

ผลกระทบของแนวปฏิบัติทางการบัญชีบริหารสมัยใหม่ต่อความสำเร็จของธุรกิจ:
หลักฐานจากนิคมอุตสาหกรรมในเขตพัฒนาพิเศษภาคตะวันออกของประเทศไทย
**The Impact of Contemporary Management Accounting Practices on Business
Success: Evidence from Industrial Estates in the Eastern Economic Corridor,
Thailand**

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บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อตรวจสอบผลกระทบของแนวปฏิบัติทางการบัญชีบริหารสมัยใหม่ต่อคุณภาพสารสนเทศทางบัญชี ความคิดสร้างสรรค์ทางธุรกิจ ความสามารถในการแข่งขันทางธุรกิจ และความสำเร็จของธุรกิจ แนวปฏิบัติทางการบัญชีบริหารสมัยใหม่ประกอบด้วย การจัดการต้นทุนเชิงกลยุทธ์ การจัดการงบประมาณที่ครอบคลุม การประเมินผลการดำเนินงานแบบบูรณาการ และแนวทางการตัดสินใจที่มีประสิทธิผล ในการวิจัยนี้มีกิจการในนิคมอุตสาหกรรมในเขตพัฒนาพิเศษภาคตะวันออกของประเทศไทย จำนวน 353 กิจการ เป็นตัวอย่างของการวิจัย ผลการวิจัยพบว่า การจัดการต้นทุนเชิงกลยุทธ์ และแนวทางการตัดสินใจที่มีประสิทธิผลมีความสัมพันธ์เชิงบวกต่อคุณภาพสารสนเทศทางบัญชี ความคิดสร้างสรรค์ทางธุรกิจ ความสามารถในการแข่งขันทางธุรกิจ และความสำเร็จของธุรกิจ ในขณะที่การจัดการงบประมาณที่ครอบคลุมมีความสัมพันธ์เชิงบวกต่อคุณภาพสารสนเทศทางบัญชี ความสามารถในการแข่งขันทางธุรกิจ และความสำเร็จของธุรกิจ และการประเมินผลการดำเนินงานแบบบูรณาการมีความสัมพันธ์เชิงบวกต่อความคิดสร้างสรรค์ทางธุรกิจ ความสามารถในการแข่งขันทางธุรกิจ และความสำเร็จของธุรกิจ นอกจากนี้คุณภาพสารสนเทศทางบัญชี และความคิดสร้างสรรค์ทางธุรกิจมีความสัมพันธ์เชิงบวกต่อความสามารถในการแข่งขันทางธุรกิจ และความสำเร็จของธุรกิจ นอกจากนั้นความสามารถในการแข่งขันทางธุรกิจมีความสัมพันธ์เชิงบวกต่อความสำเร็จของธุรกิจ ดังนั้น บริษัทจำเป็นต้องให้ความสำคัญกับแนวปฏิบัติทางการบัญชีบริหารสมัยใหม่ โดยเฉพาะด้านการจัดการต้นทุนเชิงกลยุทธ์ และแนวทางการตัดสินใจที่มีประสิทธิผลเพราะเป็นส่วนขับเคลื่อนสำคัญในการนำองค์กรไปสู่ผลลัพธ์ทางธุรกิจที่มีประสิทธิภาพ ซึ่งจะนำไปสู่โอกาสประสบความสำเร็จทางธุรกิจที่มากยิ่งขึ้น

คำสำคัญ: แนวปฏิบัติทางการบัญชีบริหารสมัยใหม่ คุณภาพสารสนเทศทางบัญชี ความคิดสร้างสรรค์ทางธุรกิจ ความสามารถในการแข่งขันทางธุรกิจ ความสำเร็จของธุรกิจ เขตพัฒนาพิเศษภาคตะวันออก

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Abstract

This research aims at investigating the effects of contemporary management accounting practices on accounting information quality, business creativity, business competitiveness and business success. Contemporary management accounting practices includes strategic cost management, comprehensive budget management, integrated performance evaluation and effective decision-making practices. In this research, 353 firms in industrial estates in the Eastern Economic Corridor, Thailand are the samples of the study. The results reveal that strategic cost management and effective decision-making practices have a significant positive influence on accounting information quality, business creativity, business competitiveness and business success. Also, comprehensive budget management has a significant positive influence on accounting information quality, business competitiveness and business success. While integrated performance evaluation has a significant positive effect on business creativity, business competitiveness and business success. Besides, accounting information quality and business creativity have a significant positive effect on business competitiveness and business success. Likewise, business competitiveness has a significant positive influence on business success. Firms need to focus on contemporary management accounting practices especially in strategic cost management and effective decision-making practices, it is a key driver in leading organizations to effective business results that lead to greater business success opportunities.

