author(s)	Definitions and Characteristics of Strategic Target Costing
Ellram (2002)	Target costing is a valuable tool and philosophy to support an organization's overall efforts to remain cost-competitive while meeting the customer's demands. Additionally, TC is not a stand-alone effort, but it is a process used most effectively with other value-adding processes such as early supplier involvement, value analysis, and value engineering. Target costing is a process whereby an organization determines the "estimated selling price" for its product or service, less the "desired profit," with the remainder equaling the "target cost."
Dekker and Smidt (2003)	Target costing is positioned as a cost management system, suggesting that cost reduction is an important objective. TA as a disciplining mechanism contributes to realizing these different goals by having product designers make explicit tradeoffs between them.
Hibbets, Albright and Funk (2003)	TC is identified as a link to firm strategy and as a defining factor of this cost management tool (e.g., Cooper and Slagmulder, 1997; Ansari and Bell, 1997) and intimately linked to an organization's competitive strategy. Strategy may moderate the relationship between competitive environment and the decision to adopt TC.
Zsidisin, Ellram and Ogden (2003)	TC focuses the purchasing firm on developing and producing only those items it can sell at a reasonable profit by simultaneously considering the features customers desire and the cost to provide those features. TC is a technique whereby the organization determines the price the market will bear and backs out desirable profits; the amount remaining is the cost for manufacturing and supplier purchases (Cooper and Slagmulder, 1999), and becomes the overall allowable cost for the product or service.

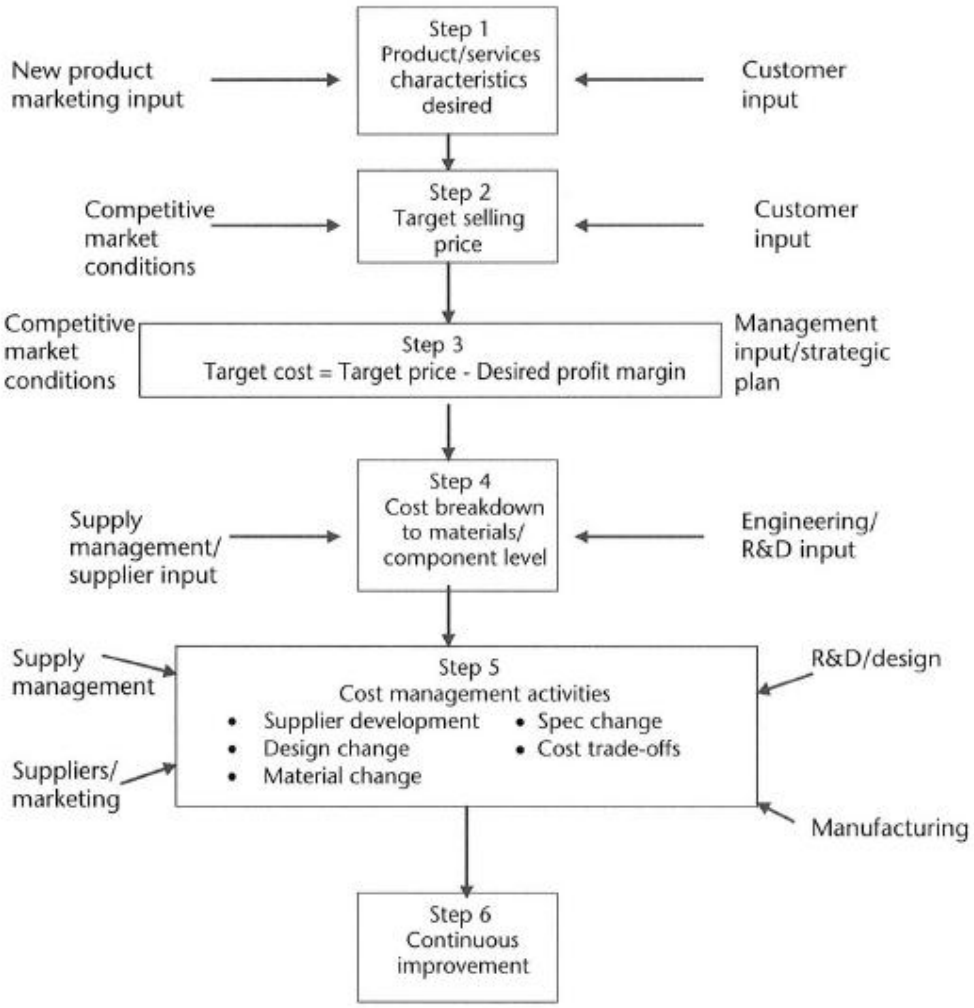
Table 1: Summary of Definitions and Characteristics of Strategic Target Costing (Continued)

Author(s)	Definitions and Characteristics of Strategic Target Costing
Ellram (2006)	Presented a brief review of the literature in target costing theory which explained the target costing process and definition. The overall target cost for a product or service is determined using the following formula: Target Cost = Estimated Selling Price – Desired Profit The target costing process is a very systematic approach for establishing and communicating cost objectives and performance metrics both within the organization and to external suppliers.
Everaert et.al. (2006)	TC is the process of determining the target cost for products early in the new product development (NPD) and of supporting the attainment of this target cost during this NPD process, by providing target costing information to motivate the NPD team to realize downstream cost management of new products in order to ensure product profitability when launched.
Gopalakrishnan, Samuels and Swenson (2007)	TC is more likely to be adopted successfully if it's fully integrated into a company's pre-existing product-development process, and offers a methodology to support the analysis. A company establishes a hard cost target for a new product and must achieve it before target costing supports the decision to move forward with the project.
Woods, Taylor and Fang (2012)	Target costing is described as a marketing oriented tool used for profit planning and cost management. Product target cost which is calculated as the expected sales price at the starting point, reflects the market orientation of the costing process (Hiromoto, 1988), while target profit for a product is based on the strategic plan for the business which forms the foundation for a corporate profit plan (Kato, 1993). The profit plans incorporate a return on capital measure because capital investment is viewed as integral to NPD.

Table 1: Summary of Definitions and Characteristics of Strategic Target Costing (Continued)

Author(s)	Definitions and Characteristics of Strategic Target Costing
Ax, Greve and Nilsson (2008)	Target costing is based on the idea that a product's quality and cost are largely determined during the design stage of the product lifecycle, and that little can be done to improve these elements once product design has been set. These elements require management to use systematic market and profit planning, and proactive cost management activities during the product-development phase.
Yazdifar and Askarany (2012)	Target costing is defined as a systematic process of managing product costs during the design stage of a new product (Kee, 2010; Filomena et al., 2009; Ax Greve and Nilsson, 2008; Ibusuki and Kaminski, 2007; Ewert and Ernst, 1999; Kato, 1993), establishing market sales prices and target profit margins, and reducing the overall cost of the products over their life cycles (while still meeting customer requirements) by examining all ideas for cost reduction in the product-planning R&D process (Ax, Greve and Nilsson, 2008; Cooper and Slagmulder, 1997).

Table 1 summarizes the definitions of target costing and its characteristics, including their process in which TC is a strategic cost management approach within the product design stage that enables achieving a targeted product profit margin while realizing customer requirements based on a price that customers are willing to pay and a target product profit margin. It is a useful tool which can apply to other tools to strategic cost management as a philosophy, which is an approach with a set of techniques to help firms succeed in the marketplace, create value cost effectiveness, and achieve goals (Kumar and Shafabi, 2011).



Source: Ellram (2006: 15)

Figure 5 Target Costing Process

Figure 5 shows the target costing process that is being used for a new product or service (Ellram, 2002). The target costing process begins with developing an understanding of unmet needs in the marketplace, and then determining what customers would pay to have their needs met, or, the "target price." Internal goals and pressures determine the profit margin desired. Calculating the allowable target cost is the next step, where:

Target cost allowed = estimated selling price - desired profit.

During the next step, the target cost is apportioned among the key cost elements, and further broken down into the materials or component level. Based on the component level, goals or targets involve undertaking various cost management activities to achieve the target component/materials prices. Once the target costs are achieved, the item goes into production, and continuous improvement measures are implemented. The activities that make up the target costing process cut across functional boundaries within the firm and organizational boundaries in the supply chain (Ellram, 2002).

The conclusion of the key literature review on strategic target costing adoption or implementation is as shown in Table 2. It indicates that although in recent years research themes about strategic target costing effectiveness have been expanded, most of those studies are empirical and conceptual papers.

In order to be successful, strategic target costing effectiveness in this research refers to the success of the target cost process implementation as one of the organization's strategies that enables achieving a target product profit margin by launching new product development while realizing customer requirements, a strong relationship with suppliers, a cross-functional team based efficiency and performance effectiveness of resource utilization integration, and representatives from procurement, marketing, manufacturing, process engineering, quality assurance, and research and develop (Ellram, 2000) to achieve organizational goal-setting.

According to relevant theories and literature reviews, six dimensions of strategic target costing effectiveness are derived and used to test the hypotheses. These dimensions consist of cost data mining effectiveness; product management flexibility; cost accounting system quality; competitor information richness; resource utilization integration; and customer needs awareness. The details of each component are provided in the following.

Table 2: Summary of Relative Literature Review on Strategic Target Costing

Authors	Title	Conclusion
Ellram (2000)	Purchasing and supply management's participation in the target costing process	This research describes and prescribes the role of purchasing and supply management, in the target process, and concludes with some managerial recommendations for achieving purchasing ideal role for the long run success for implementing target costing (e.g. reducing costs, improving cost monitoring, and increasing cost accountability).
Ellram (2002)	Supply management's involvement in the target costing process	Supply management plays a substantial role throughout the target cost process. Its contribution is particularly critical at the initial stages, when developing component level target costs, and when activities/modifications are occurring to achieve target costs. A cross-functional team approach, including suppliers are critical to the long-term success of target costing efforts.
Dekker and Smidt (2003)	A survey of the adoption and use of target costing in Dutch firms	It suggests that the adoption and use of costing practices that resemble the Japanese target costing concept were developed independently of the Japanese practice. Adoption is highest among assembling firms and is related to a competitive and unpredictable environment. Cost reduction is the main objective and benefit of these mainly performed in team structures.

Table 2: Summary of Relative Literature Review on Strategic Target Costing (Continued)

Authors	Title	Conclusion
Hibbets, Albright and Funk (2003)	The competitive environment and strategy of target costing implementers: Evidence from the field	This research investigates the relationship between competitive environment and strategy for target costing implementers (12 of U.S. and German firms) shows evidence reveals product differentiators are more likely to implement TC than firms pursuing other competitive strategies (i.e., cost leadership or confrontational strategies). This is consistent with the view that TC is a useful tool in the presence of increased global competition.
Zsidisin, Ellram and Ogden (2003)	The relationship between purchasing and supply management's perceived value and participation in strategic supplier cost management activities.	Purchasing and supply management (PSM) in RBV focus, is argue that the way PSM believes its perceived within the firm affects the extent to which PSM engages in total cost of ownership analysis, supplier cost structure analysis, and target costing.
Souissi and Ito (2004)	Integrating target costing and the balanced scorecard	TC has been used successfully for years by leading Japanese companies, principally to motivate design engineers to look for innovative ways to manage cost while not neglecting other crucial dimensions such as product quality and time-to-market.

Table 2: Summary of Relative Literature Review on Strategic Target Costing (Continued)

Authors	Title	Conclusion
Ellram (2006)	The implementation of target costing in the United States: Theory versus practice	It used case studies of 11 organizations actively engaged in the target costing process, comparing it with the popular theoretical model of TC. It helps shed light on to TC practices of U.S. and other Western firms, and highlights the often overlooked role of the purchasing function in successful TC efforts.
Everaert et.al. (2006)	Characteristics of target costing: theoretical and field study perspectives	It identifies eight characteristics of target costing: 1) the target sales price is set during product planning (in a market-oriented way); 2) the target profit margin is determined during product planning (based on the strategic profit plan); 3) TC is set before NPD really starts (based on either the subtraction or the addition method); 4) TC is subdivided into target cost for functions, subassemblies, cost items, designer or suppliers; 5) TC requires cross-functional co-operation; 6) detailed cost information is provided to support cost reduction; 7) the cost level of the future product (drifting cost) is compared with its target cost at different points during NPD; 8) Establishing the general rule that " TC can never be exceeded." Based on the early Japanese case description, these characteristics are related to the way a target is set and the results from case study confirm these characteristics.

Table 2: Summary of Relative Literature Review on Strategic Target Costing (Continued)

Authors	Title	Conclusion
Gopalakrishnan, Samuels and Swenson (2007)	Target costing at a consumer products company	This global manufacturer uses a TC approach to develop and introduce new products. It is considered throughout the product-development cycle. Companies manufacture and sell products that they can produce at or below a target cost and redesign and abandon products with costs that exceed the target cost.
Ibusuki and Kaminski (2007)	Product development process with focus on value engineering and target-costing: A case study in an automotive company	This research suggests a methodology for NPD process aiming at the correct systematic approach of value engineering (VE) and target-costing in cost management. VE and TC are complementary process which shows the target to be achieved to guarantee the long-term profitability plan of a company.
Afonso, Nunes and Braga (2008)	The influence of time-to-market and target costing in the new product development success	This research found that target costing and reduction of time-to-market together provide considerable advantages to users of new product development firm practices. Such companies can achieve reductions in NPD cycle time and cost without compromising quality and functionality.
Ax, Greve and Nilsson (2008)	The impact of competition and uncertainty on the adoption of target costing	The adoption of target costing positively correlates with the intensity of competition, but negative correlates with perceived environmental uncertainty which play a role of moderator effect of the adoption of target costing.

Table 2: Summary of Relative Literature Review on Strategic Target Costing (Continued)

Authors	Title	Conclusion
Yadav and Goel (2008)	Customer satisfaction driven quality improvement target planning for product development in automotive industry	This research presents a comprehensive framework (link between corporate decision making and engineering decision making by integrating best practices and structuring technical activities.) for target planning for customer satisfaction driven quality improvement efforts in the product development process.
Yilmax and Gokhan (2010)	Target costing as a strategic cost management tool for success of balance scorecard system	In the financial perspective of the balanced scorecard system, cost reduction is a strategic objective. It is essential that firm's cost management strategy should not only be a reaction to the market, but also a continual strategy. Target costing as a strategic cost management can be used as an effective tool in BSC's financial perspective for the objective of cost reduction.
Sarokolaee, Taghizadeh and Ebrati (2012)	The relationship between target costing and value-based pricing and presenting an aggregate model based on customers' expectations	This research, TC is considered as a multi-dimensional approach for designing the products to manage the price and reduce cost, and focus on the two approaches (customer orientation, and devising strategies and tactics) with an integrated model based on the expectations of the customer will be presented in which the quality and the cost expected by the customers its considered as the principal factors.

Table 2: Summary of Relative Literature Review on Strategic Target Costing (Continued)

Authors	Title	Conclusion
Woods, Taylor and Fang (2012)	Electronics: A case study of economic value added in target costing	They provide preliminary evidence that TC can be used to align both of the management accounting and value based management perspective, and when combined with other SMA techniques it can serve as "the bridge connecting strategy formulation with strategy execution and profit generation." (Ansari et al., 2007, p.512).
Yazdifar and Askarany (2012)	A comparative study of the adoption and implementation of target costing in the UK, Australia and New Zealand	TC is equally prevalent among manufacturing and service firms while in terms if the levels of implementation there is a significant difference between manufacturing and service firms. This study shows that there is growing interest in the examination of all cost-reducing strategies at the planning stage and adoption of value engineering to incorporate customer requirements rather than focusing on the adoption of cost-cutting strategies at the production stage.
Horvath and Berlin (2012)	Green target costing: Getting ready for the green challenge!	In a competitive business environment, firms are rarely able to pass incurred cost for environmental requirements onto customers in the form of price premium. From the perspective of product development, cost management is traditionally supported by target costing, which, against the backdrop of the green challenge, needs to be enhanced in an environment oriented way.

Strategic Target Costing Effectiveness and Its Consequences

This section investigates the effects of six key dimensions of strategic target costing effectiveness consisting of cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness, on its consequences which consist of profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement. These dimensions are firm competencies from implementation and decision making skills, which are key components of firm resources following the resource advantage theory (Hunt, 2012).

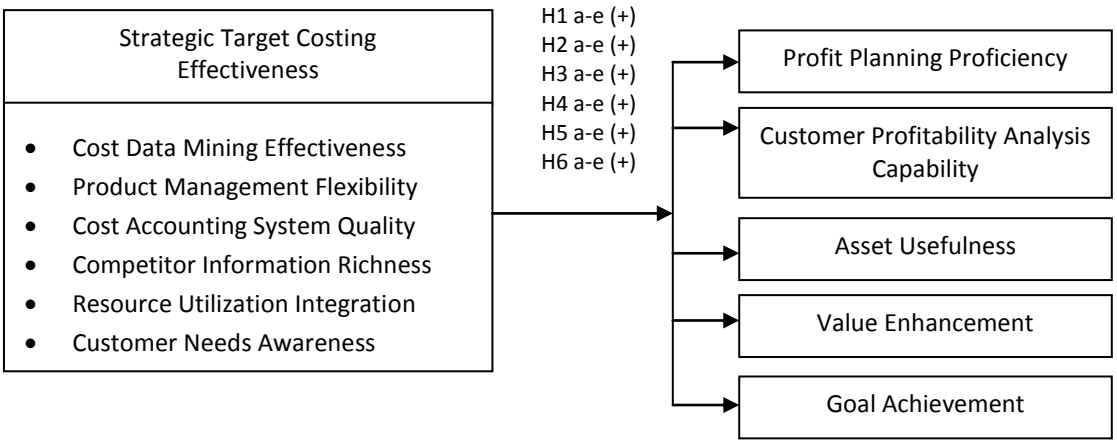


Figure 6 The Effects of Strategic Target Costing on Its Consequences

Cost Data Mining Effectiveness

Cost data mining is the process of cost analyzing and summarizing data into useful cost information from different perspectives. It allows users to analyze cost information from many different dimensions or angles, categorizes it, and summarizes the relationships identified. It is the process of finding correlations or patterns among dozens of fields in large relational cost databases including operational (Transactional) and non-operational information such as strong consumer focus, finances, communication, marketing, and organization.

Organization data mining (ODM) is defined as leveraging data-mining tools and technologies to enhance the decision-making process by transforming data

into valuable and actionable knowledge to gain a competitive advantage such as profit planning proficiency, customer profitability analysis, asset usefulness, and value enhancement (Nemati and Barko, 2003). Firms employ it to determine and summarize transactional data for decision making which includes: 1) relationships among internal factors (i.e., price, product positioning, staff skill) and external factors (economic indicators, competition, customer demographics); 2) the impact on sales, customer satisfaction, customer segment, and corporate profits; and 4) develop products and promotions to appeal to specific customer segments.

Cost data mining effectiveness refers to the capability to manage specific cost processes of a generation of information, data mining activities which adopt up-to-date data analysis tools and software that might involve the use of ICT and specific statistical analysis (Thuraisingham, 2000). Additionally, it refers to the creation of knowledge through the analysis of the useful information of the cost accounting database which is able to store large amounts of transaction data to enhance strategic target costing (generate information to assist in choosing the best course of action with various technologies and processes of data mining) for decision-making, and use this system as an enabling technology to market their products and services to targeted customers (Ellram, 2002). Moreover, the level of technical expertise and technical integration is expected to have a positive influence on the outcomes of cost data mining effectiveness and on decision-making with the goal of obtaining a sustainable competitive advantage.

The usefulness of cost data mining effectiveness is that it is a device for controlling and planning which can serve a coordinating purpose when multiple agents have correlated private information. The explorations of the relationships between resources, competition, and profitability including the analysis of competitive imitation, the suitable return to innovations, the role of imperfect information in creating profitability differences between competing firms, and the means by which the process of resource accumulation can sustain a competitive advantage (Hunt and Madhavaram, 2006a,b).

Following the resource advantage theory as mentioned above, cost data mining effectiveness is an internal resource to explain the efficiency and the effectiveness of data mining usefulness to achieve target costing process

implementation which has a possible potential to have a positive effect on the firm ability and competencies which play a role as consequence variables consisting of profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement. To summarize, the hypotheses are proposed as follows:

Hypothesis 1a: Cost data mining effectiveness will positively relate to profit planning proficiency.

Hypothesis 1b: Cost data mining effectiveness will positively relate to customer profitability analysis capability.

Hypothesis 1c: Cost data mining effectiveness will positively relate to asset usefulness.

Hypothesis 1d: Cost data mining effectiveness will positively relate to value enhancement.

Hypothesis 1e: Cost data mining effectiveness will positively relate to goal achievement.

Product Management Flexibility

Product management flexibility refers to the ability of firms to operate and manage new production activities with efficiency and effectiveness (e.g. employs new cost production processes for reducing non-value added activities), and the creativity of value engineering to redesign the product, serve customer satisfaction achievement, product competitiveness and value enhancement as parts of that need for serving the target goal (Hertensteign and Platt, 2000) for new product development (NPD).

Product management flexibility focuses on: 1) the achievement of flexible activities in new product development in manufacturing as a need for serving the target goals. NPD is the goal-setting of strategic target costing (Hertensteign and Platt, 2000). The management process of thinking and creating a new product and the

outcomes of that process to manage a new model is obtained from several resources comprised of three dimensions: new idea generation; knowledge integration; and product innovation mindset in order to achieve the goals of the firm. 2) The creative aims of value engineering are to redesign the product of its manufacturing process and to serve customer satisfaction achievement, product competitiveness, and value enhancement. Prior research (Grewal and Tansuhaj, 2001) found the evidence of a positive impact on business performance and goal achievement, while a survey about strategies of product management flexibility as a distinctive capability have a positive impact on business performance (Verdu-Jover et. al., 2006). Product management flexibility is one of the essential firm capabilities and a component of strategic target costing effectiveness which is a strategic tool of cost management to help firms meet their target goals. Based on the literature reviewed of the resource advantage theory and literature review as mentioned above, product management flexibility has the potential possibility to positively related to the consequence variables consist of profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement, and goal achievement. To summarize, the hypotheses are proposed as follows:

Hypothesis 2a: Level of product management flexibility will positively relate to profit planning proficiency.

Hypothesis 2b: Level of product management flexibility will positively relate to customer profitability analysis capability.

Hypothesis 2c: Level of product management flexibility will positively relate to level of asset usefulness.

Hypothesis 2d: Level of product management flexibility will positively relate to value enhancement.

Hypothesis 2e: Level of product management flexibility will positively relate to goal achievement.

Cost Accounting System Quality

Target costing is a structured approach to identifying the cost at which a firm must produce a product to generate the desired level of profitability over its life-cycle at its anticipated selling price (Ellram, 2002). Target costing focus on a market-based approach is used to determine the target cost for a future product, and it is the remainder after the desired profit margin which is subtracted from the estimated market price of a new product (Cohen, 2011).

The cost accounting system is a firm's systematic system which has the function for determining a cost system which in turn, depends on the circumstances that generate the need for information from classifying, summarizing, recording, reporting, and allocating current or predicted costs and is a subset of managerial accounting. The majority of cost accounting system structure's characteristics view cost information quality (Cohen, 2011). It focuses on techniques or methods for determining the cost of a project, process, or things through direct measurement, arbitrary assignment, or systematic and rational allocation, including the scope of variances calculation and frequency of cost information provision such as an inferential role on the relevance, accuracy, timeliness, usability, comparability, up-to-date, reliability and thoroughness of information for decision-making.

Cost accounting system quality refers to the high performance process for tracing various input costs to an organization's products or services and the capability to operate all functions of the cost management system, to collect and analyze cost information analysis, and ability to use a suitable traditional accounting form (job-order costing and process costing including three basic kinds of cost allocation: raw materials; direct labor; and manufacturing overhead) in order to enhance decision-making with suitable cost information in target costing, analyze the return of their projects and customer profit margin in each level, and prepare financial reports (Barfield, Raiborn and Kinney, 2003; Chaikambang and Ussahawanitchakit, 2012).

Following the resource advantage theory and literature review as mentioned above, cost accounting system quality is a firm capability which has the potential possibility to have a positive effect on the consequence variables: profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement. To summarize, the hypotheses are proposed as follows:

Hypothesis 3a: Level of cost accounting system quality will positively relate to profit planning proficiency.

Hypothesis 3b: Level of cost accounting system quality will positively relate to customer profitability analysis capability.

Hypothesis 3c: Level of cost accounting system quality will positively relate to level of asset usefulness.

Hypothesis 3d: Level of cost accounting system quality will positively relate to value enhancement.

Hypothesis 3e: Level of cost accounting system quality will positively relate to goal achievement.

Competitor Information Richness

The business environment has become much more complicated with the rapid changes and pressures of global competition. Companies must maintain and utilize internal and external information for decision-making for survival. Competitor information richness includes a competitor's information (related to cost, prices, market shares and so on) which has an important part to play in achieving a competitive advantage (Simmonds, 1981).

The competitor cost efficiency analysis includes a regularly updated forecast of the competitors' unit costs which have become valuable specialized information crucial in a competitive market, refers to an ability of a firm to analyze and summarize the competitors' cost information focusing on the cost structures of competitors, and is based on the appraisal of economies of scale, facilities, technology, governmental relationships, and analysis of product cost (Chaikambang and Ussahawanitchakit, 2012). It also includes benchmarking of competitor's cost to planning and controlling in business and beneficial accounting managers for understanding about their competitor cost efficiency, as well as staying vigilant to identify both threats and opportunities in the marketplace.

Competitor information richness focuses on the firms' perception about the concentration of competition for product differentiation and product cost of their competitors in the market, and the firms' ability to collect and to analyze information usefulness for decision-making which includes information that indicates that competitor information analysis is fundamental to the pursuit of competitiveness.

Additionally, competitor cost analysis is one of the market information competencies required in order to achieve success in the marketplace, which is expected to have a significant positive impact on company performance (Hsu and Volker, 2003). When firms perceive for product differentiation, they can react to the changing demand of uncertainty, provide the product difference, and gain more customers in enhancing the competitive environment (Liu and Wei, 2003). Moreover, in the literature of dynamic capability and target costing, firms have their ability to create new product development by using information usefulness for planning their strategies as target costing and product differentiation in order to create new customer attraction and increase competitiveness, including profit planning analysis and goal achievement which are concerned with profit planning proficiency in the short run , and customer profitability analysis capability, asset usefulness, and value enhancement for the long run (Hsu and Wang, 2004). Thus, firms with higher competitor information richness than other firms will have more capability to respond to competitor and customer needs by offering new products that are up-to-date in the market place so as to sustain a competitive advantage.

Similar to customer service cost implementation, competitor cost analysis means an ability to acquire, interpret and integrate information about the global competitive environment, and the building company value originated from information such as competitor cost information. Cost advantages and disadvantages represent an increase in profit planning (Colin and Magda, 2002).

Competitor information richness is composed of the key capabilities of rival firms, and the effectiveness of competitor information richness is the one ability of firms to respond to the competitiveness and movement in a global market (Chaikambang and Ussahawanitchakit, 2012). It can influence operations such as investment behavior, production quantity, product cost, and pricing policy (Heinen and

Hoffjan, 2005), which should provide the specialized valuable information for managers to conduct their work and use in decision-making.

Compared with the competitor's cost information, cost benchmarking helps a firm improve its future cost situation by providing key ratios of the competitors' cost structures, and thus, methods of process optimization (Hunt, 2012).

Based on the literature reviewed, the relevance of competitor information richness is stressed in the literature as mentioned above, and is done to obtain and process the cost information of competitors that allows a firm to evaluate its own strengths and weaknesses in terms of one dimension of strategic target costing effectiveness. In summary, following the resource advantage theory as mentioned above, competitor information richness is a powerful tool for maintaining the firm's capability in order to increase the competitive advantage. Analysis of the cost advantages and disadvantages of competitors allows anticipation of their future behavior for the competitors' cost situation, and convinces the organization of the practicality of cost reduction and has implications for the management within a firm (Heinen and Hoffjan, 2005). Based on the literature review already mentioned, competitor information richness has the potential possibility to affect profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and strategic goal achievement. To summarize, the hypotheses are proposed as follows:

Hypothesis 4a: Level of competitor information richness will positively relate to profit planning proficiency.

Hypothesis 4b: Level of competitor information richness will positively relate to customer profitability analysis capability.

Hypothesis 4c: Level of competitor information richness will positively relate to a level of asset usefulness.

Hypothesis 4d: Level of competitor information richness will positively relate to value enhancement.

Hypothesis 4e: Level of competitor information richness will positively relate to goal achievement.

Resource Utilization Integration

Resource utilization integration is defined as the fruitfulness of resource integration both of tangible and intangible assets including knowledge, skills and experience, innovation technology, know-how, and opportunities between the inter-functional team and inter-organizational team for supporting the work of business processes to achieve corporate target costing (Barney, 2001).

Resource utilization integration consists of resource usage quality which is a fundamental activity of management, and therefore, it has long been of interest to management scholars, and the ability of firms to analyze resource requirements, and process the allocation of resources for each department in order to utilize resources efficiently (Balkin, Markman and Gomez-Meja, 2000).

In contemporary management, strategic management scholars have expressed enormous interest in the resource advantage of the firm. When firms face intense competition over time, resource utilization and efficiency improve performance directly within the organization and this becomes the crucial factor to enforce the superior position in the marketplace over the rivals given the financial performance (Chaikambang and Ussahawanitchakit, 2012). Firms with superior resources are able to produce more target cost effectiveness and enhance customer satisfaction and goal achievement. The variations in the composition of efficiency of accounting managers may be able to integrate resource usage information into operations and programmatic best practices from one region to throughout the supply chain in order to improve resource utilization of the entire firm (Miller and Ross, 2003).

In general, the benefits of resource utilization integration is a component of strategic target costing to create new product development based on the customers' perception, concern with more quality, reduce investment cost by sharing assets, reduce uncertainty risk, and increase competitive advantage. Utilizing the shared resources, the updated information should also be obtained and shared via a process including information sharing, resource sharing, technique and know-how sharing, and opportunity sharing (Talaulicar, Grundei and Werder, 2005). This strategy has been

shared with firms where the ability to create new products or services and new processes will increase (Kratzer, Gememden and Lettl, 2008; Pansuppawatt and Ussahawanitchakit, 2011).

Resource utilization integration is concerned with these components as a key success factor of competitive advantage and becomes increasingly important for the firm's performance (O' Donnell and Jeong, 2000): 1) resources usage efficiency which is defined as an ability of the firm to appraise resource usage toward minimizing the resources on economizing (e.g., Balkin , Markman and Gomez-Meja, 2000); 2) the resource usage quality; 3) the efficient use of shared resources; and 4) an IT channel that has access to networks and the internal commitment to international markets that affects the strategy development of firms (Solberg and Durrieu, 2006).

Following the resource advantage theory and literature review as mentioned above, resource utilization integration has the possible potential to positively affect the consequence variables: profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement. To summarize, the hypotheses are proposed as follows:

Hypothesis 5a: Level of resource utilization integration will positively relate to profit planning proficiency.

Hypothesis 5b: Level of resource utilization integration will positively relate to customer profitability analysis capability.

Hypothesis 5c: Level of resource utilization integration will positively relate to a level of asset usefulness.

Hypothesis 5d: Level of resource utilization integration will positively relate to value enhancement.

Hypothesis 5e: Level of resource utilization integration will positively relate to goal achievement.

Customer Needs Awareness

Customer needs awareness refers to the firm's awareness of the customer in order to remember and understand better what are their customers' requirements, expectations, behaviors, tastes, needs, and preferences in the past, present, and future. Moreover, firms should understand the differences among customers in order to gain insight into individual needs and provide services accordingly which is one essential component of strategic target costing effectiveness. In addition, the augment is that before building a strong brand, the organization should know what their customers think of their brands, products, or services (Saekoo and Ussahawanitchakit, 2010).

Focusing on customer effectiveness concerning customer need and customer expectation, is that firms will achieve it by obtaining and using information from customers and developing a strategy which will meet the internal and external customer requirements and is implemented to achieve the objective completely (Syers and Ussahawanitchakit, 2012).

In the meanwhile, customer effectiveness refers to the importance of formulating a business strategy, learning new ideas of new products from their customer requirements, and focusing on the dynamic interactions between the firms and customers to do the right thing in order to meet customer satisfaction and customer loyalty, which is a key factor to a sustained competitive advantage. Focusing on the customer responsiveness awareness as one dimension of marketing integration strategy in marketing research, it refers to an ability of the firm to identify different customer demands or customer needs (Thongsodsang and Ussahawanitchakit, 2012). Additionally, it also creates customer relations, enhances value, and maintains a competitive advantage. Firms which understand and are concerned with marketing will have the ability to translate customer needs to solve the appropriate problems which are critical for outside customers as to their needs for other departmental operations (Engelen and Brettel, 2011).

Customer needs awareness can improve the rate of success in new product success. The qualitative and quantitative survey research is collected for the conceptual model testing of the hypotheses. The higher levels of participation and long-term membership in a brand community increase the likelihood of adopting a successful new product from the brand (Thomson and Sinha, 2008).

Additionally, customer needs awareness depends on: 1) human resources such as marketing, engineering, and operational staff members which possess substantial amounts of knowledge about the needs and preferences of individual customers; 2) technological support that provides a customer database and disseminates customer information; and 3) investment cost in marketing research projects. Firms which are concerned more with customer needs awareness, will have more capability for customer responses that are demonstrated to the firm, and will have expertise marketing leading to an ability for excellence and effectiveness in marketing (Thongsodsang and Ussahawanitchakit, 2012; Chapavang and Ussahawanitchakit, 2010).

Following the resource advantage theory and literature review as mentioned above, customer needs awareness is an essential component of strategic target costing effectiveness and has the possible potential to positively affect the consequence variables: profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement. To summarize, the hypotheses are proposed as follows:

Hypothesis 6a: Level of customer needs awareness will positively relate to profit planning proficiency.

Hypothesis 6b: Level of customer needs awareness will positively relate to customer profitability analysis capability.

Hypothesis 6c: Level of customer needs awareness will positively relate to a level of asset usefulness.

Hypothesis 6d: Level of customer needs awareness will positively relate to value enhancement.

Hypothesis 6e: Level of customer needs awareness will positively relate to goal achievement.

The Effects of Profit Planning Proficiency, Customer Profitability Analysis Capability, Asset Usefulness, and Value Enhancement on Goal Achievement

This section examines the influence of four mediator variables which consist of profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement on goal achievement. It is assumed that there are positive relationships among all of them as depicted in Figure 7.