Keywords: Contemporary Management Accounting Practices, Accounting Information Quality, Business Creativity, Business Competitiveness, Business Success, Eastern Economic Corridor

INTRODUCTION

The arrival of new technologies and intense competition have undoubtedly caused changes in the practice and structure of management accounting techniques (Ogunbade and Oyerogba, 2020). The changes may cause companies to appraisal their current practices to develop relevant in the dynamic environment (Mat and Smith, 2014). Management accounting is the method that measures, analyses and reports information of financial and non-financial which helps executives make decisions to achieve the goals of a business. A management accounting practices (MAPs) is a model, framework, process or technique that allows management accountants to facilitate decision-making, support strategic objectives, improve performance and add value (Chartered Institute of Management Accountants, 2013). Traditional management accounting practices (TMAPs) were established before the 1980s including variance

analysis, standard costing, return on investment, cost benefit analysis and budgeting. TMAPs focus on internally short-term and financially oriented. TMAPs are no longer seen as sufficient and appropriate for environment in today's business (Ahmad and Leftesi, 2014). Consequently, new MAPs have occurred which emphasize not only financial information but also on nonfinancial information to offer a strategic focus to a business's decisions (Pavlatos and Kostakis, 2015). These management accounting practices are referred to as contemporary management accounting practices (CMAPs) and interchangeably referred to in the literature as new, modern, innovative or advanced management accounting practices (Abdel-Maksoud, Cheffi and Ghoudi, 2016). CMAPs are considered as those practices that have the capability to relate processes, operations and/or activities with strategic outcomes.

CMAPs are viewed as being strategically focused. Also, CMAPs focus on both future and historical events and have affected the whole procedure of management accounting (Abdel-Kader and Luther, 2006). To succeed in the dynamic business environment practices such as activity-based costing, just-in-time, target costing and total quality management would significantly improve the capability of businesses to meet comprehensive competition (Hussein, 2018). A number of CMAPs have been established across a range of industries. Practices may vary among firms as well as among countries. The reasons for variances might be as a result of historical, political cultural, or sociological differences (Yalcin, 2012). An important body of research has been available focusing on MAPs in developing and developed countries such as Abdel-Kader and Luther (2006), Pavlatos and Kostakis (2015) and McLellan (2014). The results of these researches reveal a wide application of TMAPs even in the most developed countries and a low application of CMAPs. There is few evidences and a relative lack of knowledge about the existing implementation of CMAPs in Thailand which may limit the probable to advance it. Hence, this research is predictable to contribute significantly to the literature of management accounting by filling the gap in previous research by focused on four dimensions of CMAPs that have an impact to Business outcomes. Thus, the research contributes to knowledge and providing empirical comprehensions about importance to application of CMAPs in Thailand.

The research is conducted with firms in industrial estates in the Eastern Economic Corridor (EEC) because these firms are main parts of Thailand's economy and they have invested high amount of money in the industries. The EEC development lies at the heart of Thailand 4.0

scheme. The EEC is an area-based development initiative, aiming to revitalize the well-known Eastern Seaboard were, for 30 years. The EEC project initially focused on the three Eastern provinces, namely Rayong, Chonburi and Chachoengsao. The development plan of EEC imagines an important transformation of both social and physical development, plays a significant role as a regulatory sandbox uplifting the country's competitiveness. A combined infrastructure is established for EEC to become the major gateway to both the Asia Pacific and South East Asia in the upcoming years (The Eastern Economic Corridor Office of Thailand, 2020). Using this sample will expand the existing literature and give a clearer picture of how CMAPs can be applied to industrial businesses. Accordingly, the main objective of this research is to examine the impacts of contemporary management accounting practices on business success from firms in industrial estates in the Eastern Economic Corridor, Thailand.

LITERATURE REVIEW

Management accounting is a branch that consists of a set of social and institutional processes. Management accounting practices (MAPs) are due to interrelationship between social institution, organizational context, technologies and research contributions. As an important branch in accounting, management accounting practices have been developed to enhance decision making as well as management control (Tanui, 2020). MAPs refers to various methods, processes, procedures or rules used in a particular profession, especially considered in manufacturing industries, to support the business's infrastructure and management accounting procedures. Furthermore, MAPs help firms stay in the competition and keep up with the changing world because they give a significant competitive advantage for business to motivate behaviors, guide managerial action and

support and create necessary cultural values to complete strategic purposes (Kalifa et al., 2020). MAPs are separated into contemporary management accounting practices (CMAPs) and traditional management accounting practices (TMAPs). In the past, TMAPs were used by many organizations. These practices focused on costs, failed to signify the whole depiction, have short term focus (Pavlatos and Paggios, 2009). From these features of TMAPs, it can be noted that change is inevitable given the current business environment. Therefore, CMAPs emerged to level modern business developments. CMAPs has emerged to be more superior given the current dynamism in the business environment. Performance of enterprises to be determined by environmental dynamics. As a result, the adoption of practices which measures performance in the changing environment.