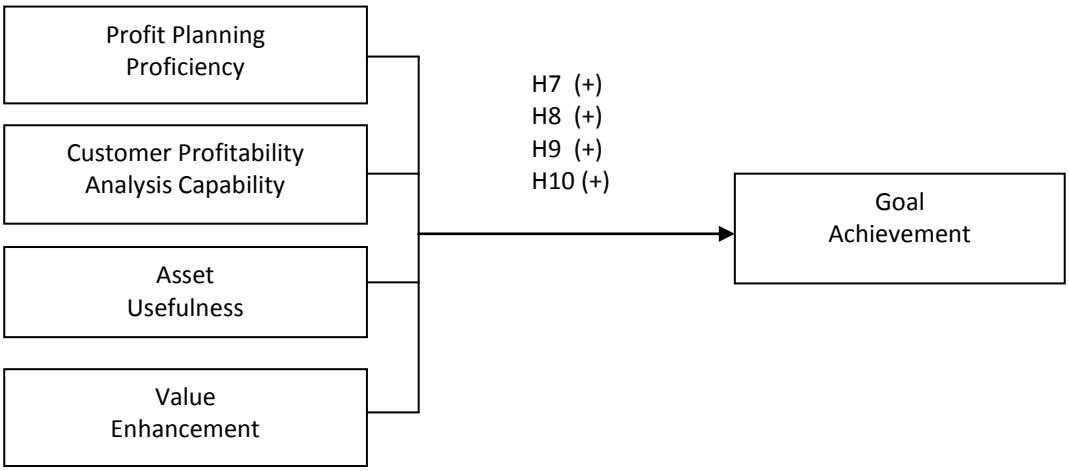


Figure 7 The Effects of Profit Planning Proficiency, Customer Profitability Analysis Capability, Asset Usefulness, and Value Enhancement on Goal Achievement

Profit Planning Proficiency

profit planning proficiency refers to the ability to forecast and increase more profit planning accurately per customers, and the ability to analyze profit margin based on each customer of the past, present, and future in order to analyze strategies and evaluate the trend of firm performances in the current and the future periods (Chenhall, 2004; Choe, 2004)

Firms are enabled to accurately forecast profit planning in the present and future by comparing with actual performance, market shares and sales volume. Thus, in order to achieve high profit planning proficiency, firms with higher target product costing profit margin efficiency focus on new product design as a target costing strategy that will have suitable information such as allowable product cost, volume of customer

requirements for decision-making, and accurate calculations of their profit planning to reach a higher profit planning proficiency (Mazel et al., 2000).

Additionally, higher profit planning proficiency with more accuracy will increase a sustained competitive advantage to encourage firms to achieve high performance and goal achievement (Rattanaphaptham and Ussahawanitchakit, 2010). Thus, the hypothesis is proposed as follows:

Hypothesis 7: Profit planning proficiency will positively relate to goal achievement.

Customer Profitability Analysis Capability

Customer profitability analysis is an organization's relative ability to generate a profit from their customers after taking into account the costs invested to develop and retain customers (Kennedy, 2005). The goal of customer profitability analysis is to separate core customers from others which help firms to provide the most long-term profits from those that are currently hurting profits (Winner, 2001), and planning for a different service mind to achieve customer satisfaction.

Customer profitability analysis capability refers to the ability of firms to reach target goals by separating and classifying core customers with long-term lifetime and profit margin from other groups, and the ability to use their suitable strategies to keep each customer profit margin, and to increase their core customers in the present and the future in order to achieve a goal (Guilding and McManus, 2002).

The net profit or loss was computed from the lifetime transaction flow of customers with the company (Jain and Singh, 2002). Businesses are able to focus investment on the highest value customers that are more profitable by classifying customers as platinum, gold, iron, and so forth (Raaij et al., 2003).

The creation of an individual customer relationship carefully targets customers, because all customers are not equally valuable (Ryals, 2006). Thus, customer profit analysis capability is a key success factor in the strategy of customer relationship management capabilities on goal achievement, and customer profit analysis capability which depends on (Winner, 2001): 1) the ability to analyze the database of enhanced customer information quality consisting of integrity, usefulness, currency,

output timeliness, reliability, completeness, conciseness, format, and relevance, 2) the ability to analyze the information customer database with more accuracy, 3) the ability to update customer profiles with efficiency and completeness. Thus, the hypothesis is proposed as follows:

Hypothesis 8: Customer profitability analysis capability will positively relate to goal achievement.

Asset Usefulness

Asset usefulness refers to the ability to use a firm's resources effectively and capably that provide benefits and its valuable strategy-building over competitors, and taking advantage of those resources and their capabilities (Lee and Wilhelm, 2010) for the modern global business environment, composed of both prices, quality, transport, innovation, and communication.

Following the resource advantage theory, firms are using their capabilities from implementation (e.g., asset usefulness and value enhancement) as a means for capabilities development for a substantial part of the development of technological capability (Figueiredo, 2002). Additionally, firm capabilities are the main source of competitive advantages for firms that can rapidly integrate, learn, and reconfigure their internal and external resources to adapt to rapid environmental changes, and thus, enhance or maintain their competitive advantages (Wu, 2010).

Moreover, asset usefulness is valuable strategy-building over competitors. Quality management needs efficient planning and forecasting encouraged with optimal production which affects price, quality of product, time-to-market, and provides the lowest cost that affects outstanding profitability in order to gain a firm competitive advantage (Pansuppawatt and Ussahawanitchakit, 2011). Thus, the hypothesis is proposed as follows:

Hypothesis 9: Asset usefulness will positively relate to goal achievement.

Value Enhancement

Value enhancement refers to the firm's capability to launch new products and services to achieve customer satisfaction and decisions on their project efficiency with useful information which includes not only financial information, but also non-financial information such as ROA, ROE, EVA, market value, and environmental risk to respond to the requirement of stakeholders as best as possible (Eggert and Ulaga, 2002).

Value enhancement is associated with projected value which is measured from value creation and is the perception of their customers and their stakeholders. Value creation is created through the customer's perceived value based on their attitude and judgment of the trade-off between "What they get" (e.g., perceived benefits, quality, satisfaction of products or services, firm performance), and "what they give" (e.g., investment cost).

Value through the eyes of the customer is variable including product utility, perceived benefits over the costs, market perceived quality adjusted for relative prices, and perceived benefits over sacrifices (Eggert and Ulaga, 2002). Delivering superior value to customers is important for business success and is the source of competitive advantage as a firm's strategy is to achieve corporate profitability (Pongpearchan and Ussahawanitchakit, 2011), and increase firm market value and stakeholder wealth.

Following the resource advantage theory, firms use their capabilities (e.g., asset usefulness and value enhancement) as a means for capabilities development as a substantial part of the development of technological capability (Figueiredo, 2003). In this research, value enhancement is one of the alternatives selected for decision-making advantage leading to improve a competitive advantage and achieved goals (Talaulicar, Grundei and Werder, 2005). Therefore, these ideas lead one to posit the following hypothesis:

Hypothesis 10: Value enhancement will positively relate to goal achievement.

Goal Achievement

A goal can influence both an individual and a team (Luo, 2000; Oghojafor, Olayemi and Okonji, 2011). Goal achievement will have effectiveness by executive support and refers to the practice of management to encourage and motivate employees to recognize and understand the pathway in an organizational mechanism to achieve the organizational target (Pansuppawatt and Ussahawanitchakit, 2011).

Goal achievement is refers to the representation of the final process in operation or in obtained results which enable the firm to achieve the objectives set by linking to the missions, visions, policy and strategies (Zaccaro and Klimoski, 2011), and is set and accepted by top leaders. It is a strategy which includes challenging statements and ideas that can lead to effective implementation in all functions (Hunt, 2012), influences the firm's competencies to achieve their target goal in the marketplace (Koste and Malhotra, 2000), and leads to followers who also achieve the goals.

Operational achievement with the best operating performance is considered an important factor to competitive advantage, while collaboration achievement as supplier and customer is important for creating new products with a suitable cost in perceiving the customer and achieving customer satisfaction. With better operational performance and collaboration, the products or services offered by an organization should become more attractive to the customers, and the firm should have better business performance (Nada and Robert, 2005).

Previous studies (e.g. Hunt, 2006a; Grant, 2001) indicate that organization goal leads to effective strategy implementation which depends on their vision, mission, strategy, and goal. Especially, following the sustainable competitive advantage theory, goal achievement focuses on an ability of the firm to create the opportunity through the business procedures to continuously maximize their profitability, market shares, and competitiveness in the long term (Modi and Mishra, 2011; Sampattikorn and Ussahawanitchakit, 2012).

Following the linkage of the resource advantage theory (which is used to explain the roles of the dimensions of strategic target costing effectiveness as capabilities of the firms), and the planning theory (for planning and control to achieve the target goal and a competitive advantage as mentioned above), six dimensions of

strategic target costing effectiveness are the key success factors and have the potential possibility to positively affect strategic goal achievement.

Antecedents of Strategic Target Costing Effectiveness

This section explains the influences of the five antecedents, namely market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive advantage on the dimensions of strategic target costing effectiveness as shown in Figure 8.

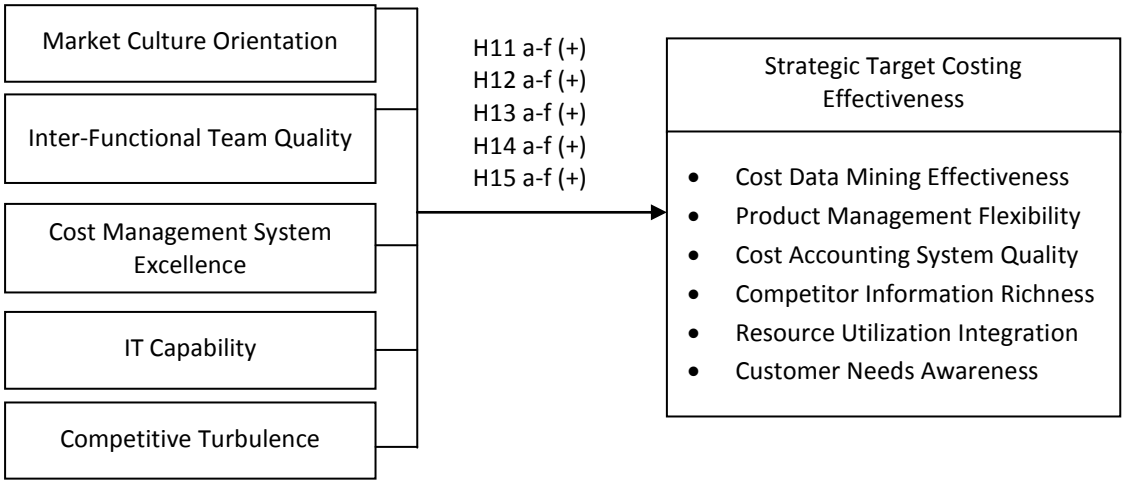


Figure 8 The Effects of Antecedent Variables on Strategic Target Costing Effectiveness.

Market Culture Orientation

In the past decade, (e.g., Day, 1994; Kearney, 1998; Narayanan, Jayaraman, Luo and Swaminathan, 2011) the scholarly literature has explained the constructs of culture which has been put forth in the popular marketing research. Marketing culture refers to the importance the firm, as a whole, places on the marketing functions. It also refers to the way marketing "things" are done in the firm. The dimensions of marketing culture are focused on service quality, interpersonal relationships, selling task, organization, internal communications, and innovativeness.

Marketing culture is defined as organizational culture, which creates the behavior of employees conferring exceptional value to the users of a company's goods

and enables achieving excellent business results most effectively, and profitability (Naver and Slater, 1990). Marketing culture emphasizes its individuality, seeing that culture lives as long as it is fostered by other members of the group and is communicated from one to another (Phokha and Ussahawanitchakit, 2012).

Market culture orientation focuses on the firms' overall culture that refers to a pattern of shared values and beliefs that help employees understand and believe the market perspective and thereby provides them with norms for behavior within the firm. Additionally, it refers to the importance of the firm, as a whole, places on marketing, and to the way in which marketing activities are executed in the firm (Nonaka and Takeuchi, 1995; Syers and Ussahawanitchakit, 2012). The levels of return on investment, sales growth, and market shares depend on marketing strategy effectiveness, which in turn, depend on market culture. Thus, firms more concerned with market culture orientation will have a more valuable relationship with higher new product development awareness, following strategic target costing effectiveness, a focus on customer information efficiency, technology adaptation effectiveness, and competitive learning success in the organizational firm (Grant, 2001; Ellram, 2006; Hunt, 2012).

The resource advantage theory and literature review explains various variables for helping in the process of creating and maintaining a competitive advantage, and provide overview topics, antecedents and consequences of their relationship. Market culture orientation is one of the antecedent variables, which has an impact on a sustained competitive advantage (Hoffman, 2000). However, prior research (Syers and Ussahawanitchakit, 2012) used this variable as a moderator effect between modern marketing vision and customer effectiveness focus. Thus, in this research based on the literature, market culture orientation played a role as an antecedent which has the potential possibility to positively affect six dimensions of strategic target costing effectiveness. To summarize, the hypotheses are proposed as follows:

Hypothesis 11a: Level of market culture orientation will positively relate to cost data mining effectiveness.

Hypothesis 11b: Level of market culture orientation will positively relate to a level of product management flexibility.

Hypothesis 11c: Level of market culture orientation will positively relate to cost accounting system quality.

Hypothesis 11d: Level of market culture orientation will positively relate to competitor information richness.

Hypothesis 11e: Level of market culture orientation will positively relate to resource utilization integration.

Hypothesis 11f: Level of market culture orientation will positively relate to customer needs awareness.

Inter-Functional Team Quality

Inter-functional team quality refers to the relationship of the collective activity, between functional or departmental, to achieve a collective benefit for an organization. Generally, it is most often compared to other constructs which included conflict, competition environment and coordination (Payan et al., 2007). Inter-functional team quality has played a role as a strategy which combines both internal and external capabilities. The achievement of inter-functional team quality is based on: 1) the ability of a quality team to understand and share their knowledge, experience, and information needs to joint problem-solving, a willingness to adapt to unanticipated changes, restraint from the use of power to the disadvantage of other participants (Mahama, 2006), and creation of information sharing for joint decision-making; 2) top management support; and 3) level of their cooperative relationship and communication.

The cooperation relationship with informal control could serve to complement and support more formal efforts, and the reliance on trust is the key determinant of successful cooperative behavior (Christ et al., 2008). Moreover, prior studies (i.e., Mahama, 2006; Payan et al., 2007) indicate there is linkage between inter-functional team operation to outcomes that have focused on firm performance and individual satisfaction, as well as the inclusion of many non-economic benefits such as to improve quality, high quality decision-making, improving competitiveness, and helping firms achieve their strategic management (e.g., target costing, activity-based

costing, supply chain management, value chain costing), (Boonmunewai and Ussahawanitchakit, 2010).

Prior research (e.g. Pungboonpanich and Ussahawanitchakit, 2010; Chen, Tjosvold and Su, 2005) provided a theory which has provided useful understanding for explaining human behavior and actions in organizational teamwork in which team members encourage quality controversy that affects increased productivity. Combined with a sustainable competitive advantage, firms which are concerned with their target goal and goal achievement under the condition of competitive turbulence will focus on a suitable strategy (e.g., inter-functional team quality) for joint resources and capabilities to meet the target such as reducing long-term costs.

Following the contingency theory and the literature review as mentioned above, inter-functional team quality has the potential possibility to positively affect six dimensions of strategic target costing effectiveness. To summarize, the hypotheses are proposed as follows:

Hypothesis 12a: Level of inter-functional team quality will positively relate to cost data mining effectiveness.

Hypothesis 12b: Level of inter-functional team quality will positively relate to a level of product management flexibility.

Hypothesis 12c: Level of inter-functional team quality will positively relate to cost accounting system quality.

Hypothesis 12d: Level of inter-functional team quality will positively relate to competitor information richness.

Hypothesis 12e: Level of inter-functional team quality will positively relate to resource utilization integration.

Hypothesis 12f: Level of inter-functional team quality will positively relate to customer needs awareness.

Cost Management System Excellence

Cost management system excellence refers to the proficiency of the users' knowledge, skills and experiences, quality of IT resources such as data bases, hardware and software systems, and efficacy of the suitable cost accounting systems which can link the subsystems of accounting for stability, ease of use, speed, easy maintenance, effective communication, and user satisfaction (Harzallah and Vernadat, 2002) in order to increase the ability of firms, to analyze their cost behavior accurately, and provide relevant quality information for achieving all levels of management functions.

In this research, cost management system excellence focuses on the disdain for traditional financial accounting and accounting awareness in that management accounting systems must be separate from financial accounting systems. Three components are described concerning strategic cost management for the firm's corporate direction (Chaikambang and Ussahawanitchakit, 2012). The first component focuses on recognizing the differences between managerial and financial accounting. The evolving attitude is toward an obsession to manage by the numbers, whereas cost management relies more on an operation's processes and much less on GAAP. Even in manufacturing, cost and managerial accounting receive manager support.

The second component is about accurate product costing, which in turn leads to representatives from all areas of the company working together, first to understand what makes up a given product's cost, and second, to do whatever was necessary to reflect those costs accurately in the cost management system. The third component focuses on cost management that can be used to meet predefined strategic goals extrinsic to cost management, such as target costing, rather than traditional cost such as standard costing to support goal achievement.

Following the resource advantage theory and the contingency theory, cost management system excellence plays a role as the firm's internal environmental resource which has a relationship with the second-stage that refers to the six dimensions of strategic target costing effectiveness. Thus, as mentioned above, cost management system excellence has the possible potential to positively affect six dimensions of strategic target costing effectiveness. To summarize, the hypotheses are proposed as follows:

Hypothesis 13a: Cost management system excellence will positively relate to cost data mining effectiveness.

Hypothesis 13b: Cost management system excellence will positively relate to a level of product management flexibility.

Hypothesis 13c: Cost management system excellence will positively relate to cost accounting system quality.

Hypothesis 13d: Cost management system excellence will positively relate to competitor information richness.

Hypothesis 13e: Cost management system excellence will positively relate to resource utilization integration.

Hypothesis 13f: Cost management system excellence will positively relate to customer needs awareness.

IT Capability

In a rapidly changing environment, firms must develop and use new technologies in order to adapt to new environmental opportunities (Karim and Mitchell, 2000). IT capability refers to the ability of a firms' innovation technology based implementation or physical infrastructure and other information technology support (Mark and Su, 2010), the achievement of information system implementation (set of interrelated components used to collect, process, store, and disseminate information to support decision-making, analysis, and management controls in an organization), (Coulter, 2002), and integration and utilization of data from a common database for generating information for operations and decision making (Chapman, 2005). New ways of operating are becoming more interesting to achieve the goals of firm. Especially, technological learning has an important role in enabling organizations to

generate new knowledge and improve capabilities and skills that can lead to accomplishment (Chaikambang and Ussahawanitchakit, 2012).

Accordingly, technology learning enhances the capacity of effective action in the market, and is a major force for technology dynamics and change (Wene, 2007). Capabilities of technology learning can create business growth, and new applications can develop new lines of business. Moreover, technological capability is an organization's ability to mobilize and deploy computer-based technologies (i.e., hardware, software, network-to-data communication, and soft technologies or advance management practice) for operational activities such as strategic cost management in a wide variety of industries.

IT capability is applying the power of IT to promote AIS in producing effective information according to a user's needs. IT resources are both invested tangible assets (i.e. hardware, software, and network to data communication) by the firm and intangible assets that are technical and managerial (Liu and Wei, 2008). Technology learning process is a process that is directed towards helping a firm learn, accumulate, and leverage management know-how and best practices to use technology for operations that is also a component of IT capability which has a process that involves deliberate efforts to articulate, codify, share, and internalize the management know-how in firms. IT capability supports AIS to provide information integration, accuracy, speed, relevance, easy understanding, system competency-IT supported, and user information satisfaction to improve cost management such as strategic target costing and decision-making, which in turn, enhances the firm's performance (Nada and Robert, 2005).

Following the resource advantage theory and the contingency theory, IT capability plays a role of a firm's resource in the first-stage of a five-stage procedure for strategy formulation which has a relationship with the second-stage referring to the six dimensions of strategic target costing effectiveness. Thus, as mentioned above, IT capability has the possible potential to positively affect six dimensions of strategic target costing effectiveness. To summarize, the hypotheses are proposed as follows:

Hypothesis 14a: IT capability will positively relate to cost data mining effectiveness.

Hypothesis 14b: IT capability will positively relate to a level of product management flexibility.

Hypothesis 14c: IT capability will positively relate to cost accounting system quality.

Hypothesis 14d: IT capability will positively relate to competitor information richness.

Hypothesis 14e: IT capability will positively relate to resource utilization integration.

Hypothesis 14f: IT capability will positively relate to customer needs awareness.

Competitive Turbulence

For the fierce global competition, *competitive turbulence* is caused by competitive intensity (Kongthong and Ussahawanitchakit, 2010) which is defined as a situation where competition among competitors in the market is violent and lacks opportunities for future growth (Auh and Menguc, 2005). The economic situation has been characterized not only by periods of considerable growth, but also by increasing competitive force.

The impact of competitive volatility on performance has gained importance in recent years because the highly volatile competition brings swift and unpredictable external situations. It is not possible for a firm to obtain the essential information and resources to usefully serve its customers on their own (Gulati and Garino, 2000; Chaikambang and Ussahawanitchakit, 2012). Likewise, the evidence that output growth rates are adversely affected by their volatility and competitive turbulence explains a situation where competition is fierce due to the number of competitors in the market and the lack of potential opportunities for further growth (Yasamorn and Ussahawanitchakit, 2011).

Competitive turbulence is often characterized by price wars and advertising wars because of many entrants in the market place (Kumar, Kumar and Crosbois, 2008). Firms will operate in their existing systems to fully capitalize on the precise predictability when faced with less intense competition and have built their new products or brands by the time the slow-followers arrive on the scene.

Following the contingency theory, this research uses competitive turbulence as an antecedent variable which explains the phenomenon that has affected the choosing of a suitable strategy for achieving the target goal, such as strategic target costing effectiveness. Thus, firms with a higher concern for competitive turbulence will have more stress due to uncertainty and risk; they will continuously revise their management cost system, create higher performance, and adopt more strategic target costing and implementation effectiveness in order to respond to the obstacles and opportunities in the market competition that serve their goal achievement. At this point, competitive turbulence has the potential possibility to affect six dimensions of strategic target costing effectiveness. Thus, the hypotheses are proposed as follows:

Hypothesis 15a: Competitive turbulence will positively relate to cost data mining effectiveness.

Hypothesis 15b: Competitive turbulence will positively relate to a level of product management flexibility.

Hypothesis 15c: Competitive turbulence will positively relate to cost accounting system quality.

Hypothesis 15d: Competitive turbulence will positively relate to competitor information richness.

Hypothesis 15e: Competitive turbulence will positively relate to resource utilization integration.

Hypothesis 15f: Competitive turbulence will positively relate to customer needs awareness.

Moderating Effects of Collaboration Climate

This research assigns the roles of the moderating effects of collaboration climate, which is hypothesized by assuming that it moderates as an influence on the relationships between strategic target costing effectiveness and its consequences (profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement), the relationship between strategic target costing effectiveness and goal achievement, and the relationship between the consequence variables and goal achievement as shown in Figure 9.

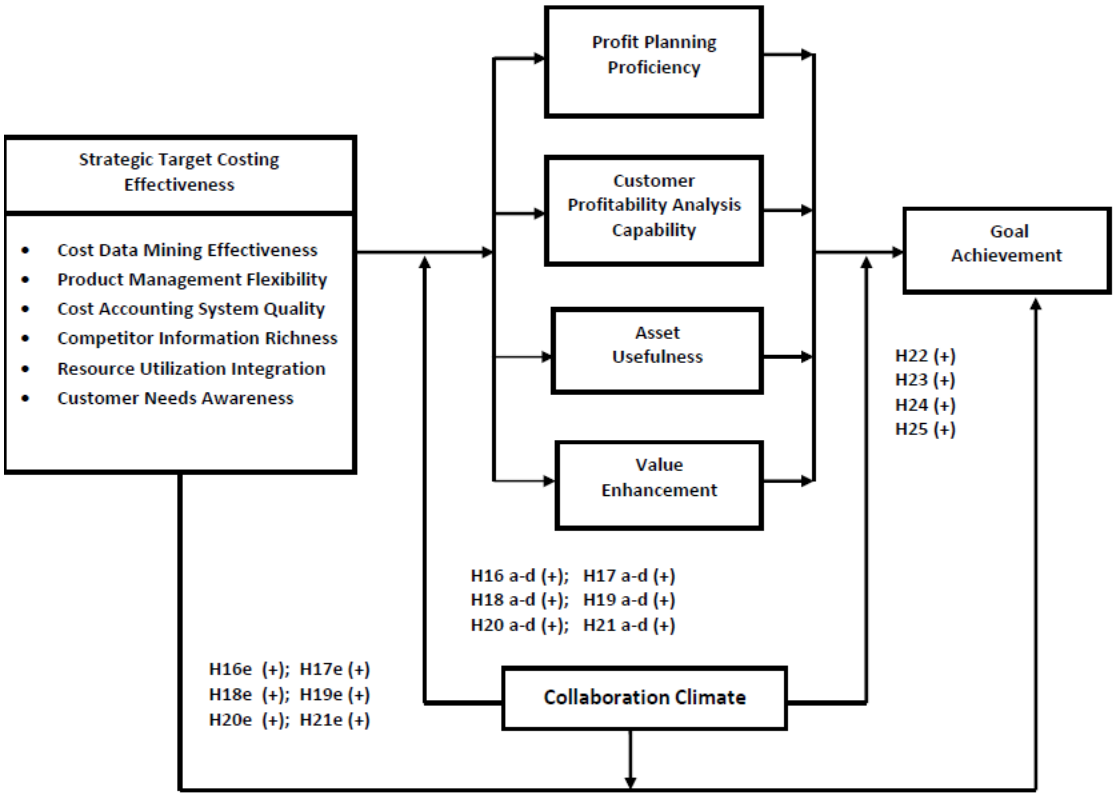


Figure 9 Roles of Collaboration Climate as a Moderator

Collaboration Climate

Collaboration climate refers to a term more conducive to value creation in knowledge work that would probably be ‘effective’. In the last few years, it has been

argued that the effectiveness of knowledge work has to do with how the creation of new knowledge and transfer of existing knowledge is organized (Nonaka and Takeuchi, 1995; Sveiby and Simons, 2002).

Collaboration climate is most commonly described as a team operating who work well together, including joint project investment such as outsourcing, teams which have clear and well defined structure, willing to share and receive knowledge, and is based on elements of trust (honesty, consistency, respect) in order to increase the firm efficiency and effectiveness, and to achieve performance outcomes and a competitive advantage (Tuntrabundit and Ussahawanitchakit, 2010). Firms that cannot reach maximum performance by operating alone must be accompanied by the establishment of an organizational process from the strategic vision to organize the collaboration in order to ensure an efficient and optimal partnership (Boivin and Roch, 2005).

Additionally, an effective relationship with both communication and understanding is needed for a collaborative climate, as well as the primary goal of gaining a competitive advantage through improvement in product or service, making firms more efficient in the supply of the end service (Cousins, 2002), perform voluntary cooperative activities between firms concerned with exchange, and the sharing or co-development of products, services, or technologies in a long-term commitment for the goal achievement (Ang, 2008).

Following the resource advantage theory and the contingency theory as mentioned above, collaboration climate is a firm strategy in their relationships and plays a role as an internal factor which focuses on teamwork in order to increase productivity and achieve their target goal (Pungboonpanich and Ussahawanitchakit, 2010). At this point, collaboration climate has the potential possibility to affect the relationships among the dimensions of strategic target costing effectiveness and consequence variables, namely, profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement, including the relationship among the consequence variable and goal achievement. Thus, the hypotheses are proposed as follows:

Hypothesis 16a: Collaboration climate positively moderates the relationships between cost data mining effectiveness and profit planning proficiency.

Hypothesis 16b: Collaboration climate positively moderates the relationships between cost data mining effectiveness and customer profitability analysis capability.

Hypothesis 16c: Collaboration climate positively moderates the relationships between cost data mining effectiveness and asset usefulness.

Hypothesis 16d: Collaboration climate positively moderates the relationships between cost data mining effectiveness and value enhancement.

Hypothesis 16e: Collaboration climate positively moderates the relationships between cost data mining effectiveness and goal achievement.

Hypothesis17a: Collaboration climate positively moderates the relationships between product management flexibility and profit planning proficiency.

Hypothesis 17b: Collaboration climate positively moderates the relationships between product management flexibility and customer profitability analysis capability.

Hypothesis 17c: Collaboration climate positively moderates the relationships between product management flexibility and asset usefulness.

Hypothesis 17d: Collaboration climate positively moderates the relationships between product management flexibility and value enhancement.

Hypothesis 17e: Collaboration climate positively moderates the relationships between product management flexibility and goal achievement.

Hypothesis 18a: Collaboration climate positively moderates the relationships between cost accounting system quality and profit planning proficiency.

Hypothesis 18b: Collaboration climate positively moderates the relationships between cost accounting system quality and customer profitability analysis capability.

Hypothesis 18c: Collaboration climate positively moderates the relationships between cost accounting system quality and asset usefulness.

Hypothesis 18d: Collaboration climate positively moderates the relationships between cost accounting system quality and value enhancement.

Hypothesis 18e: Collaboration climate positively moderates the relationships between cost accounting system quality and goal achievement.

Hypothesis 19a: Collaboration climate positively moderates the relationships between competitor information richness and profit planning proficiency.

Hypothesis 19b: Collaboration climate positively moderates the relationships between competitor information richness and customer profitability analysis capability.

Hypothesis 19c: Collaboration climate positively moderates the relationships between competitor information richness and asset usefulness.

Hypothesis 19d: Collaboration climate positively moderates the relationships between competitor information richness and value enhancement.

Hypothesis 19e: Collaboration climate positively moderates the relationships between competitor information richness and goal achievement.

Hypothesis 20a: Collaboration climate positively moderates the relationships between resource utilization integration and profit planning proficiency.

Hypothesis 20b: Collaboration climate positively moderates the relationships between resource utilization integration and customer profitability analysis capability.

Hypothesis 20c: Collaboration climate positively moderates the relationships between resource utilization integration and asset usefulness.

Hypothesis 20d: Collaboration climate positively moderates the relationships between resource utilization integration and value enhancement.

Hypothesis 20e: Collaboration climate positively moderates the relationships between resource utilization integration and goal achievement.

Hypothesis 21a: Collaboration climate positively moderates the relationships between customer needs awareness and profit planning proficiency.

Hypothesis 21b: Collaboration climate positively moderates the relationships between customer needs awareness and customer profitability analysis capability.

Hypothesis 21c: Collaboration climate positively moderates the relationships between customer needs awareness and asset usefulness.

Hypothesis 21d: Collaboration climate positively moderates the relationships between customer needs awareness and value enhancement.

Hypothesis 21e: Collaboration climate positively moderates the relationships between customer needs awareness and goal achievement.

Hypothesis 22: Collaboration climate positively moderates the relationships between profit planning proficiency and goal achievement.

Hypothesis 23: Collaboration climate positively moderates the relationships between customer profitability analysis capability and goal achievement.

Hypothesis 24: Collaboration climate positively moderates the relationships between asset usefulness and goal achievement.

Hypothesis 25: Collaboration climate positively moderates the relationships between value enhancement and goal achievement.

Summary

This chapter presents the conceptual model of strategic target costing effectiveness drawn from the resource advantage theory, the contingency theory, the collaborative planning theory. Further, 25 hypotheses are developed to test the relationships between five antecedent variables (market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence), and its consequence variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement). Furthermore, this research also examines the moderating effect, collaboration climate. All hypotheses are summarized in Table 3.

The next chapter shows how the research methods are conducted. It provides an insight into the sampling method used in the data collection techniques, and the various techniques that were used to analyze the data.

Table 3: Summary of Hypothesized Relationships

Hypothesis	Description of Hypothesized Relationships
H1a	Cost data mining effectiveness will positively relate to profit planning proficiency.
H1b	Cost data mining effectiveness will positively relate to customer profitability analysis capability.
H1c	Cost data mining effectiveness will positively relate to asset usefulness.
H1d	Cost data mining effectiveness will positively relate to value enhancement.
H1e	Cost data mining effectiveness will positively relate to goal achievement.

Table 3: Summary of Hypothesized Relationships (continued)

Hypothesis	Description of Hypothesized Relationships
H2a	Level of product management flexibility will positively relate to profit planning proficiency.
H2b	Level of product management flexibility will positively relate to customer profitability analysis capability.
H2c	Level of product management flexibility will positively relate to a level of asset usefulness.
H2d	Level of product management flexibility will positively relate to value enhancement.
H2e	Level of product management flexibility will positively relate to goal achievement.
H3a	Level of cost accounting system quality will positively relate to profit planning proficiency.
H3b	Level of cost accounting system quality will positively relate to customer profitability analysis capability.
H3c	Level of cost accounting system quality will positively relate to a level of asset usefulness.
H3d	Level of cost accounting system quality will positively relate to value enhancement.
H3e	Level of cost accounting system quality will positively relate to goal achievement.
H4a	Level of competitor information richness will positively relate to profit planning proficiency.
H4b	Level of competitor information richness will positively relate to customer profitability analysis capability.
H4c	Level of competitor information richness will positively relate to a level of asset usefulness.

Table 3: Summary of Hypothesized Relationships (continued)

Hypothesis	Description of Hypothesized Relationships
H4d	Level of competitor information richness will positively relate to value enhancement.
H4e	Level of competitor information richness will positively relate to goal achievement.
H5a	Level of resource utilization integration will positively relate to profit planning proficiency.
H5b	Level of resource utilization integration will positively relate to customer profitability analysis capability.
H5c	Level of resource utilization integration will positively relate to a level of asset usefulness.
H5d	Level of resource utilization integration will positively relate to value enhancement.
H5e	Level of resource utilization integration will positively relate to goal achievement.
H6a	Level of customer needs awareness will positively relate to profit planning proficiency.
H6b	Level of customer needs awareness will positively relate to customer profitability analysis capability.
H6c	Level of customer needs awareness will positively relate to a level of asset usefulness.
H6d	Level of customer needs awareness will positively relate to value enhancement.
H6e	Level of customer needs awareness will positively relate to goal achievement.
H7	Profit planning proficiency will positively relate to goal achievement.
H8	Customer profitability analysis capability will positively relate to goal achievement.

Table 3: Summary of Hypothesized Relationships (continued)

Hypothesis	Description of Hypothesized Relationships
H9	Asset usefulness will positively relate to goal achievement.
H10	Value enhancement will positively relate to goal achievement.
H11a	Level of market culture orientation will positively relate to cost data mining effectiveness.
H11b	Level of market culture orientation will positively relate to a level of product management flexibility.
H11c	Level of market culture orientation will positively relate to cost accounting system quality.
H11d	Level of market culture orientation will positively relate to competitor information richness.
H11e	Level of market culture orientation will positively relate to resource utilization integration.
H11f	Level of market culture orientation will positively relate to customer needs awareness.
H12a	Level of inter-functional team quality will positively relate to cost data mining effectiveness.
H12b	Level of inter-functional team quality will positively relate to a level of product management flexibility.
H12c	Level of inter-functional team quality will positively relate to cost accounting system quality.
H12d	Level of inter-functional team quality will positively relate to competitor information richness.
H12e	Level of inter-functional team quality will positively relate to resource utilization integration.
H12f	Level of inter-functional team quality will positively relate to customer needs awareness.

Table 3: Summary of Hypothesized Relationships (continued)

Hypothesis	Description of Hypothesized Relationships
H13a	Cost management system excellence will positively relate to cost data mining effectiveness.
H13b	Cost management system excellence will positively relate to a level of product management flexibility.
H13c	Cost management system excellence will positively relate to cost accounting system quality.
H13d	Cost management system excellence will positively relate to competitor information richness.
H13e	Cost management system excellence will positively relate to resource utilization integration.
H13f	Cost management system excellence will positively relate to customer needs awareness.
H14a	IT capability will positively relate to cost data mining effectiveness.
H14b	IT capability will positively relate to a level of product management flexibility.
H14c	IT capability will positively relate to cost accounting system quality.
H14d	IT capability will positively relate to competitor information richness.
H14e	IT capability will positively relate to resource utilization integration.
H14f	IT capability positively relate to customer needs awareness.
H15a	Competitive turbulence will positively relate to cost data mining effectiveness.
H15b	Competitive turbulence will positively relate to a level of product management flexibility.
H15c	Competitive turbulence will positively relate to cost accounting system quality.
H15d	Competitive turbulence will positively relate to competitor information richness.

Table 3: Summary of Hypothesized Relationships (continued)

Hypothesis	Description of Hypothesized Relationships
H15e	Competitive turbulence will positively relate to resource utilization integration.
H15f	Competitive turbulence will positively relate to customer needs awareness.
H16a	Collaboration climate positively moderates the relationships between cost data mining effectiveness and profit planning proficiency.
H16b	Collaboration climate positively moderates the relationships between cost data mining effectiveness and customer profitability analysis capability.
H16c	Collaboration climate positively moderates the relationships between cost data mining effectiveness and asset usefulness.
H16d	Collaboration climate positively moderates the relationships between cost data mining effectiveness and value enhancement.
H16e	Collaboration climate positively moderates the relationships between cost data mining effectiveness and goal achievement.
H17a	Collaboration climate positively moderates the relationships between product management flexibility and profit planning proficiency.
H17b	Collaboration climate positively moderates the relationships between product management flexibility and customer profitability analysis capability.
H17c	Collaboration climate positively moderates the relationships between product management flexibility and asset usefulness.
H17d	Collaboration climate positively moderates the relationships between product management flexibility and value enhancement.
H17e	Collaboration climate positively moderates the relationships between product management flexibility and goal achievement.
H18a	Collaboration climate positively moderates the relationships between cost accounting system quality and profit planning proficiency.

Table 3: Summary of Hypothesized Relationships (continued)

Hypothesis	Description of Hypothesized Relationships
H18b	Collaboration climate positively moderates the relationships between cost accounting system quality and customer profitability analysis capability.
H18c	Collaboration climate positively moderates the relationships between cost accounting system quality and asset usefulness.
H18d	Collaboration climate positively moderates the relationships between cost accounting system quality and value enhancement.
H18e	Collaboration climate positively moderates the relationships between cost accounting system quality and goal achievement.
H19a	Collaboration climate positively moderates the relationships between competitor information richness and profit planning proficiency.
H19b	Collaboration climate positively moderates the relationships between competitor information richness and customer profitability analysis capability.
H19c	Collaboration climate positively moderates the relationships between competitor information richness and asset usefulness.
H19d	Collaboration climate positively moderates the relationships between competitor information richness and value enhancement.
H19e	Collaboration climate positively moderates the relationships between competitor information richness and goal achievement.
H20a	Collaboration climate positively moderates the relationships between resource utilization integration and profit planning proficiency.
H20b	Collaboration climate positively moderates the relationships between resource utilization integration and customer profitability analysis capability.
H20c	Collaboration climate positively moderates the relationships between resource utilization integration and asset usefulness.

Table 3: Summary of Hypothesized Relationships (continued)

Hypothesis	Description of Hypothesized Relationships
H20d	Collaboration climate positively moderates the relationships between resource utilization integration and value enhancement.
H20e	Collaboration climate positively moderates the relationships between resource utilization integration and goal achievement.
H21a	Collaboration climate positively moderates the relationships between customer needs awareness and profit planning proficiency.
H21b	Collaboration climate positively moderates the relationships between customer needs awareness and customer profitability analysis capability.
H21c	Collaboration climate positively moderates the relationships between customer needs awareness and asset usefulness.
H21d	Collaboration climate positively moderates the relationships between customer needs awareness and value enhancement.
H21e	Collaboration climate positively moderates the relationships between customer needs awareness and goal achievement.
H22	Collaboration climate positively moderates the relationships between profit planning proficiency and goal achievement.
H23	Collaboration climate positively moderates the relationships between customer profitability analysis capability and goal achievement.
H24	Collaboration climate positively moderates the relationships between asset usefulness and goal achievement.
H25	Collaboration climate positively moderates the relationships between value enhancement and goal achievement.

CHAPTER III

RESEARCH METHODS

The previous chapter explains how to thoroughly understand the relationship of strategic target costing effectiveness on goal achievement with a theoretical foundation, literature review, conceptual framework, and hypotheses development. Therefore, this chapter describes the research methods consisting of four sections. Firstly, the sample selection and data collection procedures, including the population and sample, the data collection, and a test of non-response bias are detailed. Secondly, the variable measurements are developed. Thirdly, this chapter also elaborates on the statistical method for verifying the research instrument, including a test of validity and reliability, the statistical analysis, and the regression equations which are detailed. Finally, the table of definitions and operational variables of the constructs is also presented.

Sample Selection and Data Collection Procedure

Population and Sample

This research studies the antecedents and the consequences of strategic target costing effectiveness by using the exporting gem and jewelry businesses in Thailand. The population is firm members of exporting gem and jewelry businesses in Thailand Exporter Directory of the database of the Department of Export Promotion, Ministry of Commerce in Thailand totaling 1,051 companies (Department of Export Promotion-Thailand, n.d.). Exporting gem and jewelry businesses are interesting to investigate for several reasons. Firstly, nowadays, the exporting gem and jewelry manufacturers are value added for the economy of Thailand, and Thailand has been one of the world's highest classes of producers, importers, and exporters of famous gem and jewelry for more than 50 years (Racela, Chaikittisilpa and Thoumrungroje, 2007).

Secondly, these products or services are classified as luxury products which are concerned with product differentiation strategy and benefit from reduced costs by setting a target cost, and especially, the need to launch new products in the marketplace on time to serve customer satisfaction. Thirdly, this business firm needs to be concerned

with both a suitable customer's prices and a customer's quality compared with target costs to achieve a competitive advantage and organizational goals. Fourthly, the value of products is different, flexible, and varied by following target customers more than other groups such as automobile, food, fashion, or manufacturing firms. Therefore, strategic target costing effectiveness is one type of strategic cost management which is suitable for these business groups to implement for improving higher revenue and reducing costs (Grant, 2001; Hibbets, Albright and Funk, 2003). As a result, firms have decreased costs and increased profit margin from their customers, and have improved the competitive advantage to reach goal achievement.

To survive, this business firm seeks a suitable target cost management approach to operations, such as accounting system and accounting information, marketing information, competitor information and economic environment to support decision-making in a business, and in consideration of the customer's voice (Fu, 2007; McNair, 2000), particularly in the area of strategic target costing effectiveness. Clearly, most organizations endeavor to create new products and services that have the potential to be profitable (Ellram, 2006).

Finally, most research uses case studies and survey research from business groups of computer peripherals; semiconductor, manufacturing equipment; consumer products, electronic equipment, telecom service and equipment; aerospace OEM; transportation services; and automotive. However, there is less research which used this business firm to test hypotheses in strategic target costing effectiveness by using this business group. Therefore, the exporting gem and jewelry businesses in Thailand are considered suitable to be selected as the population in this research.

The sample of this research is chosen from the exporting gem and jewelry businesses in Thailand, the database online of Thailand Exporter Directory, the Department of Export Promotion, Ministry of Commerce; and the key informant is the accounting executive (e.g. accounting manager, accounting director) of the firms. The source of our data utilized in this research is collected through a select list of 1,051 businesses. The sample was selected by using Taro Yamane (1967) to calculate the sample size. This formula was used to calculate the sample sizes for a population with 95% confidence level, and 5% sample error was considered. The calculation sample size is proposed as follows:

$$\text{Formula} \qquad n = \frac{N}{1 + N\,(e)^2}$$

Where:

n = Sample size

N = Number of population

e = Acceptable error (0.05)

Thus, $n = (1051)/\,[1+(1051 \times (0.05)^2)]$

$n = 290$

The sample size was calculated to be 290 firms. According to Aaker, Kumer and Day (2001), the acceptable response rate of the social science research will accepted at the 20% or greater response rate for a questionnaire mailing survey without an appropriate follow-up procedure. Therefore the formula was used to calculate the sample size to send questionnaires by using the acceptable response rate for a population as follows:

n = Sample size / accepted response rate

= 290 x 100 /20

= 1,450

The calculated sample size was 290 firms to which to send the questionnaires totaling 1,450 firms. However, these numbers are over the actual population, totaling 1,051. Thus, the source of our data utilized in this research was collected through a population (select list) of 1,051 exporting gem and jewelry businesses in Thailand.

Data Collection

The key informants are selected from the accounting executives of firms, because they have the major responsibility in cost management and financials including strategic target costing effectiveness in order to create a competitive advantage and meet goal achievement. The qualifications of accounting executives will concern more of a variety of knowledge as an interdisciplinary field to achieve control cost management

process, coordination and communication to other functions or departments, or inter-organization efficiency. Hence, they are knowledgeable in both accounting information and business information such as marketing information, organization culture, business outcomes, competitor information, overall internal activities, and external environments. As this is a key informant approach, the results will clearly preclude that firm level prescriptions are more valid. Therefore, a very valuable source for evaluating is the need for testing hypotheses following the different variables of the firm.

The questionnaire is an appropriate tool as the main research instrument in this research. It is a widely-used method for large-scale data collection in behavioral accounting research, because the representative sample can be collected from the chosen population in a variety of locations at low cost (Kwok and Sharp, 1998). The questionnaire design was developed from a wide review of the literature and reviewed by professional academics to improve and choose the best possible scale of measures.

In this research, the questionnaire consists of seven parts. Part one asks for personal information such as gender, age, marital status, education level, working experience, income and position. Part two is about the general information of the exporting gem and jewelry businesses in Thailand such as type of business, main customers, registered business capital, total assets of the firm, number of employees, and the age of the firm. Next, part three is related to evaluating strategic target costing effectiveness which consists of cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness.

Part four deals with the consequences of strategic target costing effectiveness which consist of profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement. Part five is about the antecedents of strategic target costing effectiveness which consist of market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence. Part six is about the collaboration climate which plays a role as a moderator variable. Finally, part seven is an open-ended question for the recommendations of the accounting executive.

The problem of data collection by using questionnaire mailing is the difficulty of securing a high response rate (Dillman, 1972). The way to increase the mail

questionnaire response is to emphasize the effects of individual techniques by using various procedures. Thus, this research used two steps for an over-all data collection design. First step was to send questionnaires: the complete questionnaires included a cover letter and business reply envelope which were sent by mail to the key informant of firms with non-follow-ups for three weeks (excluding long-weekends). Second step, follow-ups: follow-ups included a one-week postcard designed as a thank you. After three-weeks a letter was sent by certified mail, containing replacement questionnaires, and other postcard designed for follow-up only of non-respondents which facilitated more pointed communication such as by phone or email.

With respect to the questionnaire mailing, 118 surveys were undeliverable because firms had moved to unknown locations or had liquidated. Deducting the undeliverable from the original 1,051 mailed, the valid mailing was 933 surveys, from which 348 responses were returned and usable. The effective response rate was approximately 37.30%, which was higher than 20% response rate for a mail survey acceptable in social science research (Aaker, Kumar and Day, 2001), and was thus considered acceptable. Table 4 shows the results of the questionnaire mailing used for analysis in this research.

Table 4: Details of Questionnaire Mailing

Details	**Numbers**
Number of questionnaires mailing	1,051
Number of returned questionnaires	118
Number of successful questionnaire mailing	933
Received questionnaires	360
Usable questionnaires	348
Response rate	37.30%

Test of Non-Response Bias

To detect possible response bias problems between respondents and non-respondents, a t-test comparison of the demographic data (firm type, firm characteristics, type of core customers, firm capital, amount of capital, firm size, and firm age) between

early and late respondents is conducted, corresponding with the test for non-response bias by Armstrong and Overton (1977). A non-response bias was undertaken which involved assessing whether responses received were valid representing the entire population based on certain selected characteristics (Wallace and Mellor, 1988).

All respondents in this research received questionnaires which are split into two equal groups. The early respondents are the first and the late respondents are the second. Next, the first responses are used to compare with the last received from the second group mailing. Their demographic information is calculated for a t-test to show the evidence that there is no statistically significant difference between the early and the late respondents, and that the non-response bias does not pose a major problem (Armstrong and Overton, 1977).

All received questionnaires were split into two groups. Then, 174 responses from the first group mailing were used to compare with 174 responses received from the second group mailing on the basis of their demographic information, including type of business ($t = .996$, $p > 0.05$), main customers ($t = 1.529$, $p > 0.05$), registered business capital ($t = .188$, $p > 0.05$), total assets of the firm ($t = .581$, $p > 0.05$), the number of employees ($t = -1.383$, $p > 0.05$), the period of time operating in business ($t = -.268$, $p > 0.05$), and average sales revenues per year ($t = 1.487$, $p > 0.05$). The value of the test statistic (t) in all demographic information is over t calculate with p-value at the level significant 0.05. Thus, the results indicated that there was no statistically significant difference between early and late respondents and indicated a non-response bias between respondents and non-respondents in terms of demographics. As a result, a non-response bias is not a key problem in this research.

Measurements

The measurement development procedures involve the multiple items developed for measuring each construct in the conceptual model by concerning the validity (Bagozzi, Yi and Phillips, 1991). All constructs are the abstractions that cannot be directly measured or observed and should be measured by multiple items. These constructs are transformed to the operational variables for a true measurement. To measure each construct in the conceptual model, all variables are gained from the

survey and are measured by a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Table 5 presents the definition of each construct, the operational variables, scale source, and sample questions and items. Thus, the variable measurements of the dependent variable, independent variables and control variables of this research are described in the following.

Dependent Variable

Goal achievement is measured using an item scale. Goal achievement is set by linking the organization's mission, vision, and strategy to its goals (Zaccaro and Klimoski, 2011). It consists of both financial outcomes measured by increasing accomplishment in terms of revenue, profitability, market share and non-financial outcomes such as customer satisfaction and stakeholder acceptance (Durmusoglu et al., 2012).

Independent Variables

The core construct consists of six independent variables which are the dimensions of strategic target costing effectiveness: cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness. These variables are the core construct, which is the first step for testing and measurement using an item scale. The measure of each attribute depends on its definition as detailed below.

Cost data mining effectiveness is measured by the capability of the firm to manage specific data mining activities which includes the relationships among internal factors (i.e., price, product positioning, staff skills, cost allocation), external factors (economic indicators, competition, customer demographics), impact factors on sales, customer satisfaction, customer segment, corporate profits, development products, and promotions to appeal to specific customer segments

Product management flexibility is measured by the capability of the firm, which focuses on new product development in manufacturing as part of a need to serve target cost and which consists of new idea generation, knowledge integration, product innovation mindset, and value engineering to serve their performance. The usefulness of each activity helps firms to achieve their goals (Nonaka, Toyama and Konno, 2000).

Cost accounting system quality is measured by the ability to collect, analyze, and summarize customer service cost information and usefulness of cost information to determine a suitable cost following GAAP and the market price to serve customer price and quality. Additionally, it measures the ability to use suitable techniques or methods for determining the cost of projects, processes, or things through direct measurement, arbitrary assignment, or systematic and rational allocation to improve their target performance.

Competitor Information Richness is measured by the ability of the firm to analyze, and summarize competitors' cost information, focusing on cost structures of competitors based on appraisal of economies of scale, facilities, technology, and governmental relationships with product costs; perceives and provides for product differentiation and gains more customers in benchmarking and enhancing the competitive environment (Hsu and Wang, 2004; Liu and Wei, 2008).

Resource utilization integration is measured by the ability of a firm to appraise resources such as the efficiency and effectiveness of resource utilization, the potential to manage all resources including outsources for knowledge creativity, knowledge sharing, innovation and network for competitive advantage (Kratzer, Gemernden and Lettl, 2008; Pansuppawatt and Ussahawanitchakit, 2011).

Customer needs awareness is measured by the ability of a firm to use their resources such as efficiency and effectiveness by using their human resources, focusing on technological support and investment cost in market research projects, to understand and collect all customer information in the past, present, and future for decision-making and reaching the target goal.

Market culture orientation is measured by the ability of a firm to set a service mind system which is focused on customers' requirements, expectations, needs to create suitable products and services, and to continuously operate its performance improvement. Additionally, it is the ability of firm to develop production process and manage the unique and superior features which are better than their competitors (Jagersma, 2006).

Inter-functional team quality is measured by the capability of a firm consisting of three elements: ability of team quality to understand and share its knowledge, experience, and information needs for joint problem-solving; level of top

management support; and level of cooperation, relationship, and communication (Christ et al., 2008; Mahama, 2006) in order to achieve their target goal.

Cost management system excellence is measured by the firm's capability to analyze cost behavior and the ability to separate traditional financial accounting and management accounting systems for the firm's corporate direction (Brausch, 1994) by concern for: recognizing the differences between managerial and financial accounting; ability for accurate product costing; and comparing cost management to meet predefined strategic goals extrinsic to cost management, such as target costs to support goal achievement.

IT capability is measured by the ability of a firm to apply the power of IT to promote AIS to produce effective information according to user needs (Nada and Robert, 2005). These components consist of an ability about its creativity toward innovation in R&D; ability to analyze market transaction processes; and rich knowledge to solve numerous problems in the production process efficiency.

Competitive turbulence is referred to the level of competitive intensity which consists of the level of fierce competition such as price wars and advertising wars (Kumar and Shafabi, 2011), the level of entrants in the market place, and the level of risk and uncertainty in the environment. Thus, it is measured by the ability of firms to manage their resources, capacity and suitable strategies to reduce risk, increase their performance, and to achieve their target goals.

Mediating Variables

The mediating variables are the output results of strategic target costing effectiveness of firms. This research proposes strategic target costing effectiveness with four variables to be detailed below.

Profit planning proficiency is assessed by the ability to accurately forecast customer profit planning per customer in the present and future which approximates to actual performance and target goal from market share and sales volume (Chenhall, 2004; Choe, 2004) by using customer database and financial information such as revenues, costs and expenses with more accuracy, completeness, and timeliness.

Customer profitability analysis capability is measured by an ability of the firms to separate and keep core customers by setting suitable, differentiated services for

their customers in order to achieve customer satisfaction and customer loyalty by setting a suitable strategy to achieve a sustainable competitive advantage (Ryals, 2003).

Asset Usefulness is measured by the ability of a firm based on their capabilities to create new innovation by knowledge creativity, suitable products and services in order to operate their performance, increase customer satisfaction, and to sustain a competitive advantage (Lee and Wilhelm, 2010).

Value enhancement is measured by the competency of the firms in benefit creation to customers and stakeholders, and decisions on their project efficiency with information usefulness as the objective (Ponepearchan and Ussahawanitchakit, 2011).

Moderating Variables

Collaboration climate is evaluated by the ability of teams operating in a truly collaborative climate to work well together which includes an awareness of trust. These components consist of a level of relationship mindset, inter-organizational learning, complementary resources, diversity competency, and network operation.

Control Variables

The control variables include firm age and firm size which may affect the relationships between strategic target costing effectiveness and goal achievement, and its antecedent variables and consequence variables which have an effect on strategic target costing effectiveness relationships as enumerated below.

Firm age is a proxy of the firm's experience measured by the number of years in prior business. Prior research (e.g. Kenyon and Meixell, 2008) explain that firm age is significantly relative to cost management. Firms with a long time in operations will have more experience and ability to use suitable strategic cost management than firms with less experience. In this research, firm age becomes a control variable because in an environment of uncertainty and where complexity increases, it may increase managerial opportunism and reduced risk (Foster and Akdere, 2007). Firm age is represented by a dummy variable derived from two groups: group 1 = 1, meaning that a firm has been in business more than 15 years, and group 2 = 0, meaning that a firm has been in business for 15 years or less.

Firm size was measured by the total assets of the firm. Prior studies (i.e., Fullerton and Mcwatters, 2004; Chaikambang and Ussahawanitchakit, 2012) indicate

that firm size affects strategic target costing effectiveness and goal achievement, and especially has an impact on firm performance. Therefore, the total assets are included as a control variable (Arther and Busenitz, 2006). Thus, this research believes a large firm may be able to achieve superior goal achievement. Additionally, firm size is represented by a dummy variable of which two groups are: group 1=1, meaning that a firm has total assets more than 50,000,000 baht, group 2= 0, meaning that a firm has total assets 50,000,000 baht or less.

Methods

This section describes the method prepared for data analysis in the next step. All constructs in this conceptual model are developed as new scales and modified from literature review. Next, a pre-test method is deemed appropriate to be conducted to check the validity and reliability of the questionnaire. In this research, thirty cases of accounting executive information were random selected from a sampling frame of 1,051 exporting gem and jewelry businesses in Thailand. The pre-test is to check clearly and accurately the understanding of a questionnaire before using the real data collection. The statistical techniques include correlation analysis and hierarchical regression analysis. After the pre-test, the questionnaire is modified and adjusted to the most complete status to ensure its effectiveness before mailing to the respondents. Thus, the purpose of conducting the pre-test is to examine the validity and reliability of each measurement employed in the questionnaire.

Validity and Reliability

Validity refers to the degree to which instruments measure the constructs as they were intended to measure (Peter, 1979), and is defined as the accuracy of the measurement that it is concerned with, and whether the researchers are measuring what they want to measure (Kwok and Sharp, 1998). Content and construct validity of the questionnaire is thoroughly examined as follows.

Content validity is the degree to which items in an instrument reflect the content universe to which the instrument will be generalized (Boudreau, Gefen and Straub, 2001). Moreover, Nunnally and Bernstein (1994) argue that content validity is the scales containing items which are adequate to measure what is intended. The content

validity relies on subjective interpretation of the appropriateness of the items to the construct under study, the former from the point of the researcher gleaning knowledge from the literature, and the latter from professional academics. In this research, two professionals in academic research were requested to review the instrument and suggested necessary recommendations in order to ensure that all constructs were sufficient to cover the contents of the variables. Based on their feedback, some questions were deleted or adjusted accordingly to attain the best measurement.

Construct validity is a set of measured items which reflect the theoretical latent construct that those items are designed to measure (Hair et al., 2010), and refers to whether an item to measure the construct is appropriate or valid as a measurement research tool. This research tested the validity of the instrument in order to confirm that a measure or set of measures accurately represents the concept and objective of the research.

Exploratory factor analysis (EFA) is used to test for the construct validity developed from the literature reviews (Carlo and Randall, 2002), and this research is used to test the new scale of construct which consists of cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness. It also used to test for the construct validity which is adapted from prior research which consists of profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, goal achievement, market culture orientation, inter-functional team quality, cost management system excellence, IT capability, competitive turbulence, and collaboration climate. Four items are used to measure each construct that was extracted to be only one principle component.

Construct validity is evaluated by testing the convergent validity and discriminant validity to test whether items chosen for a particular construct are valid. Convergent validity refers to the degree to which two measures are designed to measure the same constructs that are related. Convergence is found if the two measures have a high correlation (Kwok and Sharp, 1998). Discriminant validity assesses the degree to which an operation is not similar to (or divergent from) other operations. Thus, this validity also means that individually measured items should represent only one construct.

The presence of cross-loadings indicates a discriminant validity problem. Convergent validity demonstrates if the items are indicators of a specific construct convergence, or share a high proportion of variance in common. In this case, the size of the factor loading is considered. Next, the case of high convergent validity and high loadings on a factor indicate that they converge on some common point. Factor loading is used to evaluate validity which should be greater than 0.40, as the rule-of-thumb (Nunnally and Bernstein, 1994).

Reliability. This research assesses the reliability of each construct to ensure the degree of consistency between multiple measurements of a variable (Hair et al., 2010). The item-to-total correlation and the inter-item correlation are used to test the internal consistency. Moreover, reliability is the extent to which measurements of the particular test are repeated. The more consistent the results given by repeated measurements are, the higher the reliability of the procedure is (Carmines and Zeller, 1979). The context of internal consistency is that the individual items should all be measuring the same construct, and thus, be highly intercorrelated. Accordingly, Cronbach's alpha coefficient (Hair et al., 2010) is commonly used as a measure of the internal consistency or reliability of the constructs. This research proposed to test the validity and the reliability of a questionnaire (using 30 questionnaires which are first returned by mail) as good qualities assure the internal consistency of the construct by Cronbach's alpha which should be greater than 0.70 (Hair et al., 2010), and factor loading, which should be greater than 0.40 (Nunnally and Bernstein, 1994). The results were presented as factor loadings and alpha coefficients in Table 5.

Table 5 shows the details of factor loading of each construct ranges from 0.633 – 0.963 which presents a value higher than 0.40 which is the cut-off score recommended by Hair et al., 2010. The lowest factor loading is for asset usefulness (0.633) and the highest factor loading is for profit planning proficiency (0.963). Thus, construct validity of this research is tapped by items in the measurement as theorized. Additionally, Cronbach's alpha coefficients range from 0.838 – 0.944. The lowest coefficient is for customer needs awareness and the highest coefficient is for cost accounting system quality. From the results, they implied that the internal consistency of the measures used in this research must be considered good for all constructs (see Table E in Appendix E).

Statistical Techniques

All of the raw data were collected, checked, encoded, and recorded in the data file before hypotheses testing were started. The basic assumption of regression analysis was tested. This research used several statistical techniques including descriptive and inferential technique such as mean, standard deviation, correlation analysis, variance inflation factor, factor analysis, and regression analysis, each of which is fully discussed below.

Table 5: Results of Validity and Reliability Testing

Constructs	n	Factor Loadings	Reliability (Alpha)
Goal Achievement (GAM)	30	0.760 – 0.923	0.887
Cost Data Mining Effectiveness (CDME)	30	0.863 -0.932	0.925
Product Management Flexibility (PMF)	30	0.858 – 0.927	0.930
Cost Accounting System Quality (CASQ)	30	0.902 – 0.948	0.944
Competitor Information Richness (CIR)	30	0.842 – 0.937	0.924
Resource Utilization Integration (RUI)	30	0.901 – 0.944	0.938
Customer Needs Awareness (CNA)	30	0.795 – 0.863	0.838
Profit Planning Proficiency (PPP)	30	0.821 – 0.963	0.905
Customer Profitability Analysis Capability (CPAC)	30	0.811 – 0.941	0.927
Asset Usefulness (AUF)	30	0.633 – 0.946	0.855
Value Enhancement (VEM)	30	0.833 – 0.914	0.890
Market Culture Orientation (MCO)	30	0.895 – 0.927	0.868
Inter-Functional Team Quality (IFTQ)	30	0.749 – 0.951	0.895
Cost Management System Excellence (CMSE)	30	0.827 – 0.900	0.889
IT Capability (ITC)	30	0.839 – 0.927	0.906
Collaboration Climate (CBC)	30	0.889 – 0.918	0.922

Correlation Analysis is a term that refers to the strength of a relationship between two variables. Correlation coefficient (r) is a coefficient that indicates the strength of the association between any two metric variables. The sign (+ or -) indicates the direction of the relationship. The value can range from +1 to -1 indicating a positive relationship, 0 indicating no relationship, and -1 indicating a perfect negative or reverse relationship. Pearson Correlation Analysis is commonly used to test the correlations among all variables especially, and to test the relationship among independent variables to have a sign of multicollinearity problems which is indicated when the inter-correlation between explanatory variables exceeds 0.90 (Hair et al., 2010). This problem occurs when any single independent variable is highly correlated with other independent variables. In other words, a variable can be explained by the other variables in the analysis of multicollinearity. However, factor analysis is used to group highly correlated variables together, and the factor score of all variables is prepared to avoid the multicollinearity problems. Then, they are evaluated by the regression analysis.

Variance inflation factors (VIFs) are an indicator to indicate a high degree of multicollinearity among the independent variables. The VIF is an index which measures the impact of collinearity among the predictors in a regression model on the precision of estimation. Typically, when a VIF value is greater than 10, it should be concerned about multicollinearity problems, while the value of a VIF that is less than 10 indicates that there is no statistically significant problem of multicollinearity between the predictor variables (Hair et al., 2010). That is, multicollinearity greatly poses a problem for multiple regression such as increasing variances of the regression coefficients, sign of correlation were not correct, limiting the size of the correlation, and that results show more statistical significance or less statistical significance than fact.

Regression Analysis. The ordinary least square (OLS) regression analysis is used to test all hypotheses following the conceptual model. The regression equation is a linear combination of the independent variables that best explains and predicts the dependent variable (Aulakh, Kotabe and Teegen, 2000). The OLS regression is appropriate for examining the relationship between the independent variables and dependent variables because both variables are a categorical and interval scale (Hair et al., 2010). The basic assumption of regression analysis was tested before to run a

regression to test the hypotheses. This process involves checking Pearson Correlation for testing linearity, and VIF test for testing the multicollinearity problems.

As aforementioned, this research analyzes the data which is calculated from the factor scores for all variables. These are prepared to avoid and reduce the mullticollinearity problems from independent variables. Then, the data is evaluated by the ordinary least squares (OLS) regression analysis. Thus, all hypotheses in this research are transformed to eighteen equations. Each equation consists of the main variables related to the hypotheses testing as described in the previous chapter. Moreover, two control variables, firm age and firm size, are included in all of those equations for hypotheses testing. The detail of each equation is presented as the following.

The investigation of the relationships between six dimensions of strategic target costing effectiveness and profit planning proficiency is presented in Equation 1 to test the hypotheses of H1(a) – H6(a) as follows:

$$\text{Equation 1: PPP} = \alpha_{01} + \beta_1 CDME + \beta_2 PMF + \beta_3 CASQ + \beta_4 CIR + \beta_5 RUI + \beta_6 CNA + \beta_7 FA + \beta_8 FS + \varepsilon$$

The investigation of the relationships between six dimensions of strategic target costing effectiveness and customer profitability analysis capability is presented in Equation 2 to test the hypotheses of H1(b) – H6(b) as follows:

$$\text{Equation 2: CPAC} = \alpha_{02} + \beta_9 CDME + \beta_{10} PMF + \beta_{11} CASQ + \beta_{12} CIR + \beta_{13} RUI + \beta_{14} CNA + \beta_{15} FA + \beta_{16} FS + \varepsilon$$

The investigation of the relationships between six dimensions of strategic target costing effectiveness and asset usefulness is presented in Equation 3 to test the hypotheses of H1(c) – H6(c) as follows:

$$\text{Equation 3: AUF} = \alpha_{03} + \beta_{17} CDME + \beta_{18} PMF + \beta_{19} CASQ + \beta_{20} CIR + \beta_{21} RUI + \beta_{22} CNA + \beta_{23} FA + \beta_{24} FS + \varepsilon$$

The investigation of the relationships between six dimensions of strategic target costing effectiveness and value enhancement is presented in Equation 4 to test the hypotheses of H1(d) – H6(d) as follows:

$$\text{Equation 4: VEM} = \alpha_{04} + \beta_{25}\,CDME + \beta_{26}\,PMF + \beta_{27}\,CASQ + \beta_{28}\,CIR + \beta_{29}\,RUI + \beta_{30}\,CNA + \beta_{31}\,FA + \beta_{32}\,FS + \varepsilon$$

The investigation of the relationships between six dimensions of strategic target costing effectiveness and goal achievement is presented in Equation 5 to test the hypotheses of H1(e) – H6(e) as follows:

$$\text{Equation 5: GAM} = \alpha_{05} + \beta_{33}\,CDME + \beta_{34}\,PMF + \beta_{35}\,CASQ + \beta_{36}\,CIR + \beta_{37}\,RUI + \beta_{38}\,CNA + \beta_{39}\,FA + \beta_{40}\,FS + \varepsilon$$

In order to test the relationships among profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement, which play a role as mediator variables and goal achievement, it is present in Equation 6 to test the hypotheses of H7 – H10 as follows:

$$\text{Equation 6: GAM} = \alpha_{06} + \beta_{41}\,PPP + \beta_{42}\,CPAC + \beta_{43}\,AUF + \beta_{44}\,VEM + \beta_{45}\,FA + \beta_{46}\,FS + \varepsilon$$

Next, this research also investigated the relationships among the antecedent variables named market culture orientation, inter-functional team quality, IT capability, and competitive turbulence on the six dimensions of strategic target costing effectiveness which are presented in Equations 7, 8, 9, 10, 11, and 12 to test the hypotheses of H11(a-f) – H15(a-f) as follows:

$$\text{Equation 7: CDME} = \alpha_{07} + \beta_{47}\,MCO + \beta_{48}\,IFTQ + \beta_{49}\,CMSE + \beta_{50}\,ITC + \beta_{51}\,CPT + \beta_{52}\,FA + \beta_{53}\,FS + \varepsilon$$

Equation 8: PMF = $\alpha_{08} + \beta_{54} MCO + \beta_{55} IFTQ + \beta_{56} CMSE + \beta_{57} ITC + \beta_{58} CPT + \beta_{59} FA + \beta_{60} FS + \varepsilon$

Equation 9: CASQ = $\alpha_{09} + \beta_{61} MCO + \beta_{62} IFTQ + \beta_{63} CMSE + \beta_{64} ITC + \beta_{65} CPT + \beta_{66} FA + \beta_{67} FS + \varepsilon$

Equation 10: CIR = $\alpha_{010} + \beta_{68} MCO + \beta_{69} IFTQ + \beta_{70} CMSE + \beta_{71} ITC + \beta_{72} CPT + \beta_{73} FA + \beta_{74} FS + \varepsilon$

Equation 11: RUI = $\alpha_{011} + \beta_{75} MCO + \beta_{76} IFTQ + \beta_{77} CMSE + \beta_{78} ITC + \beta_{79} CPT + \beta_{80} FA + \beta_{81} FS + \varepsilon$

Equation 12: CNA = $\alpha_{012} + \beta_{82} MCO + \beta_{83} IFTQ + \beta_{84} CMSE + \beta_{85} ITC + \beta_{86} CPT + \beta_{87} FA + \beta_{88} FS + \varepsilon$

Additionally, this research also investigated the role of collaboration climate as a role of the moderator variable which affects 1) the relationships among the six dimensions of strategic target costing effectiveness and their consequence variables, namely, profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement which are presented in Equations 13, 14, 15, 16, and 17 to test the hypotheses of H16(a-e) – H21(a-e). 2) The relationships among profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement on goal achievement which is present in Equation 18 to test the hypotheses of H22 – H25 as follows:

Equation 13: PPP = $\alpha_{013} + \beta_{89} CDME + \beta_{90} PMF + \beta_{91} CASQ + \beta_{92} CIR + \beta_{93} RUI + \beta_{94} CNA + \beta_{95} CBC + \beta_{96} (CDME*CBC) + \beta_{97} (PMF*CBC) + \beta_{98} (CASQ*CBC) + \beta_{99} (CIR*CBC) + \beta_{100} (RUI*CBC) + \beta_{101} (CNA*CBC) + \beta_{102} FA + \beta_{103} FS + \varepsilon$

Equation 14: CPAC = $\alpha_{014} + \beta_{104} CDME + \beta_{105} PMF + \beta_{106} CASQ + \beta_{107} CIR + \beta_{108} RUI + \beta_{109} CNA + \beta_{110} CBC + \beta_{111} (CDME*CBC) + \beta_{112} (PMF*CBC) + \beta_{113} (CASQ*CBC) + \beta_{114} (CIR*CBC) + \beta_{115} (RUI*CBC) + \beta_{116} (CNA*CBC) + \beta_{117} FA + \beta_{118} FS + \varepsilon$

Equation 15: AUF = $\alpha_{015} + \beta_{119} CDME + \beta_{120} PMF + \beta_{121} CASQ + \beta_{122} CIR + \beta_{123} RUI + \beta_{124} CNA + \beta_{125} CBC + \beta_{126} (CDME*CBC) + \beta_{127} (PMF*CBC) + \beta_{128} (CASQ*CBC) + \beta_{129} (CIR*CBC) + \beta_{130} (RUI*CBC) + \beta_{131} (CNA*CBC) + \beta_{132} FA + \beta_{133} FS + \varepsilon$

Equation 16: VEM = $\alpha_{016} + \beta_{134} CDME + \beta_{135} PMF + \beta_{136} CASQ + \beta_{137} CIR + \beta_{138} RUI + \beta_{139} CNA + \beta_{140} CBC + \beta_{141} (CDME*CBC) + \beta_{142} (PMF*CBC) + \beta_{143} (CASQ*CBC) + \beta_{144} (CIR*CBC) + \beta_{145} (RUI*CBC) + \beta_{146} (CNA*CBC) + \beta_{147} FA + \beta_{148} FS + \varepsilon$

Equation 17: GAM = $\alpha_{017} + \beta_{149} CDME + \beta_{150} PMF + \beta_{151} CASQ + \beta_{152} CIR + \beta_{153} RUI + \beta_{154} CNA + \beta_{155} CBC + \beta_{156} (CDME*CBC) + \beta_{157} (PMF*CBC) + \beta_{158} (CASQ*CBC) + \beta_{159} (CIR*CBC) + \beta_{160} (RUI*CBC) + \beta_{161} (CNA*CBC) + \beta_{162} FA + \beta_{163} FS + \varepsilon$

Equation 18: GAM = $\alpha_{018} + \beta_{164} PPP + \beta_{165} CPAC + \beta_{166} AUF + \beta_{167} VEM + \beta_{168} CBC + \beta_{169} (PPP*CBC) + \beta_{170} (CPAC*CBC) + \beta_{171} (AUF*CBC) + \beta_{172} (VEM*CBC) + \beta_{173} FA + \beta_{174} FS + \varepsilon$

Where,

GAM = Goal Achievement
CDME = Cost Data Mining Effectiveness
PMF = Product Management Flexibility
CASQ = Cost Accounting System Quality
CIR = Competitor Information Richness
RUI = Resource Utilization Integration
CNA = Customer Needs Awareness
PPP = Profit Planning Proficiency
CPAC = Customer Profitability Analysis Capability
AUF = Asset Usefulness
VEM = Value Enhancement
MCO = Market Culture Orientation
IFTQ = Inter-Functional Team Quality
CMSE = Cost Management System Excellence
ITC = IT Capability
CPT = Competitive Turbulence
CBC = Collaboration Climate
FA = Firm Age
FS = Firm Size
β = Regression Coefficient
α = Constant
ε = Error

Summary

This chapter details the research methods for gathering data and examining all constructs in the conceptual model to answer the research question and research hypotheses. The content involves the sample selection and data collection procedure, including the population and sample of the exporting gem and jewelry businesses in Thailand totaling 1,051companies. This data collection was drawn from the Thailand Exporter Directory which is the database online of the Department of Export Promotion,

Ministry of Commerce (search on March 28, 2103), and the questionnaire mail survey. The variable measurements were followed for all variables in the conceptual model. Moreover, the statistical techniques and instrumental verifications including the test of validity and reliability were presented. Finally, in Table 4, it summarized the definition of each construct, operational variables, scale sources, and sample questions and items. The results of the hypotheses testing were revealed in the next chapter followed by the discussion. Additionally, the next chapter described respondent characteristics and descriptive statistics as well.

Table 6: Definitions and Operational Definitions of Constructs

Construct	Definition	Operational Definition	Scale Source
Dependent Variable			
Goal Achievement (GAM)	Firm's strategy to direct their followers towards achieving organizational goals by linking the organization's mission, vision, implement their plan and policy to succeed their goals (Zaccaro and Klimoski, 2011) which is sets and accepted by top leaders and includes challenging statements and ideas that can lead to effective implementation in all functions (Hunt, 2004; Koste and Malhotra, 2000).	It consists of both financial outcomes measured by increasing accomplishment in terms of revenue, profitability, market share and non-financial outcomes such as customer satisfaction and stakeholder acceptance (Durmusoglu et al., 2012).	Adapt from Ninlaphay and Ussahawanitchakit, (2012)

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Main Variables			
Strategic Target Costing Effectiveness (STCE)	Refers to the success process implementation as one of organization strategy that enables achieving a target product profit margin by create new product development while realizing customer requirement, strong relationship with suppliers cross-functional team based efficacy and performance effectiveness of resource utilization integration, representatives from procurement, marketing, manufacturing, process engineering, quality assurance, and R&D (Ellram, 2000).	Cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness.	New scale

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Cost Data Mining Effectiveness (CDME)	The capability to mange a specific cost process of a generation of information and data mining activities which adopt up-to-date data analysis tools and software that might involve the use of ICT and specific statistical analysis (Thuraisingham, 2000), and the ability of knowledge creation through collect, classify, and variety tools in order to analyze the useful information of the cost accounting database of all functions, suppliers and customers for decision making.	The capability of the firm to manage specific data mining activities which includes the relationship among internal factors, external factors, impact factors on sales, customer satisfaction, customer segment, corporate profits, development products, and promotions to appeal to specific customer segments.	New scale
Product management flexibility (PMF)	The ability of firms to manage new production activities effectiveness (such as employs new cost production process for reducing non-value added activities), the creativity of value	The capability of the firm, which focuses on NPD as part of a need to serve target cost which consists of new idea generation, knowledge integration, product innovation mindset,	New scale

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Product management flexibility (PMF)	engineering to redesign the product, serve customer satisfaction achievement, product competitiveness and value enhancement (Day, 1994; Sivakuma and Nakata, 2003) as parts of that need for serving the target goals the (Hertensteign and Platt, 2000).	and value engineering to serve their performance (Day, 1994; Sivakuma and Nakata, 2003).	New scale
Cost Accounting System Quality (CASQ)	The high performance process for tracing various input costs to an organization's products or services and the capability to operate all function of cost management system, to collect and analyze cost information analysis, and ability to use a suitable traditional accounting form in order to decision making (Barfield, Raiborn, and Kinney, 2003; Chaikambang and Ussahawanitchakit, 2012).	The ability to collect, analyze, and summarize customer service cost information and usefulness of cost information to serve customer price and quality, and the ability to use suitable techniques or methods for determining the cost of projects, processes, or things through direct measurement, arbitrary assignment, or systematic and rational allocation to improve their target performance.	New scale

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Competitor information richness (CIR)	Firm's perception about concentration of competition for product differentiation and product cost of their competitor in market and firm's ability to collect and analyze data to information usefulness for decision making, react to changing of demand uncertainty and provide the product difference and gaining more customers in enhancing of competitive environment (Liu and Wei, 2008).	The ability of the firm to analyze, and summarize competitors' cost information, focusing on cost structures of competitors based on appraisal of economies of scale, facilities, technology, and governmental relationships with product costs , perceives and provides for product differentiation and gaining more customers in benchmarking and enhancing the competitive environment (Hsu and Wang, 2004; Liu and Wei, 2008).	New scale
Resource Utilization Integration (RUI)	Fruitfulness of resource integration both of tangible and intangible assets include knowledge, skill and experiences,	The ability of firm to appraise resources toward minimizing the resources on economizing, including the use of shared resources	New scale

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Resource Utilization Integration (RUI)	innovation technology, know-how and opportunity between inter-functional team and inter-organizational team for support the work of business processes to achieve corporate target costing (Barney, 1991; Ray, Barney and Muhanna, 2004).	efficiently such as information sharing, techniques and know-how sharing, opportunity sharing including new process.	New scale
Customer needs awareness (CNA)	Firm's awareness in customer in order to remember and understand better what is their customer requirement, customer need and customer expectation (Ruekert, 1992), behaviors, tasted, needs, and preferences of customer in the past, present, and future.	The ability of firm to use their resources such as human resources, technological support and investment cost in market research project to understand and collect customer information.	New scale

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Mediating Variables			
Profit Planning Proficiency (PPP)	The ability to forecast and increase more profit planning accurately per customers, the ability to analyze profit margin based on each customer of the past, present, and future in order to analyze strategies and evaluate the trend of firm performances in the current and the future periods (Chenhall, 2004; Choe, 2004)	The ability to accurately forecast customer profit planning per customer in the present and future nearly closed actual performance and target goal from market share and sales volume.	Adapt from Rattanaphaptham and Ussahawanitchakit (2010).
Customer Profitability Analysis Capability (CPAC)	The ability of firms to reach target goals by separate and classify core customers with long-term lifetime and profit margin from other groups, and the ability to use their suitable strategies to keep	An ability of the firms to separate and keep core customers by setting suitable differentiate services to their customers in order to achieve customer satisfaction and customer loyalty by setting a suitable strategy to achieve a sustainable	Adapt from Sansook and Ussahawanitchakit (2010).

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Customer Profitability Analysis Capability (CPAC)	each customer profit margin, and to increase their core customers in the present and the future in order to achieve goal (Guilding and McManus, 2002).	competitive advantage (Ryals, 2003).	Adapt from Sansook and Ussahawanitchakit (2010).
Asset Usefulness (AUF)	Ability to use firm's resources effectiveness and capabilities that provide benefit while other firms cannot have and take advantage of those resources and capabilities via price or cost, quality of products or services, delivery reliability, new product innovation, new brands, and time to market.	The ability of firm based on their capabilities to create sustainable competitive advantage of new product development in marketplace with on time, usefulness of creativity knowledge, skills and experience sharing to create valuable ITA.	Adapt from Pansupawatt and Ussahawanitchakit (2011).

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Value Enhancement (VEM)	Firm's capability to launch new product and service to achieve customer satisfaction and decisions on their project efficiency with information usefulness included both of financial and non-financial information, market value and environmental risk.	The competency of firms in benefit creation to customers and stakeholders, and decisions on their project efficiency with information usefulness as objectivity.	Adapt from Pongpearjan and Ussahawanitchakit (2011).
Antecedent Variables			
Market Culture Orientation (MCO)	Firms' overall culture that refers to pattern of share values and belief that help employees understand and believe the market function and thereby provides them with norms for behavior in the firm, and the importance the firm as a whole places on marketing and to the way in which marketing activities are executed in the firm.	The ability of firm to develop their products with unique and superior features which are better than those competitors and has view of the future of firms about segmentation, target market, product positioning and marketing mix.	Adapt from Syers and Ussahawanitchakit, (2012)

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Inter-Functional Team Quality (IFTQ)	The relationship on collective activity between functional or departmental to achieve a collective benefit of organization, compared to other constructions. (Payan et al., 2007).	ability of team quality to understand and sharing i.e. resources, competencies, to joint problem solving; top management support; and cooperation, relationship and communication	Adapt from Boonmunewai and Ussahawanitchakit, 2010)
Cost Management System Excellence (CMSE)	The proficiency of users knowledge and efficacy of cost accounting systems which can link subsystems of accounting, stability, ease of use, speed, easy maintenance, effective communication, user satisfaction (Harzallah and Vernadat, 2002).	Firm's capability to analyze cost behavior and ability to separate traditional financial accounting and management accounting systems to firm's corporate direction (Brausch, 1994).	Adapt from Yeunyoung and Ussahawanitchakit (2009)

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
IT Capability (ITC)	Ability of firms' innovation technology base implementation or physical infrastructure and other information technology support, IT system implementation which integrates and utilizes data from a common database for generate information to operation and decision making (Chapman, 2005).	Three components : ability about their creativity toward innovation with R&D; ability to analyze market transaction process; and wealthy knowledge to solve numerous problems in production process efficiency.	Adapt from Yeunyoung and Ussahawanitchakit (2009)
Competitive Turbulence (CPT)	Refers competitive intensity and defines as situations where competition among competitors in the market is violent and lacks of opportunities for future growth (Auh and Menguc, 2005).	Level of competitive intensity which consists of level of fierce competition as price war and advertising war (Kumar and Shafabi, 2011); level of entrants of competitors in market place; and the level of risk and uncertainty environment.	Adapt from Chai-monphaisal and Ussahawanitchakit (2010).

Table 6: Definitions and Operational Definitions of Constructs (Continued)

Construct	Definition	Operational Definition	Scale Source
Moderating Variable			
Collaboration Climate (CBC)	Described teams operating in a truly collaborative climate work well together which a clearly structure team and well defined, willing to share and based on three elements of trust.	Trust and level of relationship mindset; inter-organizational learning; complementary resources; diversity competency; and network operation.	Adapt from Yasamon and Ussahawanitchakit (2011).
Control Variables			
Firm age (FA)	Number of years firm in operation in Gems and Jewelries Exporting Business Firms in Thailand	Dummy variables Group 1 = 1, >15 years, Group 2 = 0, ≤15 years	Adapt from Chaikambang and Ussahawanitchakit (2012).
Firm size (FS)	Total assets of Gems and Jewelries Exporting Businesses in Thailand	Dummy variables Group 1 = 1, > 50,000,000 Baht Group 2 = 0, ≤ 50,000,001 Baht	Adapt from Chaikambang and Ussahawanitchakit (2012).

CHAPTER IV

RESULTS AND DISCUSSION

This chapter demonstrates the results of hypotheses testing which are organized as follows. The first section presents the respondent characteristics and main characteristics of exporting gem and jewelry businesses in Thailand of which accounting executives of the firms are the unit of analysis in this research. Secondly, the hypotheses testing by using multiple regression analysis and results are reported. Furthermore, descriptive statistics and correlation analysis are also included in this section. Finally, critical points of the results are discussed to truly understand how six dimensions of strategic target costing effectiveness affects their consequences, consisting of profit planning proficiency, customer profit analysis capability, asset usefulness, and value enhancement. Additionally, the antecedents consisting of market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence have an impact on six dimensions of strategic target costing effectiveness. Especially, the collaboration climate affects the relationship among six dimensions of strategic target costing effectiveness and consequence variables consisting of profit planning proficiency, customer profit analysis capability, asset usefulness, value enhancement, and goal achievement. The summary of all hypotheses testing is included in Table 18.

Respondent Characteristics and Descriptive Statistics

The key informants in this research are the accounting executives of exporting gem and jewelry businesses in Thailand. The respondent characteristics and the main characteristics of these businesses were explained by the demographic characteristics, including personal information (gender, age, marital status, educational level, work experience, average salary per month, and current position), and firm information (business owner type, type of business, main customers, registered business capital, total assets of the firm, number of employees, the period of time operating in business, and average sales revenues per year) as follows.

Respondent Characteristics

The results, presenting demographic characteristics of personal information, totaling 348 key participants, show that 65.23% of respondent participants are female and 34.77% are male. The age spans of respondent participants are: between 30 – 40 years old (45.69%), between 41 – 50 years old (33.05%), more than 50 years old (18.10%), and less than 30 years old (3.16%), respectively. The status of all participants is: married (60.63%), single (35.06%), and divorced (4.31%). The education levels of respondent participants are mostly higher than Bachelor's degree (51.44%) and Bachelor's degree or lower (48.56%). Most respondent participants have working experience in the firm of more than 15 years (41.09%), 11 – 15 years (27.59%), 5 – 10 years (27.30%), and less than 5 years (4.02%). The average incomes per month of respondent participants are 40,000 – 60,000 baht (41.95%), less than 40,000 baht (25.29%), over 80,000 baht (20.69%), and 60,001 – 80,000 baht (12.07%), respectively. Finally, the working positions at present of the respondents are mainly accounting managers (52.30%), accounting directors (16.09%), and others (31.69%). For all of the details, see also Appendix C.

Firm Characteristics

The findings of 348 exporting gem and jewelry businesses' demographic characteristics are described in terms of business form. Most firms are company limited (72.13%) and partnerships (27.87%), respectively. Moreover, the types of businesses are Thai owned business (67.82%), foreign business but operated in Thailand as a subsidiary branch (21.55%), and a consortium or joint venture with foreign businesses (10.63%). Main customers consist of business firms (56.61%), persons (39.66%), and others (3.73%). Most business capital registered less than 10,000,000 baht (41.96%), 10,000,000 – 50,000,000 baht (41.09%), 50,000,001 – 90,000,000 baht (11.78%), and more than 90,000,000 baht (5.17%), respectively. The total assets of firm respondents are 10,000,000 – 50,000,000 baht (39.08%), less than 10,000,000 baht (32.18%), 50,000,001 – 90,000,000 baht (16.38%), and more than 90,000,000 baht (12.36%). The most number of employees in the organizations are less than 50 persons (43.97%), 50 – 100 persons (25.57%), 101 – 150 persons (16.95%), and more than 150 persons (13.51%), respectively. In addition, the period of time operating in business is more than 15 years (50.58%), 11 – 15 years (24.71%), 5 – 10 years (16.95%), and less than 5 years (7.76%), respectively.

Finally, most of the firm's average revenues per year are 10,000,000 – 30,000,000 baht (34.48%), less than 10,000,000 baht (34.20%), more than 50,000,000 baht (16.95%), and 30,000,001 – 50,000,000 baht (14.37%), respectively. For more details see also Appendix D.

Descriptive Statistics

The analysis of descriptive statistics describes the basic characteristics of variables including mean and standard deviation. In other words, the descriptive statistics are used to analyze the basic features of the data in this research. The descriptive statistics of all variables of 348 usable respondents is demonstrated in Tables 7, 8, 10, 12, and 14. All variables are obtained from the survey and are measured by a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) according to Chapter 3.

The descriptive statistics of six dimensions of strategic target costing effectiveness, antecedent variables and consequence variables are shown in Table 7. The results show that the mean scores of six dimensions of strategic target costing effectiveness consisting of cost data mining effectiveness (3.863), product management flexibility (3.878), cost accounting system quality (3.963), competitor information richness (3.711), resource utilization integration (3.708), and customer needs awareness (4.005), are rather high. The standard deviation value of these variables is between 0.669 – 0.868. It indicates that exporting gem and jewelry businesses in Thailand recognizes and is concerned about the benefits of strategic target costing effectiveness and the importance of doing managerial accounting practice.

The mean scores of the consequences of strategic target costing effectiveness consisting of profit planning proficiency (3.711), customer profitability analysis capability (3.846), asset usefulness (3.800), value enhancement (3.807), and goal achievement (3.930), are rather high, the same as six dimensions of strategic target costing effectiveness, while the standard deviation value of these variables is between0.690 – 0.759. Additionally, the results also indicate the mean score of the antecedent variables consist of market culture orientation (4.153), inter-functional team quality (3.843), cost management system excellence (3.983), IT capability (3.876), competitive turbulence (4.082), moderator variable – collaboration climate (4.169), and control variables consisting of firm age (0.510) and firm size (0.320), while the standard

Table 7: Descriptive Statistics and Correlation Matrix of Variables

Variables	GAM	CDME	PMF	CASQ	CIR	RUI	CNA	PPP	CPAC	AUF	VEM	MCO	IFTQ	CMSE	ITC	CPT	CBC	FA	FS
Mean	**3.930**	**3.863**	**3.878**	**3.963**	**3.711**	**3.708**	**4.005**	**3.711**	**3.846**	**3.800**	**3.807**	**4.153**	**3.843**	**3.983**	**3.876**	**4.082**	**4.169**	**0.510**	**0.320**
S.D.	**0.690**	**0.678**	**0.754**	**0.755**	**0.868**	**0.771**	**0.669**	**0.748**	**0.711**	**0.736**	**0.759**	**0.657**	**0.779**	**0.740**	**0.793**	**0.653**	**0.649**	**0.501**	**0.468**
GAM																			
CDME	.716**																		
PMF	.735**	.769**																	
CASQ	.748**	.759**	.739**																
CIR	.774**	.696**	.746**	.794**															
RUI	.748**	.707**	.739**	.738**	.755**														
CNA	.696**	.624**	.664**	.672**	.649**	.725**													
PPP	.796**	.676**	.673**	.749**	.767**	.729**	.623**												
CPAC	.804**	.684**	.707**	.738**	.781**	.766**	.698**	.835**											
AUF	.811**	.691**	.714**	.709**	.743**	.754**	.682**	.764**	.790**										
VEM	.858**	.673**	.722**	.719**	.763**	.756**	.686**	.797**	.795**	.855**									
MCO	.726**	.562**	.594**	.593**	.603**	.616**	.609**	.662**	.665**	.649**	.684**								
IFTQ	.645**	.475**	.460**	.516**	.524**	.601**	.554**	.587**	.637**	.640**	.649**	.644**							
CMSE	.742**	.590**	.614**	.666**	.639**	.647**	.614**	.682**	.684**	.684**	.698**	.734**	.755**						
ITC	.753**	.613**	.607**	.636**	.660**	.643**	.597**	.725**	.694**	.725**	.714**	.636**	.683**	.735**					
CPT	.705**	.594**	.591**	.641**	.599**	.579**	.579**	.643**	.646**	.630**	.670**	.666**	.623**	.735**	.702**				
CBC	.598**	.488**	.488**	.539**	.511**	.515**	.490**	.515**	.516**	.468**	.540**	.557**	.506**	.624**	.586**	.655**			
FA	.060	.031	.011	.010	.004	.009	.139**	.079	.081	.067	.028	.103	.070	.072	.015	.010	.078		
FS	.093	.090	.042	.142**	.089	.104	.101	.176**	.125*	.091	.072	.144**	.122*	.147**	.088	.156**	.148**	.238**	

**p<.01, *p<.05

deviation value of these variables is between 0.468 – 0.793. It indicates that exporting gem and jewelry businesses in Thailand have a level of high degree in all consequences, antecedents, and one moderator variable.

Correlation analysis

A bivariate correlation analysis of Pearson Correlation is conducted on all variables in this research. The correlation analysis results explore the relationships among variables and multicollinearity problems. A correlation matrix can prove the correlation between two variables and verify multicollinearity problems by intercorrelations among independent variables. Table 7 presents the results of the correlation analysis of all constructs and reveal that all variables, excluding control variables (firm age and firm size) have a correlation between 0.460 – 0.858. The lowest correlation coefficient (r) is a correlation between inter-function team quality and product management flexibility (r = 0.460). The highest correlation coefficient is a correlation between value enhancement and goal achievement (r = 0.858). It indicates that value enhancement and goal achievement has strong positive relationship because the correlation coefficient (r) 0.858 is nearly closed 1.

Most of these correlations are less than 0.80 as recommended by Hair et al. (2010). However, there are some independent variables which have their correlations higher than 0.80 – profit planning proficiency and customer profitability analysis capability ($r = 0.835$, $p < .01$), and asset usefulness and value enhancement ($r = 0.855$, $p < .01$). Next, this research tests the variance inflation factors (VIF) which are used to test the correlations variables and verify multicollinearity problems. The results show the VIF range is between 1.012 – 4.988 which the maximum value of VIF is below the cut-off value of 10 (Hair et al., 2010). Hence, the overall results indicate no significant muliticollinearity problems in this research.

Hypotheses Testing and Results

The Effects of Strategic Target Costing Effectiveness on Its Consequences

The study Investigates the relationships between six dimensions of strategic target costing effectiveness (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization

integration, and customer needs awareness), and their consequence variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement). The investigation of the relationships between six dimensions of strategic target costing effectiveness and their consequence variables is presented in Equation 1- 5 to test the hypotheses of H1(a-e) – H6(a-e) as shown in Figure 6. The correlations between six dimensions of strategic target costing effectiveness and their consequences are illustrated in Table 8. The results of OLS regression analysis of these variables is presented in Table 9.

Table 8: Correlation Matrix of Strategic Target Costing Effectiveness and Its Consequence Variables

Variables	PPP	CPAC	AUF	VEM	GAM	CDME	PMF	CASQ	CIR	RUI	CNA	FA	FS
Mean	3.711	3.846	3.800	3.807	3.930	3.863	3.878	3.963	3.711	3.708	4.005	0.510	0.320
S.D.	0.748	0.711	0.736	0.759	0.690	0.678	0.754	0.755	0.868	0.771	0.669	0.501	0.468
PPP													
CPAC	**.835****												
AUF	.764**	.790**											
VEM	.797**	.795**	**.855****										
GAM	.796**	.804**	..811**	.858**									
CDME	.676**	.684**	.691**	.673**	.716**								
PMF	.673**	.707**	.714**	.722**	.735**	.769**							
CASQ	.749**	.738**	.709**	.719**	.748**	.759**	.739**						
CIR	.767**	.781**	.743**	.763**	.774**	.696**	.746**	.794**					
RUI	.729**	.766**	.754**	.756**	.748**	.707**	.739**	.738**	.755**				
CNA	.623**	.698**	.682**	.686**	.696**	.624**	.664**	.672**	.649**	.725**			
FA	.079	.081	.067	.028	.060	.031	.011	.010	.004	.009	.139**		
FS	.176**	.125*	.091	.072	.093	.090	.042	.142**	.089	.104	.101	.238**	

**p<.05, *p<.10

In table 8, the results indicate the correlation coefficient (r) of six dimensions of strategic target costing effectiveness (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness), their

consequence variables. The correlation coefficient (r) is between 0.623 – 0.858. Six dimensions of strategic target costing effectiveness are significantly and strong positively correlated with profit planning proficiency ($r = 0.676$, $r = 0.673$, $r = 0.749$, $r = 0.767$, $r = 0.729$, $r = 0.623$; $p<0.01$), customer profitability analysis capability ($r = 0.684$, $r = 0.707$, $r = 0.738$, $r = 0.781$, $r = 0.766$, $r = 0.698$; $p<0.01$), asset usefulness ($r = 0.691$, $r = 0.714$, $r = 0.709$, $r = 0.743$, $r = 0.754$, $r = 0.682$; $p<0.01$), value enhancement ($r = 0.673$, $r = 0.722$, $r = 0.719$, $r = 0.763$, $r = 0.756$, $r = 0.686$; $p<0.01$), and goal achievement ($r = 0.716$, $r = 0.735$, $r = 0.748$, $r = 0.774$, $r = 0.748$, $r = 0.696$; $p<0.01$), respectively. It implies that all six dimensions of strategic target costing effectiveness have strong positive correlate with all consequence variables. However, firm size has only significantly and positively correlated with profit planning proficiency ($r =.176$; $p<0.01$), customer profitability analysis capability ($r = .125$; $p<0.05$), cost accounting system quality ($r = .142$; $p<0.01$), and firm age ($r = .238$; $p<0.01$), while firm age has only significantly and positively correlated with customer needs awareness ($r = .139$; $p<0.01$), and firm size ($r = .238$; $p<0.01$).

Additionally, the results indicate the significant positive correlation coefficient among independent variables (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness) are between 0.624 – 0.794. It indicates that there is strong positive correlation among independent variables. However, all correlation coefficients among independent variables are less than 0.80. Therefore, as suggested by Berry and Feldman (1985) and Hair et al. (2010), the multicollinearity problems are of no concern for this analysis. With regard to potential problems relating to multicolliearity, this research tests variance inflation factors (VIF) which are used to test the correlations among six dimensions of strategic target costing effectiveness and their consequence variables. In Table 9, the VIF range, which is between is 1.012 -3.823, is well below the cut-off value of 10 (Hair et al., 2010), meaning all dimensions of strategic target costing effectiveness management are not significantly correlated with each other. Therefore, there are no significant multicollinearity problems confronted.

Table 9: The Results of OLS regression Analysis of Strategic Target Costing Effectiveness and Its Consequence Variables[a]

Independent Variables	Dependent Variables				
	PPP	**CPAC**	**AUF**	**VEM**	**GAM**
CDME	**.104***	.071	**.132****	.048	**.134****
	(.060)	(.054)	**(.059)**	(.060)	**(.052)**
PMF	.009	.049	**.109***	**.137****	**.105****
	(.057)	(.051)	**(.056)**	**(.057)**	**(.049)**
CASQ	**.215*****	**.093***	.050	.078	**.109****
	(.060)	**(.053)**	(.059)	(.059)	**(.057)**
CIR	**.292*****	**.271*****	**.209*****	**.254*****	**.226*****
	(.050)	**(.044)**	**(.049)**	**(.050)**	**(.043)**
RUI	**.210*****	**.222*****	**.242*****	**.232*****	**.136*****
	(.055)	**(.050)**	**(.054)**	**(.055)**	**(.048)**
CNA	.025	**.168*****	**.164*****	**.180*****	**.165*****
	(.054)	**(.049)**	**(.054)**	**(.054)**	**(.047)**
FA	.077	.067	.056	.004	.041
	(.048)	(.043)	(.048)	(.048)	(.042)
FS	**.110****	.032	-.007	-.026	-.008
	(.051)	(.046)	(.051)	(.051)	(.045)
Adjusted R^2	**.673**	**.708**	**.671**	**.683**	**.707**

***p<.01, **p<.05, *p<.10, Beta coefficients with standard error in parenthesis

[a] VIF test in OLS regression analysis is between 1.096 – 3.823

Table 9 presents the results of OLS regression analysis in both the effects of six dimensions of strategic target costing effectiveness consisting of cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness on consequence variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement). The Hypotheses 1 (a-e) – 6(a-e) predicted positive relationships. The results are as follows.

First, competitor information richness (CIR) has strong positive impact on all consequence variables consisting of profit planning proficiency ($\beta_4 = 0.292$, $\rho<0.01$), customer profitability analysis capability ($\beta_{12} = 0.271$, $\rho<0.01$), asset usefulness (β_{20} =

0.209, ρ<0.01), value enhancement (β_{28} = 0.254, ρ<0.01), and goal achievement (β_{36} = 0.226, p<0.01). *Hence, Hypotheses 4(a-e) are fully supported.*

Competitor information richness can influence operations management such as investment behavior, production quantity, product cost, and pricing policy (Heinen and Hoffjan, 2005), which should provide the specialized valuable information for managers to conduct their work and use in decision-making. It also include benchmarking of all competitor's cost information to planning and controlling in business and beneficial accounting managers of understanding and decision-making for suitable strategy for operation and increase their performances in order to reach their target goals (Chaikambang and Ussahawanitchakit, 2012). Thus, this research shows the results as being the same as the literature review.

Likewise, resource utilization integration (RUI) has also strong positive impact on all consequences consisting of profit planning proficiency (β_5 = 0.210, ρ<0.01), customer profitability analysis capability (β_{13} = 0.222, ρ<0.01), asset usefulness (β_{21} = 0.242, ρ<0.01), value enhancement (β_{29} = 0.232, ρ<0.01), and goal achievement (β_{37} = 0.136, p<0.01). *Hence, Hypotheses 5(a-e) are fully supported.*

Following the resource advantage theory resource utilization integration help firms to reduce cost and increase the efficient use of share resources such as IT channel that has access to networks and the internal commitment to internal markets that affects the strategy development of firms to achieve their goals (Solberg and Durrieu, 2006). These results imply that firms which more concern and concentrate on resource utilization integration with these components as a key success factor of competitive advantage will becomes increasingly important for the firm's performance and succeed in their target goal than firms which less concern and concentrate on resource utilization integration (O' Donnell and Jeong, 2000).

Second, customer needs awareness (CNA) has a strong positive impact on customer profitability analysis capability (β_{14} = 0.168, ρ<0.01), asset usefulness (β_{22} = 0.164, ρ<0.01), value enhancement (β_{30} = 0.180, ρ<0.01), and goal achievement (β_{38} = 0.165, p<0.01). However, it has no positive impact on profit planning proficiency (β_6 = 0.025, ρ>0.10).

Customer needs awareness focuses on marketing integration strategy which refers to ability of the firm to identify different customer demands or customer needs,

ability to translate customer needs to solve the appropriate problems which are critical for outside customers as to their need for other departmental operations (Engelen and Brettel, 2011). It also focuses on customer satisfaction which has an important and crucial position in company goals (Sarokolaee, Taghizadeh and Ebrati, 2012). It can improve the rate of success in new product success and help a firm to achieve a target goal. *Thus, Hypothesis 6 (b-e) are supported.*

However, customer needs awareness has no positive effect on profit planning proficiency. Firstly, customer needs awareness can improve firm performance and create higher levels of participation and long-term membership in a brand community and increase the likelihood of adopting a successful, new product from the brand (Thomson and Sinha, 2008).

Secondly, concern in customer needs awareness has limitations between cost and benefit. It increases firm target costs (such as increase quality and cost of product and operating expenses) which has an impact on financial performance (Ellram, 2006), but it will increase market performance to increase sales and customer loyalty in short and long-term performance. Regarding the importance of customer value in present century, the companies are forced to use this strategy in order to survive in the markets. Additionally, the cost of maintaining the old customers and creating new customers is difficult to estimate in the short-run. It is suggested that different industries should notice systems in which the customer and customer value is considerably observed because their customers need more care and services compared with the customer in the past (Sarokolaee, Taghizadeh and Ebrati, 2012). Hence, the Hypothesis 6(e) may not be significant in the short-term because of the effect on target cost to reduce firm performance in short-run, and has no effect on profit planning proficiency. However, it has a positive impact on goal achievement directly and through other consequence variables. *Hence, Hypothesis 6(a) is not supported.*

Third, cost data mining effectiveness (CDME) has a positive impact on profit planning proficiency ($\beta_1 = 0.104$, $\rho<0.10$), asset usefulness ($\beta_{17} = 0.132$, $\rho<0.05$), and goal achievement ($\beta_{33} = 0.134$, $p<0.05$), while it has no positive impact on customer profitability analysis capability ($\beta_9 = 0.071$, $\rho>0.10$), and value enhancement ($\beta_{25} = 0.048$, $\rho>0.10$).

Cost data mining is the process of cost analyzing and summarizing data into cost useful information from different perspectives. It allows users to analyze cost information from many different dimensions or angles, categorizes it, and summarizes the relationships identified. Thus, this result shows that cost data mining has increased more useful information and firm financial performance process by transforming data into valuable and actionable knowledge to gain a competitive advantage such as profit planning proficiency, asset usefulness, and goal achievement (Nemati and Barko, 2003). *Hence, Hypothesis 1 (a, c, e) are supported*

However, it has a limitation on cost and benefit. The cost of maintaining a system of cost data mining effectiveness is very high and increases the cost of firm performance, especially, allocation cost in the products and services which could not maintain their core customers. Additionally, It increases firm target costs (such as increased quality and cost of product and operating expenses) which has impact on financial performance (Ellram, 2006); but it will increase market performance to increase sales and customer loyalty in short and long-term performance. Hence, the Hypothesis 1(b, e) may not be significant in the short-term because of the effect on target cost due to reduced firm performance in the short-run and has no effect on customer profitability analysis capability, and value enhancement. However, it has a positive impact on goal achievement directly and through other consequence variables. *Hence, Hypothesis 1(b, d) are not supported.*

Fourth, product management flexibility (PMF) has positive impact on asset usefulness (β_{18} = 0.109, ρ<0.10), asset usefulness (β_{26} = 0.137, ρ<0.05), and goal achievement (β_{34} = 0.105, p<0.05), while it has no positive impact on product management flexibility (β_{2} = 0.009, ρ>0.10), and customer profitability analysis capability (β_{10} = 0.049, ρ>.10). *Product management flexibility* refers to the ability of firms to operate and manage new production activities with efficiency and effectiveness (e.g. employs new cost production processes for reducing non-value added activities), and the creativity of value engineering to redesign the product, serve customer satisfaction achievement, product competitiveness and value enhancement as parts of that need for serving the target goal (Hertensteign and Platt, 2000) for new product development (NPD). *Thus, Hypothesis 2 (c-e) are supported,*

Target costing has a learning curve that depends on experience in working with these relationships (Stenzel and Stenzel, 2004). Target costing is an important technique for managing product costs during the design stage, essentially concerned with setting a target cost to be achieved in the product development process, such that a sufficient profit margin is realized when the product is introduced into the market. It focuses on long-term cost management efforts (Dekker and Smidt, 2003). Target managers work directly toward desired relationships between cost, price, and profit. The wish to introduce products timely, satisfy customer needs, and control quality ranked after cost reduction. In order to increase product management flexibility, a firm has investment cost in tangible and intangible assets to create more quality in the customer mind. This cost is allocated in target cost and has impact directly on gross profit and customer profit analysis in the short run financial performance. Thus, it is the reason why product management flexibility increases more target costs in short run and may have no impact on profit planning proficiency and customer profit analysis. However, it has a positive impact on goal achievement directly and through other consequence variables). *Thus, Hypothesis 2 (a-b) are not supported.*

Finally, cost accounting system quality (CASQ) has positive impact on profit planning proficiency ($\beta_3 = 0.215$, $\rho<0.01$), customer profitability analysis capability ($\beta_{11} = 0.093$, $\rho<0.10$), and goal achievement ($\beta_{35} = 0.109$, $p<0.05$); while it has no positive impact on asset usefulness ($\beta_{19} = 0.050$, $\rho>0.10$), and value enhancement ($\beta_{25} = 0.078$, $\rho>0.10$). The cost accounting system is a firm's system which has the function for determining a cost system and which depends on the circumstances that generate the need for information from classifying, summarizing, recording, reporting, and allocating current or predicted costs, and is a subset of managerial accounting. The majority of cost accounting system structure's characteristics view is on cost information quality and help firm success to decision-making on profit planning in order to achieve their goals (Cohen, 2011). *Hence, Hypothesis 3 (a, b, e) are supported.*

However, the investment cost of cost accounting system impacts on financial performance the same as cost data mining effectiveness and product management flexibility. However, the cost of accounting system quality is not impacted on target costing but impacts direct on allocate overhead cost in standard costing,

operating expenses, and increased cost of financial performance which allocate intangible life (Cohen and Kaimenaki, 2011). Additionally, competitive force and uncertainty environment are factors influence on the effective of cost reduction which is the most important goal when they adopted these systems (Dekker and Smidt, 2003). Small firms which focus on cost reduction in all function of production stage in Target costing process with cost leadership strategy have no intend to investment in IT system because it increases cost of product in short-run. Thus, it is the reason why cost accounting system quality (which increases operating expenses but does not impact on increasing target costs in the short run), has no impact on asset usefulness and value enhancement. However, it has a positive impact on goal achievement directly and through other consequence variables. *Hence, Hypothesis 3(c-d) are not supported.*

Additionally, the evidence in Table 9 also reveals that firm size has strong positive impact on profit planning proficiency ($\beta_8 = 0.110$, $\rho<0.05$), while firm age has no positive impact on all consequence variables. It implies that firms with higher total assets have more profit planning proficiency than firms with lower total assets.

The results indicate that strategic target costing effectiveness describes the usefulness of target costing effectiveness as a strategy to help firm competitive advantage (Ellram, 2006; Afonso et al., 2008). All six dimensions of strategic target costing effectiveness have strong positive impact on goal achievement, and two dimensions of strategic target costing effectiveness (competitor information richness and resource utilization integration) have strong positive impact on profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement.

The Effects of Profit Planning Proficiency, Customer Profitability Analysis Capability, Asset Usefulness, and Value Enhancement on Goal Achievement

The investigation of the relationships among profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement on goal achievement is presented in Equation 6 to test the Hypotheses H7 – H10 as shown in Figure 7. The correlations between these variables are illustrated in Table 10. The results of OLS regression analysis of these variables is presented in Table 11.

In Table 10, the results indicate the positive correlation score of profit planning proficiency, customer profitability analysis capability, asset usefulness, value

enhancement on goal achievement. It reveals that all variables have a correlation coefficient (r) between 0.764 – 0.858, the same as Table 7 and Table 8. The results indicate the significant positive correlation score between profit planning proficiency and goal achievement ($r = 0.796$; $p<.05$), customer profitability analysis capability and goal achievement ($r = 0.804$; $p<.05$), asset usefulness and goal achievement ($r = 0.811$; $p<.05$), and value enhancement and goal achievement ($r = 0.858$; $p<.05$).

Table 10: Correlation Matrix of Profit Planning Proficiency, Customer Profitability Analysis Capability, Asset Usefulness, Value Enhancement, and Goal Achievement

Variables	**GAM**	**PPP**	**CPAC**	**AUF**	**VEM**	**FA**	**FS**
Mean	3.930	3.711	3.846	3.800	3.807	0.510	0.320
S.D.	0.690	0.711	0.711	0.736	0.759	0.501	0.468
GAM							
PPP	.796**						
CPAC	.804**	.835**					
AUF	.811**	.764**	.790**				
VEM	.858**	.797**	.795**	.855**			
FA	.060	.079	.081	.067	.028		
FS	.093	.176**	.125*	.091	.072	.238**	

**p<.05, *p<.10.

Additionally, the results also indicate that there are some independent variables which have their correlations higher than 0.80 which consist of relationships between profit planning proficiency and customer profitability analysis capability ($r =0.835$, $p<.01$), and relationship between asset usefulness and value enhancement ($r =0.855$, $p<.01$). However, this correlation is not over than 0.90 refers by Hair et al. (2010). Thus, there is no multicollinearity problem. Additionally, it also tests the variance inflation factors (VIF) which are used to test the correlation of variables and verify multicollinearity problems. The results show the VIF range is between 1.069 –

4.747, which the maximum value of VIF is below the cut-off value of 10 (Hair et al., 2010). Hence, the overall results indicate no significance of muliticollinearity problems in this research.

Table 11 presents the results of OLS regression analysis of the effects among profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement on goal achievement. The Hypotheses 7 – 10 predicted positive relationships. The results are as follows.

Table 11: The Results of OLS Regression Analysis among Profit Planning Proficiency, Customer Profitability Analysis Capability, Asset Usefulness, Value Enhancement and Goal Achievement

Independent Variables	**Dependent Variable: GAM (Eq.6)**
PPP	**.155***** **(.046)**
CPAC	**.189***** **(.049)**
AUF	**.147***** **(.048)**
VEM	**.396***** **(.049)**
FA	.014 (.035)
FS	-.013 .038
Adjusted R^2	**0.787**

***p<.01, Beta coefficients with standard error in parenthesis

VIF range is between 1.069 – 4.747

All independent variables have strong positive impact on goal achievement which consist of profit planning proficiency (β_{41} = 0.155, ρ<0.01), customer profitability analysis capability (β_{42} = 0.189, ρ<0.01), asset usefulness (β_{43} = 0.147, ρ<0.01), and value enhancement (β_{44} = 0.396, ρ<0.01). The results indicate the output is

the same as prior research indicating that higher profit planning proficiency, with more accuracy will increase a sustained competitive advantage to encourage firms to achieve high performance and goal achievement (Rattanaphaptham and Ussahawanitchakit, 2010). Likewise, the same as customer profit analysis capability is a key success factor in the strategy of customer relationship management capabilities on goal achievement (Winner, 2001). *Hence, Hypotheses 7 - 8 are supported.*

Following the R-A theory, firms are using their capabilities from implementation (e.g., asset usefulness and value enhancement), which are the main source of competitive advantages (Figueiredo, 2002) for firms that can rapidly integrate, learn, and reconfigure their internal and external resources to adapt to rapid environmental changes, and thus, enhance or maintain their competitive advantages which will enable firms to succeed in their goal achievement (Wu, 2010). Additionally, the implementation of various value enhancing especially, innovations throughout the entire organization and positively affect the firm target goal (La and Kandampully, 2004). *Hence, Hypotheses 9 – 10 are supported.*

The Effects of Antecedent Variables on Strategic Target Costing Effectiveness

The investigation of the relationships among antecedent variables (market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence) on six dimensions of strategic target costing effectiveness is presented in Equation 7 – 12 to test the Hypotheses H11(a-f) – H15(a-f) as shown in Figure 8. The correlations between these variables are illustrated in Table 12. The results of OLS regression analysis of these variables is presented in Table 13.

In table 12, the results indicate the correlation score of antecedent variables (market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence) on six dimensions of strategic target costing effectiveness (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness). It reveals that all variables have a correlation between 0.516 – 0.769.

The results indicate the significant positive correlation score among market culture orientation and six dimensions ($r = 0.562$, $r = 594$, $r = 0.593$, $r = 0.603$, $r = 0.616$, $r = 0.609$; $p<.05$), inter-functional team quality and six dimensions ($r = 0.475$, $r =$

460, r = 0.516, r = 0.524, r = 0.601, r = 0.554; p<.05), cost management system excellence and six dimensions (r = 0.590, r = 614, r = 0.666, r = 0.639, r = 0.647, r = 0.614; p<.05), IT capability and six dimensions (r = 0.613, r = 607, r = 0.636, r = 0.660, r = 0.643, r = 0.597; p<.05), competitive turbulence and six dimensions (r = 0.594, r = 591, r = 0.641, r = 0.599, r = 0.579, r = 0.579; p<.05), respectively. Most of these correlations between independent variables should be less than 0.90 as recommended by Hair et al. (2010). Thus, multicollinearity problems are of no concern for this analysis.

Table 12: Correlation Matrix of Antecedent Variables on Strategic Target Costing Effectiveness

Variables	CDME	PMF	CASQ	CIR	RUI	CNA	MCO	IFTQ	CMSE	ITC	CPT	FA	FS
Mean	3.863	3.878	3.963	3.711	3.708	4.005	4.153	3.843	3.982	3.876	4.082	0.510	0.320
S.D.	0.678	0.754	0.755	0.868	0.771	0.669	0.657	0.779	0.740	0.792	0.653	0.501	0.468
CDME													
PMF	.769**												
CASQ	.759**	.739**											
CIR	.696**	.746**	.794**										
RUI	.707**	.739**	.738**	.755**									
CAN	.624**	.664**	.672**	.649**	.725**								
MCO	.562**	.594**	.593**	.603**	.616**	.609**							
IFTQ	.475**	.460**	.516**	.524**	.601**	.554**	.644**						
CMSE	.590**	.614**	.666**	.639**	.647**	.614**	.734**	.755**					
ITC	.613**	.607**	.636**	.660**	.643**	.597**	.636**	.683**	.735**				
CPT	.594**	.591**	.641**	.599**	.579**	.579**	.666**	.623**	.735**	.702**			
FA	.031	.011	.010	.004	.009	.139**	.103	.070	.072	.015	.010		
FS	.090	.042	.142**	.089	.104	.101	.144**	.122*	.147**	.088	.156**	.238**	

**p<.05, *p<.10

This research also tests the variance inflation factors (VIF) which are used to test the correlation of variables and verify multicollinearity problems as shown in Table 13. The results show the VIF range is between 1.080 – 3.824 of which the maximum value of VIF is below the cut-off value of 10 (Hair et al., 2010). Hence, the

overall results indicate no significance of muliticollinearity problems in this research. Table 13 presents the results of OLS regression analysis among independent variables (market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence) and strategic target costing effectiveness with six dimensions (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness). The Hypotheses 11 (a-f) – 15(a-f) are predicted positive relationships. The results are as follows.

Table 13: The Results of OLS Regression Analysis among Independent Variables and Six Dimensions of Strategic Target Costing Effectiveness

Independent Variables	**Dependent Variables**					
	CDME (Eq.7)	**PMF (Eq.8)**	**CASQ (Eq.9)**	**CIR (Eq.10)**	**RUI (Eq.11)**	**CNA (Eq.12)**
MCO	**.181***** **(.065)**	**.282***** **(.070)**	**.157**** **(.067)**	**.270***** **(.078)**	**.254***** **(.069)**	**.242***** **(.062)**
IFTQ	-.081 (.056)	**-.158***** **(.061)**	**-.099*** **(.058)**	-.071 (.068)	**.132**** **(.060)**	.065 (.054)
CMSE	**.142**** **(.072)**	**.247***** **(.078)**	**.308***** **(.074)**	**.237***** **(.087)**	**.168**** **(.077)**	.112 (.069)
ITC	**.261***** **(.056)**	**.255***** **(.061)**	**.231***** **(.058)**	**.381***** **(.068)**	**.254***** **(.060)**	**.171***** **(.054)**
CPT	**.216***** **(.068)**	**.197***** **(.073)**	**.249***** **(.070)**	**.147*** **(.082)**	.057 (.073)	**.147**** **(.065)**
FA	.005 (.056)	-.019 (.061)	-.052 (.055)	-.057 (.068)	-.064 (.060)	**.136**** **(.054)**
FS	-.011 (.061)	-.091 (.066)	.071 (.063)	-.004 (.073)	.020 (.065)	-.036 (.059)
Adjusted R^2	**.445**	**.470**	**.518**	**.505**	**.504**	**.468**

***p<.01, **p<.05, *p<.10 [a] Beta coefficients with standard errors in parenthesis

VIF Test of OLS regression analysis is between 1.080 – 3.824

First, market culture orientation (MCO) has a strong positive impact on all six dimensions of strategic target costing effectiveness (β_{47} = 0.181, β_{54} = 0.282; p<.01, β_{61} = 0.157; p<.05, β_{68} = 0.270, β_{75} = 0.254, *and* β_{82} = 0.242; ρ<.01), respectively. Likewise, IT capability has also strong positive impact on all six dimensions of strategic target costing effectiveness (β_{50} = 0.261, β_{57} = 0.255, β_{64} = 0.231, β_{71} = 0.381, β_{78} = 0.254, *and* β_{85} = 0.171; ρ<.01), respectively.

This finding results shows as same as La and Kandampully (2004) that market culture orientation as internal environment of firm's market orientation has impact on strategic changes which affects on value enhancement and organizational goals. Based on the contingency theory, the results describe the output as indicated in prior literature (Levina and Vaast, 2005; Chaikambang and Ussahawanitchakit, 2012) where factors such as technology, organizational vision, and a competitive environment affect the design and functioning of the firms. Firms will adapt the contingency approach to achieve a fit with the changing competitive environment. Firms more concerned with market culture orientation will have a more valuable relationship with higher new product development awareness following strategic target costing effectiveness, a focus on customer information efficiency, technology adaptation effectiveness, and competitive learning success in the organizational firm (Grant, 2001; Hoffman, 2000).

Moreover, IT capability is applies the power of IT to promote AIS to produce effective information according to a user's needs, and technological capability is an organization's ability to mobilize and deploy computer-based technologies (i.e., hardware, software, network-to-data communication, soft technologies or advance management practice) for operational activities such as strategic cost management in a wide variety of industries (Chaikambang and Ussahawanitchakit, 2012). *Hence, Hypotheses 11(a-f) and 14 (a-f) are fully supported.*

Second, cost management system excellence (CMSE) has strong positive impact on five dimensions of strategic target costing effectiveness (β_{49} = 0.142; p<.05, β_{56} = 0.247, β_{63} = 0.308, β_{70} = 0.237; p<.01, β_{77} = 0.168; p<.05) with the exception of customer needs awareness (β_{84} = 0.112; p>.10).

These results are consistence with Chaikambang and Ussahawanitchakit (2012) that cost management system excellence is essential for modern cost

management as strategic target costing effectiveness because target costing is one method of the strategic cost management approach which supports and focuses on the product design stage that enables the achievement of a target product profit margin while realizing customer requirements and allowable product costs that are calculated (Ellram, 2002). *Thus, Hypotheses 13(a-e) are supported.*

Following the concept of the contingency theory and the global competitive environment, firms have to make decision by using cost information quality and information that assists managers to make better decisions, while customer needs have changed overtime, and thus, firms have to force their competitors. Thus, they have to control the process system and use suitable strategies for success toward their target goals, maintain their core customers, and maintain competitive advantage over competitors. Cost management system excellence will help the process of the overall process in strategic target costing effectiveness. Additionally, competitive force and uncertainty environment are factors influence on the effective of cost reduction which is the most important goal when they adopted this systems (Dekker and Smidt, 2003). Small firms which focus on cost reduction in all function of production stage in Target costing process with cost leadership strategy have no intend to investment in new IT system because it increases cost of product in short-run. Hence, it has positive impact on five dimensions of strategic target costing effectiveness, but has no impact on customer needs awareness. *Hence, Hypothesis 13 (f) is not supported.*

Likewise, competitive turbulence (CPT) also has a strong positive impact on five dimension of strategic target costing effectiveness (β_{51} = 0.216, β_{58} = 0.197, β_{65} = 0.249; p<.01, β_{72} = 0.147; p<.10, β_{86} = 0.147; p<.05) with the exception of resource customer needs awareness (β_{79} = 0.057; p>.10). Competitive turbulence is often characterized by price wars and advertising wars because of many entrants in the market place. Firms will operate in their existing systems to fully capitalize on the precise predictability when faced with less intense competition and have built their new products or brands by the time the slow-followers arrive on the scene (Kumar and Shafabi, 2011). This finding shows the evidences as same as Chaikambang and Ussahawanitchakit (2012), and indicates that competitive turbulence has positive impact on cost data mining effectiveness, product management flexibility, cost accounting

system quality, competitor information richness, and customer needs awareness. *Hence, Hypotheses 15 (a-d, f) are supported.*

The result of competitive turbulence has no impact on resource utilization integration. With the impact of the global competitive environment and the contingency theory, firms will use the strategies of resource utilization integration to reduce the problem of unpredictable risk by sharing information, increasing quality of product and services, and adding new network connections as alliances. However, resource utilization has a limitation on the commitment of the top management of firms. Hence, increasing in competitive turbulence may have no impact on the level of resource utilization integration. *Hence, Hypothesis 15 (e) is not supported.*

Third, inter-functional team quality (IFTQ) has a strong positive impact on resource utilization integration (β_{76} = 0.132; p<.01), β_{72} = 0.147; p<.10, β_{86} = 0.147; p<.05). This result is consistence with Al-Awawdeh and Al-Sharairi (2012) that target costing technique is base on the use a team work for each of the product and operation. This team is responsible for all phases of product life cycle in the broad sense. Based on this, it is noted that the team work is not just a multi-talented people who contribute their expertise and capabilities, but also members who are fully responsible for the product in all stages of its life cycle. Additionally, the cooperative relationship with informal control could serve to complement and support more formal efforts and the reliance on trust is the key determinant of successful cooperative behavior (Christ et. al., 2008). Moreover, prior studies (i.e., Payan et al., 2007; Mahama, 2006) indicate the linkage between inter-functional team operation to outcomes that have focused on firm performance and individual satisfaction. Thus, this result shows the positive affect of inter-functional team quality on resource utilization integration. *Hence, Hypotheses 12 (e) is supported.*

This result also indicates that inter-functional team quality has strong negative impact on product management flexibility (β_{55} = -0.158; p<.01) and cost accounting system quality (β_{62} = -0.099; p<.10), while it has no significant impact on cost data mining effectiveness (β_{48} = -0.081; p>.10) and customer needs awareness (β_{83} = 0.065; p>.10).

The achievement of inter-functional team quality has a limitation which is based on: 1) ability of team quality to understand and share its knowledge, experience,

and information needs as to joint problem-solving, a willingness to adapt to unanticipated changes, and restraint from the use of power to the disadvantage of other participants (Mahama, 2006), and to create information sharing for joint decision-making, 2) top management support, and 3) level of their cooperative relationship and communication. The role target costing technique played by following the formation of work teams, which agrees Ansari and Bell (1997), as they indicated that the work team should include representatives from outside the entity. However, these results pointed out the need to monitor all stages of product life cycle, after-sales services and team benefit in order to achieve the objectives in the long term than short term (Cooper and Slagmuder, 2002). Prior research (Pungboonpanich and Ussahawanitchakit, 2010; Chen et al., 2005) provides a theory which has provided useful understanding and explains human behavior and actions in organizational teamwork in which team members encourage quality controversy that affects increased productivity.

Target costing has a learning curve that depends on experience in working with these relationships (Stenzel and Stenzel, 2004). Target costing is an important technique for managing product costs during the design stage, essentially concerned with setting a target cost to be achieved in the product development process, such that a sufficient profit margin is realized when the product is introduced into the market (Dekker and Smidt, 2003). During the design stage, all transaction costs attributable to a disruption in supply are higher the more difficult it is to find replacement parts. The disturbance to operations is more severe, the quasi-rents at stake are larger and the customer is justified spending more to negotiate and revise its sales contract to limit these costs. The cost of finding replacement parts is higher when the customer has fewer immediate alternatives to its normal supplier (Emsley, 2005). Thus, it may indicate that inter-functional team quality has negative impact on product management flexibility and cost accounting system quality during the design stage in the short run and will be positive when the product is introduced into the market in the long-run. *Hence, Hypotheses 12 (a -c) are not supported.*

Additionally, the result also indicates that firm age has strong positive impact on customer needs awareness (β_{87} = 0.136; p<.05). It implies that firms with longer operation will have a higher level of customer needs awareness than firms with shorter operation. Compared with the overall strategic target costing effectiveness;

market culture orientation, cost management system excellence, IT capability, and competitive turbulence have strong positive impact on strategic target costing effectiveness, while inter-functional team quality has no significant impact on strategic target costing effectiveness. This result has the output as the same as prior research (Boonmunewai and Ussahawanitchakit, 2010).

The Effects of Collaboration Climate on the Relationship among Strategic Target Costing Effectiveness and Its Consequence Variables, and the Relationship among Profitability Planning Proficiency, Customer Profitability Analysis Capability, Asset Usefulness, Value Enhancement

The investigation of the effect of collaboration climate (moderator variable) on the relationships among six dimensions of strategic target costing effectiveness and their consequence variables is presented in Equation 13 – 17 to test the Hypotheses 16(a-e) – 21(a-e) as shown in Figure 9. This research also investigates the relationship among profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement as presented in Equation 18 to test the Hypotheses 22 – 25. The correlations between these variables are illustrated in Table 14 and the results of OLS regression analysis of these variables are presented in Table 15.

In Table 14, the results indicate the correlation score of six dimensions of strategic target costing effectiveness, profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, goal achievement (dependent variable), and collaboration climate (moderator variable). It reveals that all variables have a correlation between 0.004 and 0.858. Most of these correlations between independent variables should less than 0.80 as recommended by Hair et al. (2010). The results indicate the significant positive correlation score between profit planning proficiency and customer profitability analysis capability ($r = 0.835$; $p<.05$), and between asset usefulness and value enhancement ($r = 0.855$; $p<.05$).

Additionally, some of the correlation score between dependent variables are higher than 0.80, consisting of customer profitability analysis capability and goal achievement ($r = 0.804$; $p<.05$), asset usefulness and goal achievement ($r = 0.811$; $p<.05$), and value enhancement and goal achievement ($r = 0.858$; $p<.05$). Next, this research tests the variance inflation factors (VIF) which are used to test the correlation

of variables and verify multicollinearity problems as shown in Tables 15. The results show the VIF range in Table 15 is between 1.134 and 4.087, which the maximum value of VIF is below the cut-off value of 10 (Hair et al., 2010). Hence, the overall results indicate no significant muliticollinearity problems in this research.

Table 14: Correlation Matrix of Antecedent Variables on Strategic Target Costing Effectiveness

Variables	PPP	CPAC	AUF	VEM	GAM	CDME	PMF	CASQ	CIR	RUI	CNA	CBC	FA	FS
Mean	3.711	3.846	3.800	3.807	3.930	3.863	3.878	3.963	3.711	3708	4.005	4.169	0.510	0.320
S.D.	0.748	0.710	0.736	0.759	0.690	0.678	0.754	0.755	0.868	0.771	0.669	0.649	0.501	0.468
PPP														
CPAC	.835**													
AUF	.764**	.790**												
VEM	.797**	.795**	.855**											
GAM	.796**	.804**	.811**	.858**										
CDME	.676**	.684**	.691**	.673**	.716**									
PMF	.673**	.707**	.714**	.722**	.735**	.769**								
CASQ	.749**	.738**	.709**	.719**	.748**	.759**	.739**							
CIR	.767**	.781**	.743**	.763**	.774**	.696**	.746**	.794**						
RUI	.729**	.766**	.754**	.756**	.748**	.707**	.739**	.738**	.755**					
CAN	.623**	.698**	.682**	.686**	.696**	.624**	.664**	.672**	.649**	.725**				
CBC	.515**	.516**	.468**	.540**	.598**	.488**	.488**	.539**	.511**	.515**	.490**			
FA	.079	.081	.067	.028	.060	.031**	.011	.010	.004	.009	.139**	.078		
FS	.176**	.125*	.091	.072	.093	.090	.042	.142**	.089	.104	.101	.148**	.238**	

**p<.05, *p<.10

Table 15 presents the results of OLS regression analysis of collaboration climate (a moderator variable) on the relationship among six dimensions of strategic target costing effectiveness and their consequences. The Hypotheses 16 (a-e) – 21(a-e) are predicted as positive relationships. The results are as follows.

First, most of the results of the relationships among six dimensions of strategic target costing effectiveness and their consequence variables (profit planning

proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement) in Table 15 show results in Table 9. Competitor information richness has strong positive impact on all consequence variables (β_{92} = 0.296, β_{107} = 0.291, β_{122} = 0.231, β_{137} = 0.255, β_{152} = 0.216; p<.01), respectively.

Table 15: The Results of OLS Regression Analysis of Collaboration Climate on the Relationship among Strategic Target Costing Effectiveness and Its Consequences

Independent Variables	**Dependent Variables**				
	PPP (Eq.13)	**CPAC (Eq.14)**	**AUF (Eq.15)**	**VEM (Eq.16)**	**GAM (Eq.17)**
CDME	.097 (.060)	.056 (.054)	.153*** (.059)	.055 (.060)	.121** (.051)
PMF	.002 (.057)	.037 (.051)	.119** (.056)	.126** (.057)	.103** (.049)
CASQ	.209*** (.060)	.072 (.054)	.039 (.059)	.046 (.060)	.077 (.050)
CIR	.296*** (.051)	.291*** (.045)	.231*** (.050)	.255*** (.050)	.216*** (.043)
RUI	.217*** (.056)	.235*** (.050)	.213*** (.055)	.212*** (.055)	.126*** (.047)
CNA	-.014 (.055)	.138*** (.049)	.178*** (.054)	.167*** (.055)	.131*** (.047)
CBC	.058 (.044)	.033 (.040)	-.030 (.043)	**.093**** **(.044)**	**.173***** **(.038)**
CDME*CBC	.037 (.098)	-.086 (.087)	.022 (.096)	-.056 (.097)	-.114 (.083)
PMF*CBC	-.161 (.101)	-.076 (.091)	-.099 (.099)	**-.187*** **(.101)**	-.066 (.086)
CASQ*CBC	.068 (.085)	.019 (.076)	.085 (.083)	**.149*** **(.084)**	**.129*** **(.072)**
CIR*CBC	.109 (.096)	**.181**** **(.086)**	**.187**** **(.094)**	.108 (.095)	.066 (.082)
RUI*CBC	.103 (.098)	.052 (.088)	**-.317***** **(.096)**	-.109 (.097)	.052 (.084)
CNA*CBC	**-.205***** **(.077)**	**-.175**** **(.069)**	**.148**** **(.075)**	.037 (.076)	-.054 (.065)
FA	.089* (.049)	.082* (.044)	.031 (.049)	-.010 (.049)	.023 (.042)
FS	.100* (.052)	.035 (.046)	.006 (.051)	-.023 (.051)	-.019 (.044)
Adjusted R^2	**.679**	**.716**	**.681**	**.692**	**.726**

***p<.01, **p<.05, *p<.10, Beta coefficients with standard error in parenthesis

VIF is between 1.134 – 4.087

Likewise, resource utilization integration has also strong positive impact on all consequence variables (β_{93} = 0.217, β_{108} = 0.235, β_{123} = 0.213, β_{138} = 0.212, β_{153} = 0.126; p<.01), respectively.

Customer needs awareness has strong positive impact on customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement (β_{109} = 0.138, β_{124} = 0.178, β_{139} = 0.167, β_{154} = 0.131; p<.01), respectively. The results indicate the output is the same as shown in Table 9.

Product management flexibility has strong positive impact on asset usefulness, value enhancement, and goal achievement (β_{120} = 0.119, β_{135} = 0.126, β_{150} = 0.103; p<.05). Next, cost data mining effectiveness has strong positive impact on asset usefulness (β_{119} = 0.153; p<.01, β_{149} = 0.121; p<.05). The results also indicate the output as the same as shown in Table 9.

The results indicate that cost accounting system quality has strong impact on product planning proficiency (β_{91} = 0.209; p<.01), while it has no impact on goal achievement which is the impact of collaboration climate on the relationship between cost accounting system quality and goal achievement, and the relationship between cost accounting system quality and customer profitability analysis capability.

Second, collaboration climate has a direct effect on value enhancement (β_{140} = 0.093; p<.05), and goal achievement (β_{155} = 0.173; p<.01). The results indicate that collaboration climate has positive impact on the relationship between cost accounting system quality and value enhancement (β_{143} = 0.149; p<.10), cost accounting system quality and goal achievement (β_{91} = 0.129; p<.10), competitor information richness and customer profitability analysis capability (β_{114} = 0.181; p<.05), competitor information richness and asset usefulness (β_{129} = 0.187; p<.05), and customer needs awareness and asset usefulness (β_{131} = 0.148; p<.05). This findings support that collaboration climate, supported an effective relationship with both communication and understanding, is necessary in organization as the primary goal of gaining a competitive advantage through improvement in product or services, making firms more efficient (Cousins, 2002), and can do their task according to their responsibility completely so as to achieve goals (Chaikambang and Ussahawanitchakit, 2012). *Hence, Hypotheses 18 (d-e), 19(b-c), and 21(c) are supported.*

This result also indicates that collaboration climate has negative impact on the relationship between product management flexibility and value enhancement (β_{142} = -0.187; p<.10), resource utilization integration and asset usefulness (β_{130} = -0.317; p<.01), customer need awareness and profit planning proficiency (β_{101} = -0.205; p<.01), and customer needs awareness and customer profitability analysis capability (β_{116} = -0.175; p<.05).

The most important thing is for firms to make efficient use of those different advantages which are resource usage quality of a firm that enhances the value of a firm (Fu, 2007). Prior research (e.g. Mercader, Cerdan and Sanchez, 2006) demonstrates that technology learning competency in cost accounting system cannot be achieved without process, rule and habits where sharing and collaboration play key roles. The lack of process, sharing and collaboration among the membership in an organization lead to technology learning competency has no effect on customer service cost implementation. Additionally, one possible reason may cause by collaboration climate which has limitations on itself, and is based on elements of trust (honesty, consistency, respect). Firms cannot reach maximum performance by operating alone and must be accompanied by the establishment of an organizational process from the strategic vision to organize the collaboration in order to ensure an efficient and optimal partnership (Boivin and Roch, 2005). *Hence, Hypotheses 17 (e), 20 (c), and 21 (a-b) are not supported.*

Additionally, collaboration climate has no significant positive effect on 1) the relationship among cost data mining effectiveness and its consequence variables (β_{96} = 0.037, β_{111} = -0.086, β_{126} = 0.022, β_{141} = -0.056, β_{156} = -0.114; p>.10), 2) the relationship among product management flexibility and profit planning proficiency, customer profitability analysis capability, asset usefulness, and goal achievement (β_{97} = -0.161, β_{112} = -0.076, β_{127} = -0.099; β_{157} = -0.066; p>.10), 3) the relationship among cost accounting system quality and profit planning proficiency, customer profitability capability, asset usefulness (β_{98} = 0.068; β_{113} = 0.019; β_{128} = 0.085, p>.10), 4) the relationship among competitor information richness and profit planning proficiency, value enhancement, and goal achievement (β_{99} = 0.109; β_{144} = 0.108; β_{159} = 0.066; p>.10), 5) the relationship among resource utilization integration and profit planning proficiency, customer profitability analysis capability, value enhancement, and goal

achievement (β_{100} = 0.103; β_{115} = 0.052; β_{145} = -0.109; β_{160} = 0.052; p>.10), 6) the relationship among customer needs awareness and value enhancement, goal achievement (β_{146} = 0.037; β_{161} = -0.054; p>.10).

Prior research in literature reviews indicate that there is the impact of other variables (e.g. communication, organization behavior, culture, trust) on collaboration climate (which is the limitation of this research). Thus, with this limitation of collaboration climate, this impact also reacts to collaboration climate and has a negative impact or has no effect on the relationship among six dimensions and their consequence variables. *Hence, Hypotheses 16, 17, and 20 are not supported.*

Compared with Table 9, cost accounting system has no impact on value enhancement. However, the collaboration climate has effect on the relationship between cost accounting system quality and value enhancement. The benefit of collaboration climate is useful for teams operating to work well together including joint project investment such as outsourcing, a team which has a clear structure and is well defined, willing to share and receive knowledge in order to increase the firm efficiency and effectiveness, and to achieve performance outcomes and a competitive advantage (Tuntrabundit and Ussahawanitchakit, 2010). Thus, this result also indicates that collaboration climate has played a role both of independent variable on goal achievement and a moderator variable on the relationship among six dimensions of strategic target costing effectiveness. *Hence, Hypotheses 18, 19, and 21 are partially supported.*

Third, this result shows that firm age has a positive impact on profit planning proficiency and customer profitability analysis capability (β_{102} = 0.089, β_{117} = 0.082; p<.10), while firm size has positive impact on profit planning proficiency (β_{103} = 0.100; p<.10). It implies that firms which have longer operation management will have a higher level of profit planning proficiency and customer profitability analysis capability than firms with shorter operation management. Moreover, firms which have more total assets in operations will have a higher level of profit planning proficiency than firms which have less total assets in operations. However, the results in Table 15 indicate that collaboration climate is also suitable for playing a role as an antecedent variable of value enhancement and goal achievement and also for playing a role as a moderator of the relationship with positive and negative effect on the relationship

among five dimensions (with the exception of cost data mining effectiveness) and their consequences.

Table 16 presents the results of OLS regression analysis of collaboration climate (a moderator variable) on the relationship among profitability planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement. The Hypotheses 22 – 25 are predicted as positive relationships. The results are as follows.

Table 16: The Results of OLS Regression Analysis of Collaboration Climate on the Relationship among Profit Planning Proficiency, Customer Profitability Analysis Capability, Asset Usefulness, Value Enhancement and Goal Achievement

Independent Variables	**Dependent Variable: GAM**
PPP	.133***
	(.045)
CPAC	.172***
	(.048)
AUF	.157***
	(.047)
VEM	.343***
	(.049)
CBC	.165***
	(.031)
PPP*CBC	.087
	(.077)
CPAC*CBC	.041
	(.070)
AUF*CBC	-.041
	(.073)
VEM*CBC	-.062
	(.071)
FA	.004
	(.035)
FS	-.030
	(.037)
Adjusted R^2	**.802**

***p<.01, Beta coefficients with standard error in parenthesis

VIF Test of OLS regression analysis is between 1.126 – 4.988

First, all independent variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement) have strong positive impact on goal achievement (β_{164} = 0.133, β_{165} = 0.172, β_{166} = 0.157, β_{167} = 0.343; $\rho<0.01$), respectively. This result indicates that it shows the same results in Table 11.

Second, collaboration climate has direct effect on goal achievement (β_{168} = 0.165; $p<.01$), while there is no significant impact on the relationship among profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement and goal achievement (β_{169} = 0.086, β_{170} = 0.041, β_{171} = -0.045, β_{172} = -0.062; $\rho>0.10$), respectively.

In R-A theory, success for an organization will depend on the degree to which the corporate culture fosters and maximizes organizational capability and the success for this will obviously depend on the capability of both management and employees (Sharkie, 2003). These results may have possibly occurred even if collaboration climate operate team (such as outsourcing) and suitable of internal environment to reduce conflict, to achieve performance outcomes, and to increase a competitive advantage. However, collaboration climate is needed for firms that cannot reach maximum performance by operating alone must be accompanied by the establishment of an organizational process from the strategic vision to organize the collaboration in order to ensure an efficient and optimal partnership (Boivin and Roch, 2005). Additionally, the group of exporting gem and jewelry businesses in Thailand needs specific expertise and has a different culture from other industry groups. Additionally, collaborative planning theory explains that collaborative planning has a limitation following collaboration plan rationality, and accounts for another relatively neglected, but critical aspect of planning: the coordinative and strategic functions of planning (Gordon et al., 2009). The grand aim of collaborative planning is to involve all stakeholders' in the processes of planning for achieving consensual policy outcomes after a debate under the conditions of communicative action (Kumar and Paddison, 2000). Thus, there is a possibility that firms with different cultures, policy outcomes after a debate under the conditions of communicative action, and industry types are the reasons why collaboration climate of exporting gem and jewelry businesses in Thailand have no impact on the relationship among profit planning proficiency, customer

profitability analysis capability, asset usefulness, value enhancement, and goal achievement which are different from prior literature. *Hence, Hypotheses 22 - 25 are not supported*.

Summary

This chapter presents the results of this research. The first part shows key participant characteristics, and demographic information of the firm that is explained by using descriptive statistics such as a mean, standard deviation and percentage. Subsequently, it presents the hypotheses testing and discussion which show the result of descriptive statistics, correlation analysis, and multiple regression analysis including discussion of critical points.

The results indicate as follows: First, all six variables (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness) are representative as components of strategic target costing effectiveness. Second, all six components have strong positive impact on goal achievement. They also have impact on goal achievement through four mediator variables, consisting of profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement. Competitor information richness and resource utilization integration, two components of strategic target costing effectiveness, have strong positive effect on four mediator variables and goal achievement. Third, profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement, which have strong positive impact on goal achievement, play a suitable role as moderator variables of strategic target costing effectiveness.

Fourth, this research tests the relationship among antecedent variables on six dimensions of strategic target costing effectiveness. The results indicate that all of antecedent variables consisting of market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence have impact on six dimensions of strategic target costing effectiveness. However, only market culture orientation and IT capability have strong positive impact on all of six dimensions of strategic target costing effectiveness. Moreover, inter-functional team

quality has strong positive impact on resource utilization integration and has negative impact on product management flexibility and cost accounting system quality.

Finally, the results indicate that collaboration climate, a moderator variable, has no effect on the relationship among profitability profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement. However, collaboration climate has positive impact on the relationship between cost accounting system quality and value enhancement, cost accounting system quality and goal achievement, competitor information richness and customer profitability analysis capability, competitor information richness and asset usefulness, resource utilization integration and asset usefulness, and customer needs awareness and asset usefulness. Moreover, collaboration climate has strong positive impact on goal achievement.

In conclusion, Hypotheses 4, 5, 7, 8, 9, 10, 11, and 14 are fully supported; Hypotheses 16, 17, 20, 22, 23, 24, and 25 are not supported; while Hypotheses 1, 2, 3, 6, 12, 13, 15, 18, 19, and 21 are partially supported. The summary of these results of Hypotheses testing is presented in Table 18.

The next chapter shows the conclusions of the research. It provides an overall view of research and summarizes the main point of this research. Additionally, it provides the limitation of this research and future research suggestions.

Table 17: Summary of the Results of Hypotheses Testing

Hypothesis	Description of Hypothesized Relationships	Results
H1a	Cost data mining effectiveness will positively relate to profit planning proficiency.	Supported
H1b	Cost allocation effectiveness evaluation will positively relate to decision making advantage.	Not Supported
H1c	Cost allocation effectiveness evaluation will positively relate to valuable information specialization.	Supported
H1d	Cost data mining effectiveness will positively relate to value enhancement.	Not Supported
H1e	Cost data mining effectiveness will positively relate to goal achievement.	Supported
H2a	Level of product management flexibility will positively relate to profit planning proficiency.	Not Supported
H2b	Level of product management flexibility will positively relate to customer profitability analysis capability.	Not Supported
H2c	Level of product management flexibility will positively relate to a level of asset usefulness.	Supported
H2d	Level of product management flexibility will positively relate to value enhancement.	Supported
H2e	Level of product management flexibility will positively relate to goal achievement.	Supported
H3a	Level of cost accounting system quality will positively relate to profit planning proficiency.	Supported
H3b	Level of cost accounting system quality will positively relate to customer profitability analysis capability.	Supported
H3c	Level of cost accounting system quality will positively relate to a level of asset usefulness.	Not Supported

Table 17: Summary of the Results of Hypotheses Testing (Continued)

Hypothesis	Description of Hypothesized Relationships	Results
H3d	Level of cost accounting system quality will positively relate to value enhancement.	Not Supported
H3e	Level of cost accounting system quality will positively relate to goal achievement.	Supported
H4a	Level of competitor information richness will positively relate to profit planning proficiency.	Supported
H4b	Level of competitor information richness will positively relate to customer profitability analysis capability.	Supported
H4c	Level of competitor information richness will positively relate to a level of asset usefulness.	Supported
H4d	Level of competitor information richness will positively relate to value enhancement.	Supported
H4e	Level of competitor information richness will positively relate to goal achievement.	Supported
H5a	Level of resource utilization integration will positively relate to profit planning proficiency.	Supported
H5b	Level of resource utilization integration will positively relate to customer profitability analysis capability.	Supported
H5c	Level of resource utilization integration will positively relate to a level of asset usefulness.	Supported
H5d	Level of resource utilization integration will positively relate to value enhancement.	Supported
H5e	Level of resource utilization integration will positively relate to goal achievement.	Supported

Table 17: Summary of the Results of Hypotheses Testing (Continued)

Hypothesis	Description of Hypothesized Relationships	Results
H6a	Level of customer needs awareness will positively relate to profit planning proficiency.	Not Supported
H6b	Level of customer needs awareness will positively relate to customer profitability analysis capability.	Supported
H6c	Level of customer needs awareness will positively relate to a level of asset usefulness.	Supported
H6d	Level of customer needs awareness will positively relate to value enhancement.	Supported
H6e	Level of customer needs awareness will positively relate to goal achievement.	Supported
H7	Profit planning proficiency will positively relate to goal achievement.	Supported
H8	Customer profitability analysis capability will positively relate to goal achievement.	Supported
H9	Asset usefulness will positively relate to goal achievement.	Supported
H10	Value enhancement will positively relate to goal achievement.	Supported
H11a	Level of market culture orientation will positively relate to cost data mining effectiveness.	Supported
H11b	Level of market culture orientation will positively relate to a level of product management flexibility.	Supported
H11c	Level of market culture orientation will positively relate to cost accounting system quality.	Supported
H11d	Level of market culture orientation will positively relate to competitor information richness.	Supported

Table 17: Summary of the Results of Hypotheses Testing (Continued)

Hypothesis	Description of Hypothesized Relationships	Results
H11e	Level of market culture orientation will positively relate to resource utilization integration.	Supported
H11f	Level of market culture orientation will positively relate to customer needs awareness.	Supported
H12a	Level of inter-functional team quality will positively relate to cost data mining effectiveness.	Not Supported
H12b	Level of inter-functional team quality will positively relate to a level of product management flexibility.	Not Supported
H12c	Level of inter-functional team quality will positively relate to cost accounting system quality.	Not Supported
H12d	Level of inter-functional team quality will positively relate to competitor information richness.	Not Supported
H12e	Level of inter-functional team quality will positively relate to resource utilization integration.	Supported
H12f	Level of inter-functional team quality will positively relate to customer needs awareness.	Not Supported
H13a	Cost management system excellence will positively relate to cost data mining effectiveness.	Supported
H13b	Cost management system excellence will positively relate to a level of product management flexibility.	Supported
H13c	Cost management system excellence will positively relate to cost accounting system quality.	Supported
H13d	Cost management system excellence will positively relate to competitor information richness.	Supported
H13e	Cost management system excellence will positively relate to resource utilization integration.	Supported

Table 17: Summary of the Results of Hypotheses Testing (Continued)

Hypothesis	Description of Hypothesized Relationships	Results
H13f	Cost management system excellence will positively relate to customer needs awareness.	Not Supported
H14a	IT capability will positively relate to cost data mining effectiveness.	Supported
H14b	IT capability will positively relate to a level of product management flexibility.	Supported
H14c	IT capability will positively relate to cost accounting system quality.	Supported
H14d	IT capability will positively relate to competitor information richness.	Supported
H14e	IT capability will positively relate to resource utilization integration.	Supported
H14f	IT capability positively relate to customer needs awareness.	Supported
H15a	Competitive turbulence will positively relate to cost data mining effectiveness.	Supported
H15b	Competitive turbulence will positively relate to a level of product management flexibility.	Supported
H15c	Competitive turbulence will positively relate to cost accounting system quality.	Supported
H15d	Competitive turbulence will positively relate to competitor information richness.	Supported
H15e	Competitive turbulence will positively relate to resource utilization integration.	Not Supported
H15f	Competitive turbulence will positively relate to customer needs awareness.	Supported

Table 17: Summary of the Results of Hypotheses Testing (Continued)

Hypothesis	Description of Hypothesized Relationships	Results
H16a	Collaboration climate positively moderates the relationships between cost data mining effectiveness and profit planning proficiency.	Not Supported
H16b	Collaboration climate positively moderates the relationships between cost data mining effectiveness and customer profitability analysis capability.	Not Supported
H16c	Collaboration climate positively moderates the relationships between cost data mining effectiveness and asset usefulness.	Not Supported
H16d	Collaboration climate positively moderates the relationships between cost data mining effectiveness and value enhancement.	Not Supported
H16e	Collaboration climate positively moderates the relationships between cost data mining effectiveness and goal achievement.	Not Supported
H17a	Collaboration climate positively moderates the relationships between product management flexibility and profit planning proficiency.	Not Supported
H17b	Collaboration climate positively moderates the relationships between product management flexibility and customer profitability analysis capability.	Not Supported
H17c	Collaboration climate positively moderates the relationships between product management flexibility and asset usefulness.	Not Supported

Table 17: Summary of the Results of Hypotheses Testing (Continued)

Hypothesis	Description of Hypothesized Relationships	Results
H17d	Collaboration climate positively moderates the relationships between product management flexibility and value enhancement.	Not Supported
H17e	Collaboration climate positively moderates the relationships between product management flexibility and goal achievement.	Not Supported
H18a	Collaboration climate positively moderates the relationships between cost accounting system quality and profit planning proficiency.	Not Supported
H18b	Collaboration climate positively moderates the relationships between cost accounting system quality and customer profitability analysis capability.	Not Supported
H18c	Collaboration climate positively moderates the relationships between cost accounting system quality and asset usefulness.	Not Supported
H18d	Collaboration climate positively moderates the relationships between cost accounting system quality and value enhancement.	Supported
H18e	Collaboration climate positively moderates the relationships between cost accounting system quality and goal achievement.	Supported
H19a	Collaboration climate positively moderates the relationships between competitor information richness and profit planning proficiency.	Not Supported
H19b	Collaboration climate positively moderates the relationships between competitor information richness and customer profitability analysis capability.	Supported

Table 17: Summary of the Results of Hypotheses Testing (Continued)

Hypothesis	Description of Hypothesized Relationships	Results
H19c	Collaboration climate positively moderates the relationships between competitor information richness and asset usefulness.	Supported
H19d	Collaboration climate positively moderates the relationships between competitor information richness and value enhancement.	Not Supported
H19e	Collaboration climate positively moderates the relationships between competitor information richness and goal achievement.	Not Supported
H20a	Collaboration climate positively moderates the relationships between resource utilization integration and profit planning proficiency.	Not Supported
H20b	Collaboration climate positively moderates the relationships between resource utilization integration and customer profitability analysis capability.	Not Supported
H20c	Collaboration climate positively moderates the relationships between resource utilization integration and asset usefulness.	Not Supported
H20d	Collaboration climate positively moderates the relationships between resource utilization integration and value enhancement.	Not Supported
H20e	Collaboration climate positively moderates the relationships between resource utilization integration and goal achievement.	Not Supported
H21a	Collaboration climate positively moderates the relationships between customer needs awareness and profit planning proficiency.	Not Supported

CHAPTER V

CONCLUSION

Firms are challenged in gaining effective strategic target costing effectiveness with the impact of global competition, (Ellram, 2006) which is one of strategic tools in order to increase the creativity of their operational strategies, maintain their profits (Chaikambang and Ussahawanitchakit, 2012), and increase their productivity and competitive advantage, including succeeding in their target goals.

The findings of this research highlight six components of strategic target costing effectiveness, and several factors particularly relevant (both antecedent variables and consequence variables) to strategic target costing effectiveness and goal achievement of exporting gem and jewelry businesses in Thailand. Additionally, firm internal environment named "collaboration climate" which is assumed as a moderator of the relationship among six dimensions of strategic target costing effectiveness and their consequences (profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement), and affect on the relationship among profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement, and goal achievement.

The key research question of this research is how six dimensions of strategic target costing effectiveness have significant impact, both direct and indirect, on goal achievement. Furthermore, the specific research questions are as follows: 1) how does each dimension of strategic target costing effectiveness affect goal achievement? 2) How does each dimension of strategic target costing effectiveness affect profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement? 3) How do profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement) affect goal achievement? 4) How do market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence affect the dimensions of strategic target costing effectiveness? 5) How does the collaboration climate affect the relationship among the dimensions of strategic target costing effectiveness and profit planning proficiency, customer profitability analysis capability, asset usefulness, value

enhancement, and goal achievement? and, 6) How does the collaboration climate affect the relationship among profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement and goal achievement?

Following the literature, this research employs the concept of resource advantage theory (Hunt, 2012), the contingency theory (Chaikambang and Ussahawanitchakit, 2012), and the collaborative planning theory (Grant, 2001) which are applied to establish hypotheses linking each construct in conceptual model. The resource advantage theory explains firms' resources including market culture orientation, heterogeneous firm resources, comparative advantages and disadvantages in resources, as well as the firms' ability to attempt to develop resources for competitive advantage capabilities and superior performance (Kanchanda and Ussawanitchakit, 2012) Meanwhile, the collaborative planning theory is employed to explain a moderator variable and the impact on the relationship among six dimensions of strategic target costing effectiveness and their consequences, and the relationship among mediator variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement) and goal achievement.

Moreover, the contingency theory suggests that the development of strategies that may arise from structure and resources to meet the needs of the environment will result in increased performance as driven by the needs of a particular company due to the lack of resources, creating a single winner. Then, the company may be selected by another company that specializes in an alignment of appropriate environmental resources which are better for survival (Ferreira, 2000; Fredericks, 2005).

This research studies the antecedents and the consequences of strategic target costing effectiveness by using the exporting gem and jewelry businesses in Thailand. The population is firm members of exporting gem and jewelry businesses in Thailand found in the Exporter Directory, in the database of the Department of Export Promotion, Ministry of Commerce of Thailand, totaling 1,051 firms. The key informants are selected from the accounting executive of each firm, because they have the major responsibility in cost management and finances including strategic target costing effectiveness in order to create a competitive advantage and meet goal achievement. The qualifications of an accounting executive are concerned for more knowledge variety as an interdisciplinary field to achieve cost control management processes,

coordination and communication to other functions, or departments, or inter-organizational efficiency. Hence, they are knowledgeable in both accounting information and business information such as marketing information, organization culture, business outcomes, competitor information, overall internal activities, and external environments. With respect to the questionnaire mailing, 118 surveys were undeliverable because firms had moved to unknown locations or had liquidated. Deducting the undeliverable from the original 1,051 mailed, the valid mailing was 933 surveys, from which 348 responses were returned and usable. The effective response rate was approximately 37.30 percent.

The results indicate and imply that six dimensions (cost data mining effectiveness, product management flexibility, cost accounting system quality, competitor information richness, resource utilization integration, and customer needs awareness) are suitable representative of strategic target costing effectiveness, and have impact on goal achievement and consequence variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement). It also indicates that all the antecedent variables, consisting of market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence have impact on six dimensions of strategic target costing effectiveness. However, only market culture orientation and IT capability have strong positive impact on all six dimensions of strategic target costing effectiveness. Moreover, inter-functional team quality has strong a positive impact on resource utilization integration and has a negative impact on product management flexibility and cost accounting system quality.

Moreover, it shows the evidence that collaboration is suitably plays a role as an antecedent variable on goal achievement and also plays a role as a moderator variable. The results show the effect of collaboration climate on the relationship between cost accounting system quality and value enhancement, cost accounting system quality and goal achievement, competitor information richness and customer profitability analysis capability, competitor information richness and asset usefulness, resource utilization integration and asset usefulness, and customer needs awareness and asset usefulness. However, collaboration climate has also a negative impact on the relationship between product management and value enhancement, resource utilization integration and asset

usefulness, customer needs awareness and profit planning proficiency, and customer needs awareness and customer needs awareness. As earlier described, the summary of all research questions and results is included in Table 18 and also in Figure 4.

The findings of this research indicate that target costing is a valuable tool and philosophy to support the organization's overall efforts to remain cost competitive while meeting the customer's demands. Strategic target costing is one of strategic cost management tools which can help firms to increase their performance and achieve target goals, link to all operative functions including other modern cost management. It becomes involved in working with accounting and marketing to calculate the target costs on a component or material level of target costing process in order to reduce risk and increase the effort. The findings show the result as same as prior research (e.g. Dekker and Smidt, 2003; Ellram 2006) which explained that cost reduction to be the most important reason for adopting costing practices similar to target cost. Competitive force and uncertainty environment situation, variables which focus on market orientation (e.g. competitive information richness, customer needs awareness, market culture orientation), and information technology (IT capability) are the most important reason for strategic target costing effectiveness and decision-making to achieve goal rather than cost reduction (cost accounting system quality) and new product development (product management flexibility).

Based on the resource advantage theory, it explains: 1) the view that the strategic imperative of a firm such as strategic target costing effectiveness should be sustained, superior financial performance, and 2) the belief that organizational goal can be achieved through a sustainable competitive advantage in the market place. Firms use target costing as a strategy to increase their performance and capabilities in order to reach the organizational goals and maintain competitive advantage. Following these results, the level of strategic target costing effectiveness is need for firms to plan and decision-making in order to increase firm competencies, firm performance, and achieve organizational goal in competitive turbulence environment.

Table 18: Summary of Results in All Hypotheses Testing

Research Questions	Hypothesis	Results	Conclusion
1. How does each dimension of strategic target costing effectiveness affect on goal achievement? (Eq.5)	Hypotheses 1(e) – Hypotheses 6(e)	• All six dimensions have strong positive impact on goal achievement. • Firm size has strong impact on profit planning proficiency.	Fully Supported
2. How does each dimension of strategic target costing effectiveness affect on mediator variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement)? (Eq. 1 – 4)	Hypotheses 1 (a-d) – Hypotheses 6 (a-d)	• Competitor information richness and resource utilization integration have strong positive impact on four mediator variables, while other dimension has partially impact on four mediator variables.	Partially Supported
3. How do profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement affect goal achievement? (Eq.6)	Hypotheses 7 – Hypotheses 10	• Profit planning proficiency. Customer profitability analysis capability, asset usefulness, and value enhancement have strong positive impact on goal achievement.	Fully Supported

Table 18: Summary of Results in All Hypotheses Testing (Continued)

Research Questions	Hypothesis	Results	Conclusion
4. How do market culture orientation, inter-function team quality, cost management system excellence, IT capability, and competitive turbulence affect the dimensions of strategic target costing effectiveness? (Eq.7 – 12)	Hypotheses 11 (a-f) – Hypotheses 15(a-f)	• Market culture orientation and IT capability have strong positive impact on all six dimensions of strategic target costing effectiveness. • Inter-functional team quality has only strong positive impact on resource utilization integration, and also has negative impact on product management flexibility and cost accounting system quality. • Other antecedent variables have partially supported on six dimensions of strategic target costing effectiveness.	Partially Supported

Table 18: Summary of Results in All Hypotheses Testing (Continued)

Research Questions	Hypothesis	Results	Conclusion
5. How does the collaboration climate affect the relationship among the dimensions of strategic target costing effectiveness and profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement and goal achievement? (Eq.13 - 17)	Hypotheses 16(a-e) – Hypotheses 21(a-e)	• Collaboration climate has positive impact on the relationship between CASQ and VEM, CASQ and GAM, CIR and CPAC, CIR and AUF, and CNA and AUF. • Collaboration climate has also negative impact on PMF and VEM, CNA and PPP, and CNA and CPAC.	Partially Supported
6. How does the collaboration climate affect the relationship among profit planning proficiency, customer profitability analysis capability, asset usefulness, value enhancement and goal achievement? (Eq.18)	Hypotheses 22 – Hypotheses 25	• Collaboration climate has no impact on the relationship among these variables. • However, collaboration climate has direct effect on goal achievement	Not Supported

Contributions

This research contributes significantly toward understanding how strategic target costing effectiveness, which concerns in accounting and marketing concept following the resource advantage theory, for exporting gem and jewelry businesses in Thailand enhance on increase their performance and have the advantage to lead firms to goal achievement directly and through mediator variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement) in the global competitive environment. Moreover, it attempts to explain the relationship among the antecedents and consequences of strategic target costing effectiveness, including a moderator effect in the new model, and also attempts to capture and measure these constructs by using questionnaires for data collection. Regarded as the conceptual model, this research provides the following theoretical and managerial contributions.

Theoretical Contribution

This research describes the expansion of previous knowledge and the relevant literature by using six key dimensions of strategic target costing effectiveness which combines market perspective and accounting concept. This conceptual model is developed by three principle theoretical frameworks in this research, including resource-based theory, contingency theory, and collaborative planning theory.

Additionally, it insight provides a clearer understanding of the relationships between six dimensions of strategic target costing effectiveness and goal achievement, consequence variables and antecedent variables of exporting gem and jewelry businesses in Thailand that have a crucial role in expanding previous knowledge and relevant strategic cost management literature. In competitive force and uncertainty environment, firms concentrate and focus on market orientation and IT capability are to be the most important to increase strategic target costing effectiveness and achieves target goal.

The resource advantage theory explains firm resources that include market culture orientation, heterogeneous firm resources, comparative advantages and disadvantages in resources, and firms' abilities to attempt and develop resources for competitive advantage capabilities and superior performance. The results indicate that

competitive information richness (CIR), resource utilization integration (RUI), and customer needs awareness (CNA) have strong impact on consequence variables and are the constructs which apply marketing perspective to create competitive advantage and help firms achieve goals.

Meanwhile, the collaborative planning theory is employed to explain a moderator variable and the impact on the relationship among six dimensions of strategic target costing effectiveness and their consequences, and the relationship between mediator variables (profit planning proficiency, customer profitability analysis capability, asset usefulness, and value enhancement) and goal achievement. However, this theory has a limitation on the contract and commitment of firms (Gunton et al., 2003; Lee and Wilhelm, 2010). This research shows the results that collaboration climate also has a positive impact on goal achievement and both positive and negative impact on the relationship between six dimensions and their consequence variables.

Besides, the contingency theory is applied to explain the antecedents of strategic target costing effectiveness. The contingency theory hypothesizes that organizational structure is a function of context, a context that is simultaneously determined by both external and internal environments, including organizational factors (Anderson and Lenen, 1999; Lawrence and Lorsch's, 1967). According to the research, the antecedents (market culture orientation, inter-functional team quality, cost management system quality, IT capability, and competitive turbulence) have a strong effect on each dimension of strategic target costing effectiveness.

Managerial Contribution

Results of this research reveal the relationship among six dimensions of strategic target costing effectiveness management on goal achievement. This research helps managers identify and justify key components of strategic target costing effectiveness that can support the achievement of the firm's goal. Accounting executives consisting of CEO and accounting manager should effectively manage and exploit the components of strategic target costing effectiveness, and improving operational performance. They also manage and more concentrate about competitor information richness, resource utilization integration, and customer needs awareness which is the constructs to create competitive advantage, in order to achieve positive long-term business results. Thus, firms which adopted a higher level of strategic target

costing effectiveness will have gain more performance and achieve goals in order to maintain competitive advantage. These firms may apply more emphasis to strategic target costing effectiveness as a function of the fit between the changing business environment and its corresponding accounting concept followed by the contingency concept.

Moreover, with regard to the results of antecedents of strategic target costing effectiveness, the results indicate that all of antecedent variables consisting of market culture orientation, inter-functional team quality, cost management system excellence, IT capability, and competitive turbulence have impact on six dimensions of strategic target costing effectiveness. However, the finding suggests that market culture orientation, IT capability, and competitive turbulence have strong positive impact on all of six dimension of strategic target costing effectiveness which leads to goal achievement. Firms with more concentration on market culture orientation and IT capability which have capability to devote their technology and innovation investment, including integration of skill and technology usage that continuously increases the ability of operations, will have more competitive advantage over other firms which have less concentration on market culture orientation and IT capability.

Finally, the results indicated the role of collaboration climate as a moderator variable which has impact on the relationship between relationship between cost accounting system quality and value enhancement, cost accounting system quality and goal achievement, competitor information richness and customer profitability analysis capability, competitor information richness and asset usefulness, resource utilization integration and asset usefulness, customer needs awareness and asset usefulness. Moreover, collaboration climate has a strong positive impact on goal achievement. Thus, firms should consider competitive situations that lead to the application of the optimal strategies within organizations in order to survive in the future.

Limitations and Future Research Directions

Although, this research attempts to provide a meaningful conceptualization and measure of strategic target costing effectiveness, the research still has some limitations. However, the limitations lead to opportunities for future research.

Limitations

This research has some limitations about which one should be concerned. The population of this research is scoped as only exporting gem and jewelry businesses firms in Thailand which may be a different organizational culture and specialized business. First, number of each group in firm age and firm size (dummy variables) are different because of the item scale in questionnaire. It should be rescale in the future research. Second, a limitation of the relationship between independent variables and the relationships between dependent variable, which all of them have no correlation over 0.90 (Hair et al., 2010). Because this research attempt to derive six components of strategic target costing effectiveness and each dimension has a link and is connected to overall strategic target costing, it has correlated with other components. Their correlation score is over 0.80 and increases the VIF range when using six dimensions of overall strategic target costing effectiveness. Although the VIF range in this research is between 1.012 and 4.988, the maximum value of VIF is below the cut-off value of 10 (Hair et al., 2010). Thus, prior research employs the overall strategic target costing as one construct in order to reduce the multicollinearity problems.

Future Research Directions

In this research, a major contribution is identifying the antecedent and consequences of six dimensions of strategic target costing effectiveness. Accordingly, the results of this research is concerned about some of the research hypotheses that are not statistically significant and also the directions of negative effects such as collaboration climate (a moderator variable) and inter-functional team quality which are mostly not significant and have negative effects. Hence, future research should attempt to study other potential moderating variables. As a result, future research may consider seeking for other components of strategic target costing effectiveness, and other antecedent and consequences of strategic target costing effectiveness to re-investigate the research hypotheses that are not statistically significant.

In addition, the results show that collaboration climate has strong positive impact on goal achievement, while it has no positive effect on the relationship among mediator variables and goal achievement. Clearly, future research needs to investigate collaboration climate as an independent variable on goal achievement and sustaining competitive advantage. It is very interesting for future research.

Furthermore, this research uses only questionnaires for collecting data. Thus, future research may concern more variables which is a limitation in this research and develop other methods which may be applied in the future such as, in-depth interviews, and case studies in order to fully understand of new constructs measurements and to confirm all relationships of this model. Not only one sample industry group in Thailand, but also all industry groups in Thailand could be compared with international industry. Thus, future research may be collecting data from different groups of the sample and/or comparative population in order to verify the ability to generalize the research and increase reliability.

The summary of results in all hypotheses testing is depicted in Figure 4 as follows.

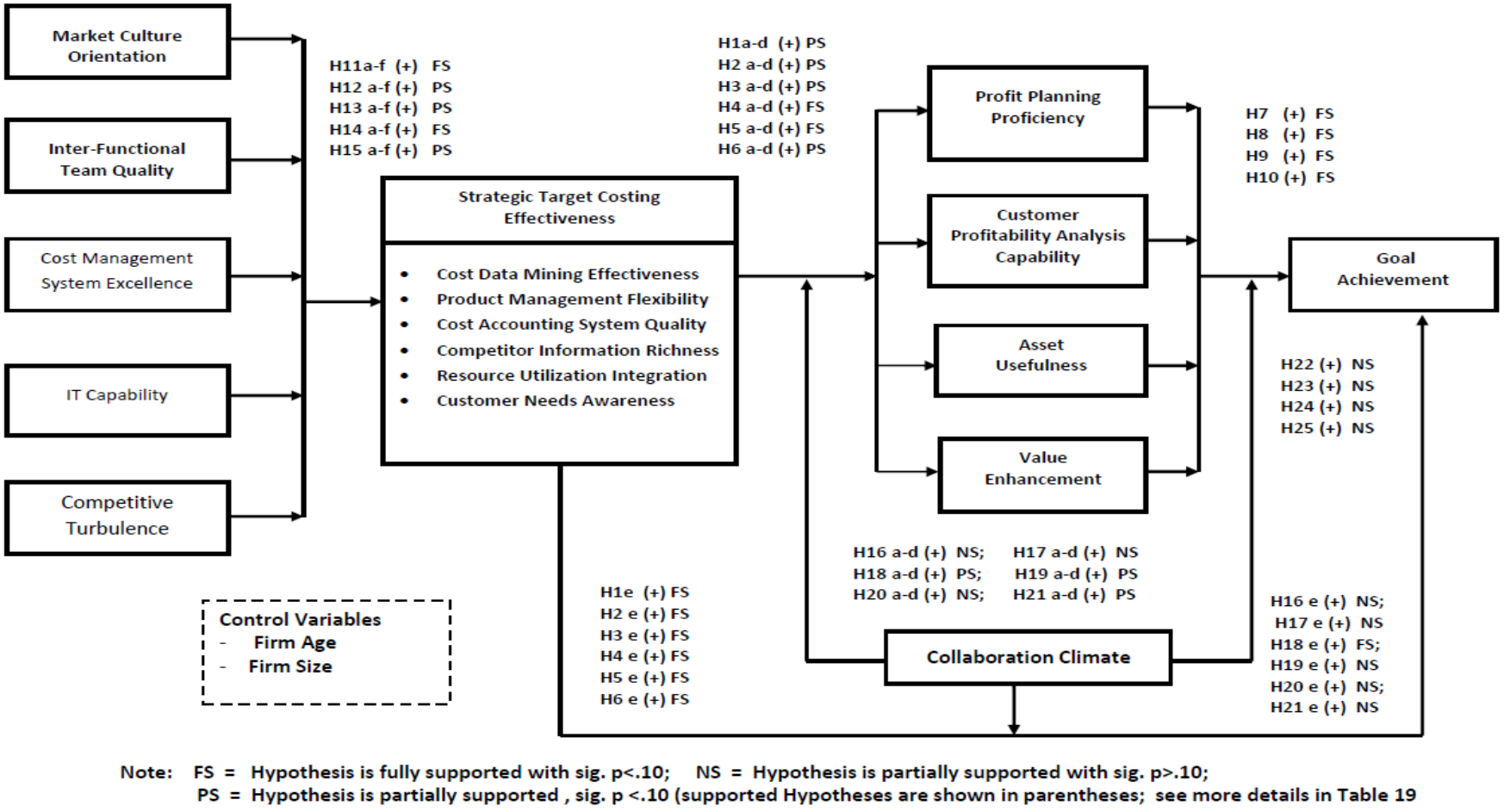


Figure 10 The Conceptual Model of Strategic Target Costing Effectiveness and Goal Achievement: Empirical Evidence from Exporting Gem and Jewelry Businesses in Thailand

Table 17: Summary of the Results of Hypotheses Testing (Continued)

Hypothesis	Description of Hypothesized Relationships	Results
H21b	Collaboration climate positively moderates the relationships between customer needs awareness and customer profitability analysis capability.	Not Supported
H21c	Collaboration climate positively moderates the relationships between customer needs awareness and asset usefulness.	Supported
H21d	Collaboration climate positively moderates the relationships between customer needs awareness and value enhancement.	Not Supported
H21e	Collaboration climate positively moderates the relationships between customer needs awareness and goal achievement.	Not Supported
H22	Collaboration climate positively moderates the relationships between profit planning proficiency and goal achievement.	Not Supported
H23	Collaboration climate positively moderates the relationships between customer profitability analysis capability and goal achievement.	Not Supported
H24	Collaboration climate positively moderates the relationships between asset usefulness and goal achievement.	Not Supported
H25	Collaboration climate positively moderates the relationships between value enhancement and goal achievement.	Not Supported

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APPENDICES

APPENDIX A

The Original Items

Table A: Original Items in Scales

Constructs	Items
Cost Data Mining Effectiveness (CDME)	
CDME1	Firm has collect all level of cost information on time in order to manage specific cost process and setting target costing with effectiveness.
CDME2	Firm has collect all level of customer information in the past, the present, and the future with effectiveness, and has used to develop suitable new product development following customer requirement.
CDME3	Firm has ability to classify all information of all cost function, and analyze all of competitors' cost information, competitive environment, and customer groups both of quantitative and qualitative in order to set up revenues and suitable cost for operation planning.
CDME4	Firm uses variety of technology which includes appropriate memories for collecting and analyzing all quality information with effectiveness, on time, and usefulness for operation planning and decision making.
Product Management Flexibility (PMF)	
PMF1	Firm has potential excellently to response modern production process, and to reduce non-value added activities of the process.
PMF2	Firm has potential to integrate knowledge from all variety function to design new product development, using various material and production process, and ability to use flexibility target cost following customer requirement and market.
PMF3	Firm has ability to use modern cost management system which consistency with innovation approach in order to renew variety products, and create continuous operation production effectiveness.
PMF4	Firm has potential to develop value engineering in order to change new types and functions of variety products and create all levels of customers satisfaction.
Cost Accounting System Quality (CASQ)	
CASQ1	Firm has cost accounting system which can response to users in every function with up-to-date, and can decision making with accuracy and effectiveness.
CASQ2	Firm has capacity to operate information systems, process all cost information and relative costs of customers, and can use to set policies and plans systematically and substantially.
CASQ3	Firm has ability to prepare overall financial reporting, financial reporting for core, major, and specific customers, including all information for decision making on time, accuracy, and reliability.
CASQ4	Firm has ability to use cost accounting information to analyze return and profit from customers including financial and non-financial performance with efficiency and effectiveness.
Competitor Information Richness (CIR)	
CIR1	Firm has ability to collect covering all levels and all dimensions of competitors information in order to set plans and strategies.

Table A: Original Items in Scales (Continued)

Constructs	Items
Competitor Information Richness (CIR)	
CIR2	Firm has capacity to analyze all components, strategies, revenue, cost of production, and service cost of competitors with effectiveness in order to set planning and target for firm operation.
CIR3	Firm has capacity to analyze the potential, ability, environment, and competitive advantage of competitors in all levels, dimensions in order to review and change suitable firm operation plan to create short and long competitive advantage.
CIR4	Firm has potential to analyze the business administration of competitors in the past, the present, and the future in order to set acceptable and reliable management guidelines from customers and stakeholders.
Resource Utilization Integration (RUI)	
RUI1	Firm has ability to plan resources sharing with internal and external functions with efficiency, economy, and maximize benefit to joint firms operation.
RUI2	Firm has ability to manage joint quality resources sharing with internal and external functions systematically and substantially in order to operate joint target.
RUI3	Firm has potential sharing information, innovation, and variety technologies both internal and external functions including recruitment process, usage, and maintenance for continuous planning and operating.
RUI4	Firm has ability to create joint connection networks to analyze, evaluate and sharing knowledge, skills and experience of teamwork, resources sharing in all functions both internal and external for creating jointly new knowledge and innovation, system development, and continuous resources management in order to maximize short and long benefits.
Customer Needs Awareness (CNA)	
CNA1	Firm emphasizes to seek the information of tastes and continuous customers requirement for planning their suitable products and services, and to create customers satisfaction and good relationship.
CNA2	Firm focuses on technology utilization and variety services to response all different levels of customer requirement and customer satisfaction which leads firms to success in the long-term.
CNA3	Firm emphasizes to create customers relationship more than other firms in the same industry and consistency with organizational goal which is already set.
CNA4	Firm has been cooperating very well from customers directly to give their recommendation, opinion, and usefulness information with consistency leads to create firm reputation from products and services and accepts by customers, market, stakeholders, and over than their competitors.

Table A: Original Items in Scales (Continued)

Constructs	Items
Profit Planning Proficiency (PPP)	
PPP1	Firm has potential ability to forecast, and profit planning accurately in the present and in the future periods.
PPP2	Firm has ability to increase their competencies in order to profit planning for continuously new product development launched in the marketplace.
PPP3	Firm has potential and ability to increased more profit margins on each customer in the present and the future performance than competitors.
PPP4	Firm has information systems efficiently to analyze firms and competitors information of revenue, cost, each individual customer profit in all level systematically leads to increase competencies to analyze profit from operation in the present, and trend analysis of operation in the future accurately and continuously.
Customer Profitability Analysis Capability (CPAC)	
CPAC1	Firm has ability to identify characteristic, relationship, and services for core customers separate from general customers in order to create customers satisfaction and customers loyalty in the long-run.
CPAC2	Firm has competencies to plan suitable strategies to present products and services, revenue, expenses, and to create the relationship with each of core customers and general customers continuously and efficiently.
CPAC3	Firm has ability to analyze profit margin, long-term customer profit from the analysis of revenue, cost, and service expenses of each core customer and general customer continuously and efficiently.
CPAC4	Firm has ability to set long-term strategies which cover operation management in all function and the strategies to create the loyalty from core customers and general customers efficiently and effectiveness following organizational goal.
Asset Usefulness (AUF)	
AUF1	Firm has competencies to create new product development which is accepted, and can response to customers satisfaction in all level continuously.
AUF2	Firm can create new knowledge, innovation, and patient which create maximize benefit for operating business.
AUF3	Firm has ability to joint resource utilization with internal and external functions efficiently, effectiveness, and leads to the harmony between the organization and inter-organization.
AUF4	Firm can manage the recruitment, joint resources utilization, and maintenance to increase asset useful life with efficiency, and effectiveness from the joint operation.
Value Enhancement (VEM)	
VEM1	Firm has competencies to increase beneficial profit from maximize project investment efficiently, and to create the reliability and return to customers, stakeholders in the short run and the long run.

Table A: Original Items in Scales (Continued)

Constructs	Items
Value Enhancement (VEM)	
VEM2	Firm has ability to increase benefit from good decision making of production design, and suitable production mixed in order to produce new products and services to the market continuously, and increase the reliability of firm's products and services continuously.
VEM3	Firm has ability to develop new knowledge continuously from the cooperation both internal and external functions, which leads to the leadership of new knowledge creation and modern innovation continuously.
VEM4	Firm has ability to manage strategic target price costing and has flexible and suitable production quantitative plan for all levels of customers, appropriate for current economic environment efficiently and effectiveness following target plan.
Goal Achievement (GAM)	
GAM1	Firm has ability to operate following organizational plan and target goal with quality, efficiency, and effectiveness.
GAM2	Firm has continuous performance improvement, has accepted and reliability from customers, market, and stakeholders.
GAM3	Firm has ability to force staffs to show the potential and capability to operate continuous performance improvement, and is accepted by customers.
GAM4	Firm has ability to set operation management, suitable resources management, operate with professional management leads to be accepted by customers, social, competitors, and stakeholders.
Market Culture Orientation (MCO)	
MCO1	Firm emphasizes on quality of service systems that focuses on customer orientation by create service mind that emphasizes to customers first priority.
MCO2	Firm has supported staff to concern change in customer requirement in order to develop new product development which increase more quality to market continuously and create maximize customer satisfaction.
MCO3	Firm emphasizes that learning of customer requirement and customer expectation is needed to help firm operates efficiency, and success in the short-run and long-run.
MCO4	Firm beliefs that setting plan of marketing operation as well is needed to help firm developing the competencies of staffs as well.
Inter-Functional Team Quality (TFTQ)	
IFTQ1	Firm emphasizes that operation by using inter-functional team and cooperation as well will lead to increase knowledge sharing, skills and experiences in order to increase the good relationship between teamwork, increase unity, reduce conflict in operation, and lead to meet join target goals.

Table A: Original Items in Scales (Continued)

Constructs	Items
Inter-Functional Team Quality (TFTQ)	
IFTQ2	Firm emphasized that the cooperation of inter-functional team will help firm economy in time and resources usage, reduce non-value added activities in operation, and lead to success in performance with efficiency.
IFTQ3	Firm beliefs that cooperation and joint problem solving of inter-functional teamwork will lead to increase joint responsibility, and force to create knowledge creativity and improve efficiency and effectiveness in operation.
IFTQ4	Firm has supported to measure and evaluate performance following inter-functional teamwork in order to force teamwork to create more quality productivity.
Cost Management System Excellence (CMSE)	
CMSE1	Firm emphasizes on the efficiency of cost management, usefulness function, easy to use and maintenance.
CMSE2	Firm concentrates on skill and experience of employees to manage operation and solve numerous problems in production process efficiency.
CMSE3	Firm concentrates on suitable database and software systems which appropriate and modern information, and can create usefulness information to decision making as well.
CMSE4	Firm emphasizes on cost management system which can analyze cost behavior and specific functions for collecting cost information following GAAP and cost information following managerial costing in order to decision making.
IT Capability (ITC)	
ITC1	Firm has supported in investment of widely network connection leads to adapt information systems, network systems, internet and others which could share the information with stakeholders such as suppliers, all levels of customers in order to maximize efficiency operation.
ITC2	Firm has potential to do research and development of computer system and information technology which lead to increase capacity of production, consistency with the present operation, supports the analysis and evaluation of information which includes decision making in various situations such as the analysis of customers requirement, the analysis and evaluation of risk management as well.
ITC3	Firm has potential to apply continuously modern managerial approach, quality of products and services which meet the customers requirement, up-to-date, reduce cost of production and inventory stocks which leads to operate more efficiently.
ITC4	Firm beliefs that firm information systems have potential to response the users both of internal and external efficiency.

Table A: Original Items in Scales (Continued)

Constructs	Items
Competitive Turbulence (CPT)	
CPT1	Competitive environment in the present which is changed continuously leads firms to seek new modern strategic cost management and efficiency tools which is usefulness in order to adapt suitable for firms.
CPT2	Increasing in new competitors and continuously leads firms to create new strategies and change for flexibility operation and creativity in order to continuous performance improvement, meet goal achievement, and maximize benefit.
CPT3	Change in various customers requirement and uncertainty environment leads firm to seek new technology to forecast and analyze customer requirement accurately, and can set suitable marketing strategies in operation.
CPT4	The acceptable and reliability from variety stakeholders is a factor leads to firm success, thus firm will focus on the implementation which leads to increase its potential and capabilities to produce quality products and services for all levels customers, and can response to stakeholders requirement continuously and effectiveness.
Collaboration Climate (CBC)	
CBC1	To have a good cooperation in operation between internal and external functions leads to coordination well and leads to success in joint operation and joint goal achievement.
CBC2	To have a good cooperation in joint investment leads firm to increase creativity in quality products and best services for customers in order to join increasing profit of firms in the short-run and the long-run.
CBC3	To have a good cooperation in joint management planning between internal and external functions leads to the capability to set jointly target goal as well and leads to increase competitive advantage.
CBC4	To have a good cooperation to develop skills of inter-functional team both of internal and external leads to knowledge sharing and creativity to produce the best products and services for customers , and leads to increase performance effectiveness.

APPENDIX B

Non-Response Bias Tests

Table B: Non-Response Bias Tests

Comparison	N	Mean	S.D.	t	Sig.
Type of Business:					
• Fist Group	174	1.58	.834	.996	.321
• Second Group	174	1.49	.817		
Main Customers:					
• Fist Group	174	1.68	.536	1.529	.128
• Second Group	174	1.60	.568		
Registered Business Capital:					
• Fist Group	174	1.81	.869	.188	.851
• Second Group	174	1.79	.814		
Total Assets Value of Firm:					
• Fist Group	174	2.12	1.033	.581	.562
• Second Group	174	2.06	.942		
Number of Employees:					
• Fist Group	174	1.92	1.050	-1.383	.168
• Second Group	174	2.08	1.094		
Period of Time in Operation:					
• Fist Group	174	3.17	.998	-.268	.789
• Second Group	174	3.20	.960		
Average Sales Revenue:					
• Fist Group	174	2.22	1.133	1.487	.139
• Second Group	174	2.06	1.001		

APPENDIX C

Respondent Characteristics

Table C: Demographic Characteristics of Respondents

Descriptions	Categories	Frequencies	Percent (%)
Gender	Male	121	34.77
	Female	227	65.23
	Total	**348**	**100.00**
Age	Less than 30 years old	11	3.16
	30-40 years old	159	45.69
	41-50 years old	115	33.05
	More than 50 years old	63	18.10
	Total	**348**	**100.00**
Marital Status	Single	122	35.06
	Married	211	60.63
	Divorced	15	4.31
	Total	**348**	**100.00**
Education Level	Bachelor's degree or less than	169	48.56
	Higher than Bachelor's degree	179	51.44
	Total	**348**	**100.00**
Working Experiences	Less than 5 years	14	4.02
	5 – 10 years	95	27.30
	11 – 15 years	96	27.59
	More than 15 years	143	41.09
	Total	**348**	**100.00**

Table C: Demographic Characteristics of Respondents (Continued)

Descriptions	Categories	Frequencies	Percent (%)
Average Incomes Per Month	Less than 40,000 Baht	88	25.29
	40,000 – 60,000 Baht	146	41.95
	60,001-80,000 Baht	42	12.07
	More than 80,000 Baht	72	20.69
Total		**348**	**100.00**
Current Position	Accounting Director	56	16.09
	Accounting Manager	182	52.30
	Others	110	31.61
Total		**348**	**100.00**

APPENDIX D

Exporting Gem and Jewelry Businesses in Thailand

Table D: Demographic Characteristics of Gems and Jewelries Businesses in Thailand

Descriptions	Categories	Frequencies	Percent (%)
Business Owner Types	Company limited	251	72.13
	Partnership	97	27.87
	Total	**348**	**100.00**
Type of business	Thai's owner business	236	67.82
	Consortium or joint venture with foreign business	37	10.63
	Foreign business but operate in Thailand (Subsidiary/Branch)	75	21.55
	Total	**348**	**100.00**
Main customers	Persons	138	39.66
	Business firms	197	56.61
	Others	13	3.73
	Total	**348**	**100.00**
Registered business capital	Less than 10,000,000 Baht	146	41.96
	10,000,000 – 50,000,000 Baht	143	41.09
	50,000,001 – 90,000,000 Baht	41	11.78
	More than 90,000,000 Baht	18	5.17
	Total	**348**	**100.00**
Total assets	Less than 10,000,000 Baht	112	32.18
	10,000,000 – 50,000,000 Baht	136	39.08
	50,000,001 – 90,000,000 Baht	57	16.38
	More than 90,000,000 Baht	43	12.36
	Total	**348**	**100.00**
Number of employees	Less than 50 persons	153	43.97
	50 – 100 persons	89	25.57
	101 – 150 persons	59	16.95
	More than 150 persons	47	13.51
	Total	**348**	**100.00**

Table D: Demographic Characteristics of Gems and Jewelries Businesses in Thailand (Continued)

Descriptions	Categories	Frequencies	Percent (%)
The period of time operating in business	Less than 5 years	27	7.76
	5-10 years	59	16.95
	11-15 years	86	24.71
	More than 15 years	176	50.58
	Total	**348**	**100.00**
Firm's average revenues per year	Less than 10,000,000 Baht	119	34.20
	10,000,000 – 30,000,000 Baht	120	34.48
	30,000,001 – 50,000,000 Baht	50	14.37
	More than 50,000,000 Baht	59	16.95
	Total	**348**	**100.00**

APPENDIX E

Item Factor Loadings and Reliability Analyses in Pre-Test

Table E: Item Factor Loadings and Reliability Analyses in Sample

Constructs	N	Items	Factor Loadings	Reliability (Alpha)
Goal Achievement (GAM)	30	GAM1	.760	.887
		GAM2	.788	
		GAM3	.923	
		GAM4	.916	
Cost Data Mining Effectiveness (CDME)	30	CDME1	.863	.925
		CDME2	.932	
		CDME3	.920	
		CDME4	.905	
Product Management Flexibility (PMF)	30	PMF1	.925	.930
		PMF2	.858	
		PMF3	.926	
		PMF4	.927	
Cost Accounting System Quality (CASQ)	30	CASQ1	.902	.944
		CASQ2	.946	
		CASQ3	.911	
		CASQ4	.948	
Competitor Information Richness (CIR)	30	CIR1	.937	.924
		CIR2	.930	
		CIR3	.919	
		CIR4	.842	
Resource Utilization Integration (RUI)	30	RUI1	.944	.938
		RUI2	.934	
		RUI3	.922	
		RUI4	.901	
Customer Needs Awareness (CNA)	30	CNA1	.795	.838
		CNA2	.845	
		CNA3	.788	
		CNA4	.863	
Profit Planning Proficiency (PPP)	30	PPP1	.892	.905
		PPP2	.963	
		PPP3	.849	
		PPP4	.821	
Customer Profitability Analysis Capability (CPAC)	30	CPAC1	.811	.927
		CPAC2	.933	
		CPAC3	.941	
		CPAC4	.939	

Table E: Item Factor Loadings and Reliability Analyses in Sample (Continued)

Constructs	N	Items	Factor Loadings	Reliability (Alpha)
Asset Usefulness (AUF)	30	AUF1	.633	.855
		AUF2	.946	
		AUF3	.888	
		AUF4	.856	
Value Enhancement (VEM)	30	VEM1	.914	.890
		VEM2	.857	
		VEM3	.870	
		VEM4	.833	
Market Culture Orientation (MCO)	30	MCO1	.895	.868
		MCO2	.881	
		MCO3	.879	
		MCO4	.927	
Inter-Functional Team Quality (IFTQ)	30	IFTQ1	.951	.895
		IFTQ2	.939	
		IFTQ3	.920	
		IFTQ4	.749	
Cost Management System Excellence (CMSE)	30	CMSE1	.827	.889
		CMSE2	.900	
		CMSE3	.857	
		CMSE4	.883	
IT Capability (ITC)	30	ITC1	.839	.906
		ITC2	.927	
		ITC3	.904	
		ITC4	.861	
Competitive Turbulence (CPT)	30	CPT1	.802	.855
		CPT2	.894	
		CPT3	.859	
		CPT4	.800	
Collaboration Climate (CBC)	30	CBC1	.918	.922
		CBC2	.889	
		CBC3	.894	
		CBC4	.906	

APPENDIX F

Cover Letter and Questionnaire (English Version)

Questionnaire to the Ph. D. Dissertation Research
"Strategic Target Costing Effectiveness and Goal Achievement: Empirical Evidence from Exporting Gem and Jewelry Businesses in Thailand"

Dear Sir,

This research is a part of doctoral dissertation of Ms.Pitachaya Kaneko at the Mahasarakham Business School, Mahasarakham University, Thailand. The objective of this research is to examine the strategic target costing effectiveness and goal achievement of Exporting Gem and Jewelry Businesses in Thailand. The questionnaire is divided into 7 parts as follows:

Part 1: Personal information of accounting executive of Exporting Gem and Jewelry Businesses in Thailand,
Part 2: General information of Exporting Gem and Jewelry Businesses in Thailand,
Part 3: Opinion on strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand,
Part 4: Opinion on the consequences of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand,
Part 5: Opinion on the antecedents of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand,
Part 6: Opinion on the collaboration climate of Exporting Gem and Jewelry Businesses in Thailand,
Part 7: Recommendations and suggestions in the operation of Exporting Gem and Jewelry Businesses in Thailand.

Your answer will be kept as confidentiality and your information will not be shared with any outsider party without your permission.

If you want a summary of this research, please indicate your E-mail address or attach your business card with this questionnaire. The summary will be mailed to you as soon as the analysis is completed.

Thank you for your time answering all the questions. I have no doubt that your answer will provide valuable information for academic advancement. If you have any questions with respect to this research, please contact me directly at mobile phone 085-014-1836 or email address: michiko_k2008@hotmail.com.

Sincerely yours,

(Pitachaya Kaneko)
Ph. D. Student
Mahasarakham Business School
Mahasarakham University, Thailand

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Cell phone: 085 – 0141836, E-mail: michiko_k2008@hotmail.com

Part 1: Personal information of accounting executive of Exporting Gem and Jewelry Businesses in Thailand

1. Gender
   - ❑ Male
   - ❑ Female

2. Age
   - ❑ Less than 30 years old
   - ❑ 30 – 40 years old
   - ❑ 41-50 years old
   - ❑ More than 50 years old

3. Marital status
   - ❑ Single
   - ❑ Married
   - ❑ Divorced

4. Level of education
   - ❑ Bachelor's degree or lower
   - ❑ Higher than undergraduate

5. Working experiences
   - ❑ Less than 5 years
   - ❑ 5- 10 years
   - ❑ 11 – 15 years
   - ❑ More than 15 years

6. Average incomes per month
   - ❑ Less than 40,000 Baht
   - ❑ 40,000 – 60,000 Baht
   - ❑ 60,001 – 80,000 Baht
   - ❑ More than 80,000 Baht

7. Current position
   - ❑ Accounting director
   - ❑ Cost accounting manager
   - ❑ Other (Please Specify)……

Part 2: General information of Exporting Gem and Jewelry Businesses in Thailand

1. Business owner type
   - ❑ Company limited
   - ❑ Partnership

2. Type of business
   - ❑ Thai's owner business
   - ❑ Consortium or joint ventures with foreign business
   - ❑ Foreign business but operate in Thailand (Subsidiary or branch)

3. Main customers
   - ❑ Persons
   - ❑ Business firms
   - ❑ Other (Please Specify)……

4. Registered business capital
   - ❑ Less than 10,000,000 Baht
   - ❑ 10,000,000 – 50,000,000 Baht
   - ❑ 50,000,001 – 90,000,000 Baht
   - ❑ More than 90,000,000 Baht

5. Total assets of the firm (at present)
   - ❑ Less than 10,000,000 Baht
   - ❑ 10,000,000 - 50,000,000 Baht
   - ❑ 50,000,001 - 90,000,000 Baht
   - ❑ More than 90,000,000 Baht

6. Number of employees
   - ❑ Less than 50 persons
   - ❑ 50 -100 persons
   - ❑ 101 – 150 persons
   - ❑ More than 150 persons

7. The period of time operating in business
   - ❑ Less than 5 years
   - ❑ 5 - 10 years
   - ❑ 11 – 15 years
   - ❑ More than 15 years

8. Average sales revenues per year
   - ❑ Less than 10,000,000 Baht
   - ❑ 10,000,001 – 30,000,000 Baht
   - ❑ 30,000,001 – 50,000,000 Baht
   - ❑ More than 50,000,000 Baht

Part 3: Opinion on strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand

Strategic Target Costing Effectiveness	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Cost Data Mining Effectiveness					
1. Firm has collected all level of cost information on time in order to manage specific cost process and setting target costing with effectiveness.					
2. Firm has collected all level of customer information in the past, the present, and the future with effectiveness, and has used to develop suitable new product development following customer requirement.					
3. Firm has ability to classify all information of all cost function, and analyze all of competitors' cost information, competitive environment, and customer groups both of quantitative and qualitative in order to set up revenues and suitable cost for operation planning.					
4. Firm uses variety of technology which includes appropriate memories for collecting and analyzing all quality information with effectiveness, on time, and usefulness for operation planning and decision making.					
Product Management Flexibility					
5. Firm has potential excellently to response modern production process, and to reduce non-value added activities of the process.					

Part 3: Opinion on strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Strategic Target Costing Effectiveness	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
6. Firm has potential to integrate knowledge from all variety function to design new product development, using various material and production process, and ability to use flexibility target cost following customer requirement and market.					
7. Firm has ability to use modern cost management system which consistency with innovation approach in order to renew variety products, and create continuous operation production effectiveness.					
8. Firm has potential to develop value engineering in order to change new types and functions of variety products and create all levels of customers satisfaction.					
Cost Accounting System Quality 9. Firm has cost accounting system which can response to users in every function with up-to-date, and can decision making with accuracy and effectiveness.					
10. Firm has capacity to operate information systems, process all cost information and relative costs of customers, and can use to set policies and plans systematically and substantially.					

Part 3: Opinion on strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Strategic Target Costing Effectiveness	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
11. Firm has ability to prepare overall financial reporting, financial reporting for core, major, and specific customers, including all information for decision making on time, accuracy, and reliability.					
12. Firm has ability to use cost accounting information to analyze return and profit from customers including financial and non-financial performance with efficiency and effectiveness.					
Competitor Information Richness					
13. Firm has ability to collect covering all levels and all dimensions of competitors information in order to set plans and strategies.					
14. Firm has capacity to analyze all components, strategies, revenue, cost of production, and service cost of competitors with effectiveness in order to set planning and target for firm operation.					
15. Firm has capacity to analyze the potential, ability, environment, and competitive advantage of competitors in all levels, dimensions in order to review and change suitable firm operation plan to create short and long competitive advantage.					

Part 3: Opinion on strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Strategic Target Costing Effectiveness	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
16. Firm has potential to analyze the business administration of competitors in the past, the present, and the future in order to set acceptable and reliable management guidelines from customers and stakeholders.					
Resource Utilization Integration 17. Firm has ability to plan resources sharing with internal and external functions with efficiency, economy, and maximize benefit to joint firms operation.					
18. Firm has ability to manage joint quality resources sharing with internal and external functions systematically and substantially in order to operate joint target.					
19. Firm has potential sharing information, innovation, and variety technologies both internal and external functions including recruitment process, usage, and maintenance for continuous planning and operating.					
20. Firm has ability to create joint connection networks to analyze, evaluate and sharing knowledge, skills and experience of teamwork, resources sharing in all functions both internal and external for creating jointly new knowledge and innovation, system development, and continuous resources management in order to maximize short and long benefits.					

Part 3: Opinion on strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Strategic Target Costing Effectiveness	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Customer Needs Awareness					
21. Firm emphasizes to seek the information of tastes and continuous customers requirement for planning their suitable products and services, and to create customers satisfaction and good relationship.					
22. Firm focuses on technology utilization and variety services to response all different levels of customer requirement and customer satisfaction which leads firms to success in the long-term.					
23. Firm emphasizes to create customers relationship more than other firms in the same industry and consistency with organizational goal which is already set.					
24. Firm has been cooperating very well from customers directly to give their recommendation, opinion, and usefulness information with consistency leads to create firm reputation from products and services and accepts by customers, market, stakeholders, and over than their competitors.					

Part 4: Opinion on the consequences of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand

Business Outcomes	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Profit Planning Proficiency					
1. Firm has potential ability to forecast, and profit planning accurately in the present and in the future periods.					
2. Firm has ability to increase their competencies in order to profit planning for continuously new product development launched in the marketplace.					
3. Firm has potential and ability to increased more profit margins on each customer in the present and the future performance than competitors.					
4. Firm has information systems efficiently to analyze firms and competitors information of revenue, cost, each individual customer profit in all level systematically leads to increase competencies to analyze profit from operation in the present, and trend analysis of operation in the future accurately and continuously.					

Part 4: Opinion on the consequences of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Business Outcomes	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Customer Profitability Analysis Capability					
5. Firm has ability to identify characteristic, relationship, and services for core customers separate from general customers in order to create customers satisfaction and customers loyalty in the long-run.					
6. Firm has competencies to plan suitable strategies to present products and services, revenue, expenses, and to create the relationship with each of core customers and general customers continuously and efficiently.					
7. Firm has ability to analyze profit margin, long-term customer profit from the analysis of revenue, cost, and service expenses of each core customer and general customer continuously and efficiently.					
8. Firm has ability to set long-term strategies which cover operation management in all function and the strategies to create the loyalty from core customers and general customers efficiently and effectiveness following organizational goal.					

Part 4: Opinion on the consequences of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Business Outcomes	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Asset Usefulness					
9. Firm has competencies to create new product development which is accepted, and can response to customers satisfaction in all level continuously.					
10. Firm can create new knowledge, innovation, and patient which create maximize benefit for operating business.					
11. Firm has ability to joint resource utilization with internal and external functions efficiently, effectiveness, and leads to the harmony between the organization and inter-organization.					
12. Firm can manage the recruitment, joint resources utilization, and maintenance to increase asset useful life with efficiency, and effectiveness from the joint operation.					
Value Enhancement					
13. Firm has competencies to increase beneficial profit from maximize project investment efficiently, and to create the reliability and return to customers, stakeholders in the short run and the long run.					

Part 4: Opinion on the consequences of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Business Outcomes	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
14. Firm has ability to increase benefit from good decision making of production design, and suitable production mixed in order to produce new products and services to the market continuously, and increase the reliability of firm's products and services continuously.					
15. Firm has ability to develop new knowledge continuously from the cooperation both internal and external functions, which leads to the leadership of new knowledge creation and modern innovation continuously.					
16. Firm has ability to manage strategic target price costing and has flexible and suitable production quantitative plan for all levels of customers, appropriate for current economic environment efficiently and effectiveness following target plan.					
Goal Achievement 17. Firm has ability to operate following organizational plan and target goal with quality, efficiency, and effectiveness.					
18. Firm has continuous performance improvement, has accepted and reliability from customers, market, and stakeholders.					

Part 4: Opinion on the consequences of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Business Outcomes	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
19. Firm has ability to force staffs to show the potential and capability to operate continuous performance improvement, and is accepted by customers.					
20. Firm has ability to set operation management, suitable resources management, operate with professional management leads to be accepted by customers, social, competitors, and stakeholders.					

Part 5: Opinion on the antecedents of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand

Internal Environment Factors on Business Operation	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Market Culture Orientation					
1. Firm emphasizes on quality of service systems that focuses on customer orientation by create service mind that emphasizes to customers first priority.					
2. Firm has supported staff to concern change in customer requirement in order to develop new product development which increase more quality to market continuously and create maximize customer satisfaction.					

Part 5: Opinion on the antecedents of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Internal Environment Factors on Business Operation	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
3. Firm emphasizes that learning of customer requirement and customer expectation is needed to help firm operates efficiency, and success in the short-run and long-run.					
4. Firm beliefs that setting plan of marketing operation as well is needed to help firm developing the competencies of staffs as well.					
Inter-Functional Team Quality 5. Firm emphasizes that operation by using inter-functional team and cooperation as well will lead to increase knowledge sharing, skills and experiences in order to increase the good relationship between teamwork, increase unity, reduce conflict in operation, and lead to meet join target goals.					
6. Firm emphasized that the cooperation of inter-functional team will help firm economy in time and resources usage, reduce non-value added activities in operation, and lead to success in performance with efficiency.					
7. Firm beliefs that cooperation and joint problem solving of inter-functional teamwork will lead to increase joint responsibility, and force to create knowledge creativity and improve efficiency and effectiveness in operation.					

Part 5: Opinion on the antecedents of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Internal Environment Factors on Business Operation	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
8. Firm has supported to measure and evaluate performance following inter-functional teamwork in order to force teamwork to create more quality productivity.					
Cost Management System Excellence 9. Firm emphasizes on the efficiency of cost management, usefulness function, easy to use and maintenance.					
10. Firm concentrates on skill and experience of employees to manage operation and solve numerous problems in production process efficiency.					
11. Firm concentrates on suitable database and software systems which appropriate and modern information, and can create usefulness information to decision making as well.					
12. Firm emphasizes on cost management system which can analyze cost behavior and specific functions for collecting cost information following GAAP and cost information following managerial costing in order to decision making.					

Part 5: Opinion on the antecedents of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

Internal Environment Factors on Business Operation	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
IT Capability					
13. Firm has supported in investment of widely network connection leads to adapt information systems, network systems, internet and others which could share the information with stakeholders such as suppliers, all levels of customers in order to maximize efficiency operation.					
14. Firm has potential to do research and development of computer system and information technology which lead to increase capacity of production, consistency with the present operation, supports the analysis and evaluation of information which includes decision making in various situations such as the analysis of customers requirement, the analysis and evaluation of risk management as well.					
15. Firm has potential to apply continuously modern managerial approach, quality of products and services which meet the customers requirement, up-to-date, reduce cost of production and inventory stocks which leads to operate more efficiently.					
16. Firm beliefs that firm information systems have potential to response the users both of internal and external efficiency.					

Part 5: Opinion on the antecedent of strategic target costing effectiveness of Exporting Gem and Jewelry Businesses in Thailand (Continued)

External Environment Factor on Business Operation	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Competitive Turbulence					
17. Competitive environment in the present which is changed continuously leads firms to seek new modern strategic cost management and efficiency tools which is usefulness in order to adapt suitable for firms.					
18. Increasing in new competitors and continuously leads firms to create new strategies and change for flexibility operation and creativity in order to continuous performance improvement, meet goal achievement, and maximize benefit.					
19. Change in various customers requirement and uncertainty environment leads firm to seek new technology to forecast and analyze customer requirement accurately, and can set suitable marketing strategies in operation.					
20. The acceptable and reliability from variety stakeholders is a factor leads to firm success, thus firm will focus on the implementation which leads to increase its potential and capabilities to produce quality products and services for all levels customers, and can response to stakeholders requirement continuously and effectiveness.					

Part 6: Opinion on the collaboration climate of Exporting Gem and Jewelry Businesses in Thailand

Collaboration Environment on Business Operation	Opinion Levels				
	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Collaboration Climate					
1. To have a good cooperation in operation between internal and external functions leads to coordination well and leads to success in joint operation and joint goal achievement.					
2. To have a good cooperation in joint investment leads firm to increase creativity in quality products and best services for customers in order to join increasing profit of firms in the short-run and the long-run.					
3. To have a good cooperation in joint management planning between internal and external functions leads to the capability to set jointly target goal as well and leads to increase competitive advantage.					
4. To have a good cooperation to develop skills of inter-functional team both of internal and external leads to knowledge sharing and creativity to produce the best products and services for customers , and leads to increase performance effectiveness.					

Part 7: Recommendations and suggestions in the operation of Exporting Gem and Jewelry Businesses in Thailand.

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Thank you for your time and attention to this matter.

APPENDIX G

Cover Letters and Questionnaire: Thai Version

ที่ ศธ 0530.10/

คณะการบัญชีและการจัดการ
มหาวิทยาลัยมหาสารคาม
อำเภอกันทรวิชัย จังหวัดมหาสารคาม
44150

2 เมษายน 2556

เรื่อง ขอความอนุเคราะห์กรอกแบบสอบถาม

เรียน ผู้บริหารฝ่ายบัญชี

ด้วย นางสาวพิฐชญาณ์ คาเนโกะ นิสิตระดับปริญญาเอก คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง “ประสิทธิผลต้นทุนตามเป้าหมายเชิงกลยุทธ์และการบรรลุเป้าหมายองค์กร : การศึกษาเชิงประจักษ์ของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย” ซึ่งเป็นส่วนหนึ่งของการทำวิทยานิพนธ์ หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) และในการศึกษาในครั้งนี้ได้เน้นให้นิสิตศึกษาข้อมูลด้วยตนเอง ดังนั้น เพื่อให้การจัดทำวิทยานิพนธ์ เป็นไปด้วยความเรียบร้อยและบรรลุวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคามจึงใคร่ขออนุญาตให้ นางสาวพิฐชญาณ์ คาเนโกะ ศึกษาและเก็บรวบรวมในรายละเอียดตามแบบสอบถามที่แนบมาพร้อมนี้

คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม หวังเป็นอย่างยิ่งว่าคงได้รับความอนุเคราะห์จากท่านในการให้ข้อมูลในครั้งนี้เป็นอย่างยิ่ง และขอขอบคุณมา ณ โอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.ปิพฤกษ์ อุตสาหะวาณิชกิจ)
คณบดีคณะการบัญชีและการจัดการ
มหาวิทยาลัยมหาสารคาม

คณะการบัญชีและการจัดการ
งานบัณฑิตศึกษา โทรศัพท์ (043) 754333 ต่อ 3431

แบบสอบถามเพื่อการวิจัย

เรื่อง การบริหารต้นทุนของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย

คำชี้แจง

โครงการวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาวิจัยเรื่อง “ประสิทธิผลต้นทุนตามเป้าหมายเชิงกลยุทธ์และการบรรลุเป้าหมายองค์กร ของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย” เพื่อใช้เป็นข้อมูลในการจัดทำวิทยานิพนธ์ในระดับปริญญาเอกของผู้วิจัย ในหลักสูตรปรัชญาดุษฎีบัณฑิต สาขาวิชาการบัญชี คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม โทรศัพท์ 043-754333

ข้าพเจ้าใคร่ขอความอนุเคราะห์จากท่านผู้ตอบแบบสอบถาม ได้โปรดตอบแบบสอบถามชุดนี้ โดยรายละเอียดของแบบสอบถามประกอบด้วยส่วนคำถาม 7 ตอน ดังนี้

ตอนที่ 1 ข้อมูลทั่วไปเกี่ยวกับผู้บริหาร ธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย
ตอนที่ 2 ข้อมูลทั่วไปเกี่ยวกับธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย
ตอนที่ 3 ความคิดเห็นเกี่ยวกับการบริหารต้นทุนของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย
ตอนที่ 4 ความคิดเห็นเกี่ยวกับผลกระทบของการบริหารต้นทุนของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย
ตอนที่ 5 ความคิดเห็นเกี่ยวกับปัจจัยที่มีอิทธิพลต่อการบริหารต้นทุนของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย
ตอนที่ 6 ความคิดเห็นเกี่ยวกับบรรยากาศแวดล้อมด้านความร่วมมือในการดำเนินงานของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย
ตอนที่ 7 ข้อคิดเห็นและข้อเสนอแนะเกี่ยวกับการดำเนินงานของธุรกิจส่งออกอัญมณีและครื่องประดับในประเทศไทย

คำตอบของท่านจะถูกเก็บรักษาเป็นความลับ จะไม่มีการใช้ข้อมูลใด ๆ ที่เปิดเผยเกี่ยวกับตัวท่านในการรายงานข้อมูล และจะไม่มีการร่วมใช้ข้อมูลดังกล่าวกับบุคคลภายนอกอื่นใดโดยไม่ได้รับอนุญาตจากท่าน

ท่านต้องการรายงานสรุปผลการวิจัยหรือไม่

❑ ต้องการ E - mail _____ ❑ ไม่ต้องการ

หากท่านต้องการรายงานสรุปผลการวิจัย โปรดระบุ E-mail Address ของท่าน หรือแนบนามบัตรของท่านมากับแบบสอบถามชุดนี้

ผู้วิจัยขอขอบพระคุณที่ท่านได้กรุณาเสียสละเวลาในการตอบแบบสอบถามชุดนี้อย่างถูกต้องครบถ้วน และหวังเป็นอย่างยิ่งว่าข้อมูลที่ได้รับจากท่านจะเป็นประโยชน์อย่างยิ่งต่อการวิจัยในครั้งนี้ และขอขอบพระคุณอย่างสูงมา ณ โอกาสนี้ หากท่านมีข้อสงสัยประการใดเกี่ยวกับแบบสอบถาม โปรดติดต่อผู้วิจัย นางสาวพิฐชญาณ์ คาเนโกะ โทรศัพท์เคลื่อนที่ 085-014-1836 หรือ E – mail: michiko_k2008 @ hotmail.com

(นางสาวพิฐชญาณ์ คาเนโกะ)
นิสิตระดับปริญญาเอก สาขาวิชาการบัญชี
คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม

ตอนที่ 1 ข้อมูลทั่วไปเกี่ยวกับผู้บริหาร ธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย

1. เพศ

❑ ชาย ❑ หญิง

2. อายุ

❑ น้อยกว่า 30 ปี ❑ 30 – 40 ปี
❑ 41-50 ปี ❑ มากกว่า 50 ปี

3. สถานภาพสมรส

❑ โสด ❑ สมรส
❑ หม้าย/หย่าร้าง

4. ระดับการศึกษา

❑ ปริญญาตรีหรือต่ำกว่า ❑ สูงกว่าปริญญาตรี

5. ประสบการณ์การทำงานในกิจการ

❑ น้อยกว่า 5 ปี ❑ 5 - 10 ปี
❑ 11 – 15 ปี ❑ มากกว่า 15 ปี

6. รายได้เฉลี่ยต่อเดือน

❑ ต่ำกว่า 40,000 บาท ❑ 40,000 – 60,000 บาท
❑ 60,001 - 80,000 บาท ❑ มากกว่า 80,000 บาท

7. ตำแหน่งงานในปัจจุบัน

❑ ผู้อำนวยการฝ่ายบัญชี ❑ ผู้จัดการฝ่ายบัญชี
❑ อื่น ๆ (โปรดระบุ).....

ตอนที่ 2 ข้อมูลทั่วไปเกี่ยวกับธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย

1. รูปแบบธุรกิจ
   - ❑ บริษัทจำกัด
   - ❑ ห้างหุ้นส่วน

2. ลักษณะของธุรกิจ
   - ❑ กิจการของคนไทย
   - ❑ กิจการร่วมทุนกับต่างประเทศ
   - ❑ กิจการต่างประเทศแต่ดำเนินธุรกิจในประเทศไทย (สาขา)

3. กลุ่มลูกค้าหลัก
   - ❑ บุคคลทั่วไป
   - ❑ กลุ่มธุรกิจ
   - ❑ อื่น ๆ (โปรดระบุ).....

4. จำนวนทุนในการดำเนินงาน
   - ❑ ต่ำกว่า 10,000,000 บาท
   - ❑ 10,000,000 – 50,000,000 บาท
   - ❑ 50,000,001 – 90,000,000 บาท
   - ❑ มากกว่า 90,000,000 บาท

5. มูลค่าสินทรัพย์รวมของกิจการในปัจจุบัน
   - ❑ ต่ำกว่า 10,000,000 บาท
   - ❑ 10,000,000 - 50,000,000 บาท
   - ❑ 50,000,001 - 90,000,000 บาท
   - ❑ มากกว่า 90,000,000 บาท

6. จำนวนพนักงานประจำ
   - ❑ น้อยว่า 50 คน
   - ❑ 50 -100 คน
   - ❑ 101-150 คน
   - ❑ มากกว่า 150 คน

7. ระยะเวลาในการดำเนินธุรกิจ
   - ❑ น้อยกว่า 5 ปี
   - ❑ 5 - 10 ปี
   - ❑ 11 - 15 ปี
   - ❑ มากกว่า 15 ปี

8. รายได้ของกิจการต่อปี
   - ❑ ต่ำกว่า 10,000,000 บาท
   - ❑ 10,000,000 – 30,000,000 บาท
   - ❑ 30,000,001 – 50,000,000 บาท
   - ❑ มากกว่า 50,000,000 บาท

ตอนที่ 3 ความคิดเห็นเกี่ยวกับการบริหารต้นทุนธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย

การบริหารต้นทุน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
1. กิจการมีการรวบรวมข้อมูลด้านต้นทุนทุกระดับอย่างทันเวลา เพื่อใช้ในการบริหารจัดการต้นทุนเฉพาะทาง กำหนดต้นทุนตามเป้าหมายได้อย่างมีคุณภาพ					
2. กิจการมีการเก็บรวบรวมข้อมูลด้านลูกค้าในทุก ๆ ด้าน ตั้งแต่อดีต ปัจจุบัน และในอนาคตอย่างมีประสิทธิภาพ และใช้ในการพัฒนาผลิตภัณฑ์ใหม่ให้ตรงตามความต้องการของลูกค้า					
3. กิจการมีความสามารถในการจำแนกข้อมูลต้นทุนในทุกส่วนงาน รวมถึงข้อมูลการวิเคราะห์เกี่ยวกับต้นทุนคู่แข่งขัน สภาพแวดล้อมการแข่งขัน และกลุ่มลูกค้าทั้งเชิงปริมาณและเชิงคุณภาพ ซึ่งช่วยให้กำหนดรายรับและต้นทุนที่เหมาะสมในการวางแผนการดำเนินงาน					
4. กิจการใช้เทคโนโลยีที่มีความหลากหลาย รวมถึงมีหน่วยความจำที่เพียงพอ ในการเก็บรวบรวมและวิเคราะห์ข้อมูลที่มีคุณภาพทันเวลา และมีประโยชน์ต่อการวางแผนและตัดสินใจในการดำเนินงาน					
5. กิจการมีศักยภาพในการตอบสนองกระบวนการผลิตแนวใหม่ได้เป็นอย่างดีและลดกิจกรรมขั้นตอนการผลิตที่ไม่ก่อให้เกิดประโยชน์ (non-value added activities)					
6. กิจการมีศักยภาพในการบูรณาการความรู้จากหลายหน่วยงานในการออกแบบผลิตภัณฑ์ใหม่ การใช้วัตถุดิบและกระบวนการผลิตที่หลากหลาย และสามารถปรับเปลี่ยนต้นทุนตามเป้าหมายได้ตามความต้องการของลูกค้าและตลาด					
7. กิจการมีความสามารถในการใช้ระบบการจัดการต้นทุนสมัยใหม่ที่สอดคล้องกับแนวคิดเชิงนวตกรรม เพื่อให้เกิดผลิตภัณฑ์ที่มีความหลากหลาย และเกิดประสิทธิภาพในการดำเนินการผลิตอย่างต่อเนื่อง					
8. กิจการมีศักยภาพในการพัฒนารูปแบบวิศวกรรมเชิงคุณค่า (value engineering) ในการปรับเปลี่ยนรูปแบบและฟังก์ชั่นการใช้งานของผลิตภัณฑ์ให้มีความหลากหลาย และสร้างความพึงพอใจให้กับกลุ่มลูกค้าทุกระดับ					

ตอนที่ 3 (ต่อ)

การบริหารต้นทุน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
9. กิจการมีระบบการบัญชีต้นทุนที่สามารถตอบสนองผู้ใช้ข้อมูลทุกหน่วยงานที่เกี่ยวข้องอย่างทันเวลา สามารถตัดสินใจได้อย่างถูกต้อง มีประสิทธิภาพ					
10. กิจการมีความสามารถในการจัดทำระบบข้อมูล การประมวลผลข้อมูลค่าใช้จ่าย และต้นทุนที่เกี่ยวข้องกับลูกค้า และใช้ในการกำหนดแนวทาง นโยบายและแผนงาน อย่างเป็นระบบ และเป็นรูปธรรมในการดำเนินงานต่อลูกค้าได้อย่างมีประสิทธิภาพมากยิ่งขึ้น					
11. กิจการสามารถจัดทำรายงานทางการเงินในภาพรวม รายงานการเงินสำหรับลูกค้าหลัก ลูกค้ารายใหญ่และลูกค้าเฉพาะราย รวมถึงข้อมูลที่ใช้ในการตัดสินใจได้อย่างทันเวลา มีความถูกต้องและเชื่อถือได้					
12. กิจการสามารถใช้ข้อมูลบัญชีต้นทุนในการวิเคราะห์ผลตอบแทนและผลกำไรที่ได้รับจากลูกค้า รวมถึงผลการดำเนินงานทั้งที่เป็นตัวเงินและไม่เป็นตัวเงินได้อย่างมีประสิทธิภาพและประสิทธิผล					
13. กิจการมีความสามารถในการรวบรวมข้อมูลคู่แข่งขันในทุกด้านทุกมิติและครอบคลุม เพื่อใช้ในการวางแผนงานและกลยุทธ์					
14. กิจการมีความสามารถในการวิเคราะห์องค์ประกอบด้าน กลยุทธ์ รายได้ ต้นทุนการผลิต และค่าใช้จ่ายในการให้บริการของคู่แข่งขันได้อย่างมีประสิทธิภาพ เพื่อเป็นแนวทางในการกำหนด แผนงานและเป้าหมาย การดำเนินงานของกิจการ					
15. กิจการมีความสามารถในการวิเคราะห์ศักยภาพ สภาพแวดล้อม ความได้เปรียบเชิงแข่งขันของคู่แข่งขัน ในทุกด้าน ทุกมิติ เพื่อทบทวน และปรับแผนการดำเนินงานของกิจการ ให้มีความเหมาะสมและมีความได้เปรียบเชิงแข่งขันทั้งในระยะสั้นและระยะยาว					
16. กิจการมีศักยภาพในการประมวลผลด้านการบริหารของคู่แข่งขันทั้งในอดีต ปัจจุบัน และอนาคต เพื่อกำหนดแนวทางการบริหารที่เป็นที่ยอมรับและไว้วางใจจากลูกค้า และผู้มีส่วนเกี่ยวข้อง					

ตอนที่ 3 (ต่อ)

การบริหารต้นทุน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
17. กิจการมีความสามารถในการวางแผนการใช้ทรัพยากรร่วมกับหน่วยงานภายในและภายนอกได้อย่างมีประสิทธิภาพ ประหยัด และก่อให้เกิดประโยชน์สูงสุดในการดำเนินงานของกิจการร่วมกัน					
18. กิจการมีศักยภาพในการบริหารจัดการทรัพยากรที่มีคุณภาพร่วมกันทั้งหน่วยงานภายในและภายนอก อย่างเป็นระบบ และเป็นรูปธรรมในการดำเนินงานตามเป้าหมายร่วมกัน					
19. กิจการมีศักยภาพในการแลกเปลี่ยนข้อมูลข่าวสาร นวตกรรรม และเทคโนโลยีที่มีความหลากหลายทั้งภายในและภายนอกหน่วยงาน รวมถึงมีกระบวนการจัดหา การใช้ และการบำรุงรักษา ในการวางแผนงานและดำเนินงานอย่างต่อเนื่อง					
20. กิจการสามารถสร้างเครือข่ายพันธมิตรร่วมกันในการวิเคราะห์และประเมินผลการแลกเปลี่ยนความรู้ ประสบการณ์ของทีมงาน การใช้ทรัพยากรร่วมกันกับหน่วยงานทุกระดับทั้งภายในและภายนอก ในการสร้างสรรค์ความรู้และนวตกรรมร่วมกันและการพัฒนาระบบ การบริหารทรัพยากรอย่างต่อเนื่อง ให้เกิดประโยชน์สูงสุดในระยะสั้นและระยะยาว					
21. กิจการมุ่งเน้นในการแสวงหาข้อมูลเกี่ยวกับรสนิยม และความต้องการ ของลูกค้าอย่างต่อเนื่อง เพื่อนำมาใช้ในการวางแผนผลิตภัณฑ์และบริการที่เหมาะสม และเพื่อสร้างความพึงพอใจและความสัมพันธ์อันดีกับลูกค้า					
22. กิจการให้ความสำคัญกับการใช้เทคโนโลยีและการให้บริการที่มีความหลากหลายในการตอบสนองความต้องการและความพึงพอใจของลูกค้าทุกระดับที่มีความแตกต่างกัน จะทำให้กิจการสามารถประสบความสำเร็จในระยะยาว					
23. กิจการให้ความสำคัญกับการสร้างความสัมพันธ์อันดีกับลูกค้าเหนือกว่าธุรกิจอื่นในอุตสาหกรรมเดียวกัน และสอดคล้องกับเป้าหมายกับองค์กร ที่ได้กำหนดไว้					
24. กิจการได้รับความร่วมมือเป็นอย่างดีจากลูกค้าโดยตรง ในการให้คำแนะนำ ข้อคิดเห็น และข้อมูลที่เป็นประโยชน์กับกิจการอย่างสม่ำเสมอ ทำให้ผลิตภัณฑ์และบริการของกิจการมีชื่อเสียง เป็นที่ยอมรับของลูกค้า ตลาด ผู้มีส่วนเกี่ยวข้อง และเหนือกว่าคู่แข่งขัน					

<u>ตอนที่ 4</u> ความคิดเห็นเกี่ยวกับผลกระทบของการบริหารต้นทุนของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย

ผลการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
1. กิจการมีความสามารถในการพยากรณ์ การวางแผนกำไรได้อย่างถูกต้อง แม่นยำ ทั้งในปัจจุบันและในอนาคต					
2. กิจการมีความสามารถในการเพิ่มสมรรถภาพในการวางแผนกำไร สำหรับผลิตภัณฑ์ใหม่ที่ออกสู่ตลาดอย่างต่อเนื่อง					
3. กิจการมีศักยภาพและความสามารถในการเพิ่มอัตราส่วนกำไรในลูกค้า แต่ละราย ทั้งในการดำเนินงานงวดปัจจุบัน และอนาคตได้ดีกว่าคู่แข่งขัน					
4. กิจการมีระบบข้อมูลที่มีประสิทธิภาพ ในการวิเคราะห์ข้อมูลรายได้ต้นทุนของกิจการ กำไรของลูกค้าแต่ละรายในทุกระดับและคู่แข่งขันอย่างเป็นระบบ ทำให้สามารถวิเคราะห์กำไรจากการดำเนินงานในปัจจุบัน และวิเคราะห์แนวโน้มผลการดำเนินงานในอนาคตได้อย่างถูกต้องและต่อเนื่อง					
5. กิจการสามารถจำแนกลักษณะ ความสัมพันธ์และการให้บริการลูกค้าลูกค้าหลักแยกจากลูกค้าทั่วไป เพื่อเป็นแนวทางในการสร้างความพึงพอใจและความจงรักภักดีในตัวลูกค้าในระยะยาวได้เป็นอย่างดี					
6. กิจการสามารถวางแผนกลยุทธ์ที่เหมาะสมในการนำเสนอสินค้าและบริการ รายได้ ค่าใช้จ่าย รวมถึงการสร้างความสัมพันธ์อันดีกับลูกค้าหลักและลูกค้าทั่วไปในแต่ละรายได้อย่างต่อเนื่องและมีประสิทธิผล					
7. กิจการสามารถวิเคราะห์ อัตรากำไรขั้นต้น กำไรในระยะยาวของลูกค้า จากการวิเคราะห์รายได้ ต้นทุน และค่าใช้จ่ายในการให้บริการของลูกค้าหลักและลูกค้าทั่วไปแต่ละรายได้อย่างต่อเนื่องและมีประสิทธิภาพ					
8. กิจการสามารถกำหนดกลยุทธ์ในระยะยาวที่ครอบคลุมการบริหารจัดการทุกส่วนงาน และกลยุทธ์ในการสร้างความจงรักภักดีในตัวลูกค้าหลักและลูกค้าทั่วไปได้อย่างมีประสิทธิภาพและมีประสิทธิผล ตามเป้าหมาย การดำเนินงานของกิจการ					

ตอนที่ 4 (ต่อ)

ผลการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
9. กิจการสามารสร้างผลิตภัณฑ์ใหม่ที่เป็นที่ยอมรับ และตอบสนองความพึงพอใจของลูกค้าทุกระดับ ได้อย่างต่อเนื่อง					
10. กิจการสามารถสร้างองค์ความรู้ใหม่ นวตกรรม และสินทรัพย์ทางปัญญาที่ก่อให้เกิดประโยชน์สูงสุดในการดำเนินงานขององค์กร					
11. กิจการสามารถใช้สินทรัพย์ร่วมกันกับหน่วยงานภายในและภายนอกได้อย่างมีประสิทธิภาพ ประสิทธิผล และก่อให้เกิดความสามัคคีในองค์กรและหน่วยงานภายนอก					
12. กิจการสามารถบริหารจัดการด้าน การจัดหา การใช้สินทรัพย์ร่วมกันรวมถึง การบำรุงรักษาและการเพิ่มอายุการใช้งาน ได้อย่างมีประสิทธิภาพ และประสิทธิผลในการดำเนินงานร่วมกัน					
13. กิจการสามารถในการสร้างประโยชน์เพิ่มจากการลงทุนในโครงการที่ได้รับผลตอบแทนสูงสุดได้อย่างมีประสิทธิภาพ รวมถึงการสร้าง ความเชื่อมั่นและผลตอบแทนให้กับลูกค้า รวมถึงผู้มีส่วนเกี่ยวข้องทั้งในระยะสั้นและระยะยาว					
14. กิจการสามารถก่อให้เกิดผลประโยชน์เพิ่มจากการตัดสินใจที่ดีในการออกแบบกระบวนการผลิต และส่วนผสมการผลิตที่เหมาะสมในการผลิตสินค้าและบริการใหม่ ๆ ออกสู่ตลาดอย่างสม่ำเสมอ และทำให้เกิดความเชื่อมั่นในตัวผลิตภัณฑ์และบริการของกิจการอย่างต่อเนื่อง					
15. กิจการสามารถพัฒนาองค์ความรู้อย่างต่อเนื่องจากความร่วมมือของทีมงานทั้งภายในและภายนอก ในการเป็นผู้นำด้านความคิดสร้างสรรค์และนวตกรรมสมัยใหม่อย่างต่อเนื่อง					
16. กิจการสามารถบริหารจัดการด้านกลยุทธ์การตั้งราคาผลิตภัณฑ์และมีความยืดหยุ่นในปริมาณการผลิตที่เพียงพอและเหมาะสมกับลูกค้าทุกระดับ และสภาพแวดล้อมทางเศรษฐกิจในปัจจุบันได้อย่างมีประสิทธิภาพและประสิทธิผลตามเป้าหมาย					
17. กิจการสามารถดำเนินงานเป็นไปตามแผนงาน และบรรลุเป้าหมายองค์กรอย่างมีคุณภาพ ประสิทธิภาพ และประสิทธิผล					

ตอนที่ 4 (ต่อ)

ผลการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
18. กิจการมีผลการดำเนินงานที่ดีขึ้นอย่างต่อเนื่อง และได้รับความเชื่อมั่นและไว้วางใจจากลูกค้า ตลาด และผู้ถือหุ้น					
19. กิจการผลักดันให้บุคคลากรได้แสดงออกถึงศักยภาพ และความสามารถในการดำเนินงานได้อย่างต่อเนื่อง และเป็นที่ยอมรับของลูกค้า					
20. กิจการจัดระบบการบริหารงาน จัดการทรัพยากรอย่างเหมาะสม และดำเนินงานอย่างมืออาชีพจนเป็นที่ยอมรับของลูกค้า สังคม คู่แข่งขัน และผู้มีส่วนเกี่ยวข้อง					

ตอนที่ 5 ความคิดเห็นเกี่ยวกับปัจจัยภายในและปัจจัยภายนอกที่มีผลต่อการดำเนินงานของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย

ปัจจัยภายในที่มีผลต่อการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
1. กิจการมุ่งเน้นให้มีระบบการบริการที่มีคุณภาพ ที่มุ่งเน้นลูกค้าเป็นสำคัญ โดยการสร้างจิตสำนึกด้านการให้บริการ (service Mind) ที่เน้นการให้ความสำคัญกับลูกค้าเป็นอันดับแรก					
2. กิจการสนับสนุนให้บุคลากรค้นหาความต้องการของลูกค้าที่เปลี่ยนแปลงไป เพื่อใช้ในการพัฒนาและปรับปรุงผลิตภัณฑ์ใหม่ ๆ ที่มีคุณภาพมากขึ้นออกสู่ตลาดอย่างต่อเนื่อง และสร้างความพึงพอใจสูงสุดให้กับลูกค้า					
3. กิจการตระหนักเสมอว่า การเรียนรู้ความต้องการและความคาดหวังของลูกค้าเป็นหลัก จะทำให้กิจการสามารถดำเนินงานมีประสิทธิภาพ และประสบความสำเร็จทั้งระยะสั้นและระยะยาว					
4. กิจการเชื่อมั่นว่า การกำหนดแนวทางในการปฏิบัติงานทางด้านการตลาดที่ดีจะเป็นแบบอย่างในการพัฒนาความสามารถของบุคลากรให้ดียิ่งขึ้น					

ตอนที่ 5 (ต่อ)

ปัจจัยภายในที่มีผลต่อการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
5. กิจการเชื่อมั่นว่า การทำงานเป็นทีมข้ามสายงานและมีการประสานงานที่ดี จะช่วยให้ทีมงานมีการแลกเปลี่ยนความรู้ ประสบการณ์ และก่อให้เกิดความสัมพันธ์อันดีระหว่างกัน มีความสามัคคี ลดข้อขัดแย้งในการทำงาน ทำให้บรรลุเป้าหมายร่วมกันได้โดยง่าย					
6. กิจการเชื่อมั่นว่า ความร่วมมือของทีมข้ามสายงาน จะช่วยให้เกิดการประหยัดเวลา ทรัพยากรที่ใช้ และลดขั้นตอนกิจกรรมที่ไม่จำเป็น ในการดำเนินงาน ส่งผลให้การปฏิบัติงานประสบผลสำเร็จอย่างมีประสิทธิภาพ					
7. กิจการเชื่อมั่นว่า การประสานงาน และการแก้ไขปัญหาร่วมกันของทีมข้ามสายงาน ก่อให้เกิดจิตสำนึกในความรับผิดชอบร่วมกัน นำไปสู่การกระตุ้นความคิดสร้างสรรค์และการปรับปรุงประสิทธิภาพและประสิทธิผลในการปฏิบัติงาน					
8. กิจการส่งเสริมให้มีการวัดและประเมินผลงานเป็นทีมข้ามสายงานเพื่อกระตุ้นให้ทีมงานเกิดการสร้างผลงานที่มีคุณภาพมากยิ่งขึ้น					
9. กิจการให้ความสำคัญกับการบริหารต้นทุนที่มีประสิทธิภาพ มีฟังก์ชั่นที่มีประโยชน์ สามารถใช้งาน และบำรุงรักษาได้ง่าย					
10. กิจการให้ความสำคัญกับทักษะและประสบการณ์ของพนักงานในการจัดการบริหารงาน และแก้ไขปัญหาต่างๆ ในกระบวนการผลิตได้อย่างมีประสิทธิภาพ					
11. กิจการให้ความสำคัญกับฐานข้อมูลและโปรแกรมระบบที่มีความเหมาะสมและมีข้อมูลทันสมัย สามารถสร้างข้อมูลที่เป็นประโยชน์ในการตัดสินใจได้เป็นอย่างดี					
12. กิจการให้ความสำคัญกับระบบการจัดการต้นทุนที่สามารถวิเคราะห์พฤติกรรมต้นทุน และฟังก์ชั่นเฉพาะที่ใช้ในการเก็บรวบรวมข้อมูลเฉพาะด้านตามมาตรฐานการบัญชีที่รับรองทั่วไป และข้อมูลต้นทุนตามแนวทางการบัญชีบริหาร เพื่อใช้ในการตัดสินใจ					

ตอนที่ 5 (ต่อ)

ปัจจัยภายในที่มีผลต่อการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
13. กิจการส่งเสริมให้มีการลงทุนในข่ายงานบริเวณกว้าง ทำให้สามารถปรับใช้ระบบสารสนเทศ ระบบเครือข่าย อินเตอร์เน็ท และอื่น สามารถแลกเปลี่ยนข้อมูลกับผู้ที่มีส่วนเกี่ยวข้อง เช่น ผู้จัดจำหน่าย ลูกค้าทุกระดับ เพื่อให้การดำเนินงานมีประสิทธิภาพสูงสุด					
14. กิจการมีศักยภาพในการวิจัยและพัฒนาระบบคอมพิวเตอร์และระบบสารสนเทศ ที่สามารถเพิ่มศักยภาพในการผลิต สอดคล้องกับการดำเนินงานในปัจจุบัน ซึ่งรองรับการวิเคราะห์และประมวลผล รวมถึง การตัดสินใจในสถานการณ์ต่าง ๆ เช่น การวิเคราะห์ ความต้องการของลูกค้า การวิเคราะห์และบริหารความเสี่ยงได้เป็นอย่างดี					
15. กิจการมีศักยภาพในการประยุกต์แนวคิดการบริหารจัดการสมัยใหม่ได้อย่างต่อเนื่อง เกี่ยวกับคุณภาพของผลิตภัณฑ์และการให้บริการลูกค้า ที่ตรงตามความต้องการและทันเวลา ลดต้นทุนการผลิต ลดการสำรองสินค้าคงคลัง ทำให้ผลการดำเนินงานมีประสิทธิภาพยิ่งขึ้น					
16. กิจการเชื่อมั่นว่าระบบสารสนเทศของกิจการมีศักยภาพสามารถตอบสนองความต้องการของผู้ใช้งานทั้งภายในและภายนอกได้อย่างมีประสิทธิภาพ					

ตอนที่ 5 (ต่อ)

ปัจจัยภายนอกที่มีผลต่อการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
17. สภาพแวดล้อมการแข่งขันในปัจจุบันที่มีการเปลี่ยนแปลงอย่างต่อเนื่อง ทำให้กิจการต่างๆ ต้องมีการแสวงหากลยุทธ์การจัดการต้นทุนสมัยใหม่ และเครื่องมือที่มีประสิทธิภาพเพื่อนำมาปรับใช้ได้อย่างเหมาะสมกับกิจการ					
18. การเพิ่มขึ้นของคู่แข่งขันรายใหม่ที่มากขึ้น และเกิดขึ้นอย่างต่อเนื่อง ทำให้กิจการต่าง ๆ มุ่งสร้างสรรค์กลยุทธ์ใหม่ และปรับเปลี่ยนแนวทางในการดำเนินงานที่ยืดหยุ่น สร้างสรรค์เพื่อให้สามารถดำเนินงานได้อย่างต่อเนื่องและบรรลุเป้าหมายและเกิดประโยชน์สูงสุด					
19. การเปลี่ยนแปลงในความต้องการของลูกค้าที่มีความหลากหลาย และมีความไม่แน่นอน ทำให้กิจการต่าง ๆ มีการแสวงหาเทคโนโลยีสมัยใหม่ในการคาดการณ์ และวิเคราะห์ความต้องการของลูกค้าได้อย่างแม่นยำมากขึ้นและสามารถกำหนดกลยุทธ์ทางการตลาดที่เหมาะสมในการดำเนินงาน					
20. ความเชื่อมั่นและการได้รับการยอมรับจากผู้มีส่วนเกี่ยวข้องที่มีความหลากหลายเป็นปัจจัยที่ส่งผลต่อความสำเร็จขององค์กร ทำให้กิจการต่าง ๆ มุ่งกำหนดแนวทางปฏิบัติงาน ที่มุ่งเพิ่มศักยภาพและความสามารถของตนเองในการผลิตสินค้าและบริการที่มีคุณภาพให้กับลูกค้าทุกระดับ และสามารถตอบสนองต่อความต้องการของผู้มีส่วนได้เสียได้อย่างต่อเนื่องและมีประสิทธิผล					

<u>ตอนที่ 6</u> ความคิดเห็นเกี่ยวกับบรรยากาศแวดล้อมด้านความร่วมมือในการดำเนินงานของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย

บรรยากาศด้านความร่วมมือในการดำเนินงาน	ระดับความคิดเห็น				
	มากที่สุด 5	มาก 4	ปานกลาง 3	น้อย 2	น้อยที่สุด 1
1. การมีบรรยากาศด้านความร่วมมือที่ดีในการดำเนินงาน ระหว่างหน่วยงานภายในและภายนอก ทำให้เกิดการประสานงานที่ดีและมุ่งไปสู่ความสำเร็จของการดำเนินงานและการบรรลุเป้าหมายร่วมกัน					
2. การมีบรรยากาศด้านความร่วมมือในการลงทุนร่วมกัน ทำให้กิจการเกิดความคิดสร้างสรรค์ในผลิตภัณฑ์ที่มีคุณภาพ และการให้บริการที่ดีเลิศแก่ลูกค้า ในการสร้างกำไรให้กับกิจการร่วมกันทั้งในระยะสั้นและระยะยาว					
3. การมีบรรยายกาศด้านความร่วมมือที่ดีในการวางแผนการบริหารงานร่วมกันระหว่างหน่วยงานทั้งภายในและภายนอก ก่อให้เกิดความสามารถในการกำหนดเป้าหมายร่วมกันได้ดียิ่งขึ้น และทำให้เกิดความได้เปรียบเชิงแข่งขันเพิ่มขึ้น					
4. การมีบรรยากาศด้านความร่วมมือที่ดีในการพัฒนาทักษะของทีมงานระหว่างหน่วยงานภายในและภายนอก ก่อให้เกิดการแบ่งปันองค์ความรู้ และความคิดสร้างสรรค์ในการผลิตสินค้าและบริการที่ดีเลิศแก่ลูกค้า ทำให้มีผลการดำเนินงานที่มีประสิทธิภาพประสิทธิผลได้ดียิ่งขึ้น					

ตอนที่ 7 ข้อเสนอแนะ

หากท่านมีข้อเสนอแนะเพิ่มเติมเกี่ยวกับการบริหารงานของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย เพื่อให้สามารถตอบสนองการเปลี่ยนแปลงของสภาพแวดล้อมทั้งภายในและภายนอกกิจการ หรือมีข้อเสนอแนะเกี่ยวกับแบบสอบถาม **ได้โปรดเสนอแนะในช่องว่างข้างล่างนี้**

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ขอขอบพระคุณท่านที่ได้สละเวลาตอบแบบสอบถาม

APPENDIX H

Letters to the Experts

บันทึกข้อความ

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ที่ ศธ.0530.10/ **วันที่** 1เมษายน 2556

เรื่อง ขอเรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัย

เรียน อาจารย์ ดร.เกสินี หมื่นไธสง

ด้วย นางสาวพิฐชญาณ์ คาเนโกะ นิสิตระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต (ปร.ด.) สาขาวิชาการบัญชี คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม กำลังศึกษาวิทยานิพนธ์ เรื่อง "ประสิทธิผลต้นทุนตามเป้าหมายเชิงกลยุทธ์และการบรรลุเป้าหมายองค์กร : หลักฐานเชิงประจักษ์ของธุรกิจส่งออกอัญมณีและเครื่องประดับในประเทศไทย" ซึ่งเป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปรัชญาดุษฎีบัณฑิต ดังนั้น เพื่อให้การดำเนินการเป็นไปด้วยความเรียบร้อยและบรรลุตามวัตถุประสงค์ คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม จึงใคร่ขอความอนุเคราะห์จากท่านเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือวิจัยและข้อเสนอแนะเพื่อนำข้อมูลที่ได้ไปดำเนินการทำวิทยานิพนธ์ต่อไป ตามเอกสารแนบท้าย

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Research output

Kaneko, Pitachaya and Ussahawanitchaki, Phapruket. "Activity-Based Cost Management Strategy and Continuous Performance Improvement: Evidence of Thai Electronic Firms," International Journal of Strategic Management. 12(3) : 67-82, 2012.

Kaneko, Pitachaya, Ussahawanitchaki, Phapruket and Muenthaisong, Kesinee. "Strategic Target Costing Effectiveness and Goal Achievement: Empirical Evidence from Exporting Gem and Jewelry Businesses in Thailand," International Journal of Business Strategy. 13(3) : 127-158, 2013.

บันทึกข้อความ

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