CMAPs are typically different from that of traditional management accounting as they enable managers to make sound decisions to minimize cost as well in the same time add value to the products and services by improving the quality of products, which is required by the customers, and reduce waste. In addition, the modern management accounting systems allow the organization as whole to develop the innovative capacity of the organization and flexibility so that it can continually change and improve performance financially as well in its non-financial areas of performance. To conclude, CMAPs relevant to modern organizational management issues as well rectify and reform TMAPs to make decisions and specialized decisions based on relevant financial and non-financial information depending on the nature of activities, size, external circumstances and market conditions, customer profiles, organizational human resource issues, structural issues.

The research employs two main theories: contingency theory and stewardship theory, which

explains the relationships between CMAPs and the consequences. Contingency as any variable that controls the result of firm characteristics on firm performance. Hence, the contingency theory is paramount to describe how CMAPs can affect the firm performance. Kariuki and Kamau (2016) agrees that contingency theory is created on the principle that there is no generally appropriate accounting system which applies equally to all businesses in all circumstances. In essence, each firm will have its own management accounting practices. The theory aspects at certain significant factors that will support management to choose on a suitable management accounting practice. The stewardship theory believes that executives are involved to perform in the optimal interest of the shareholders; thus, executives look for the business's objective success, and they maximize as well as defend the shareholders' wealth. According to the stewardship theory, executives are motivated by intrinsic rewards; they satisfy themselves when they accomplish their goal challenge and gain acceptance from their peers, the board, and the shareholders (Ratnatunga and Alam, 2011). Because they believe that ownership will equitably share a firm's profit with them, they do the best for the firm as they would do for themselves, leading to the alignment of the firm's and the manager's objective.

CMAPs can play an important role in providing analytical frameworks and information for managers. Techniques, such as activity-based costing (ABC), balanced scorecards (BSC) and benchmarking performance (BP), can provide relevant mechanisms to help manage change and improve performance. The application of CMAPs has been examined in previous studies. This research builds on the accumulated results of prior research and adopted from Abdel-Kader and Pavlatos and Kostakis (2015) and Hussein (2018). It has classified CMAPs into four categories based on

executive's information needs: (1) strategic cost management, (2) comprehensive budget management, (3) integrated performance evaluation, and (4) effective decision-making practices. Also, literature review found that consequences of CMAPs implementation comprise numerous outcomes. This research used business outcome perspectives include accounting information quality, business creativity, business

competitiveness, and business success are consequences of CMAPs implementation (Hussein, 2018; Janudin et al., 2019; Tanui, 2020). The conceptual model presents the relations among CMAPs, accounting information quality, business creativity, business competitiveness and business success through as shown in Figure 1.

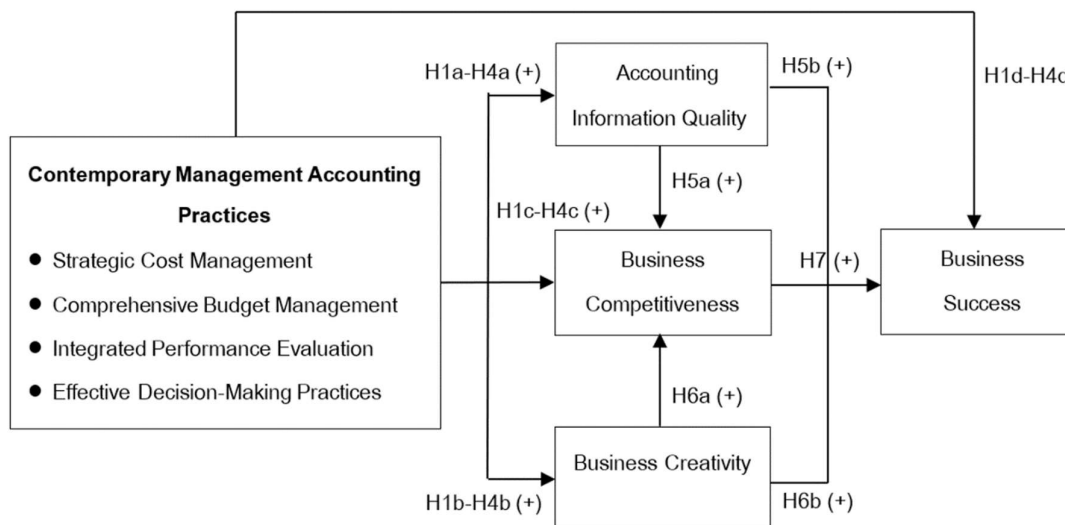


Figure 1 The conceptual model of the relationships among contemporary management accounting practices, accounting information quality, business creativity, business competitiveness and business success

Strategic Cost Management

Strategic cost management refers to the method of identifying, collecting, measuring, analyzing, interpreting, and reporting cost information valuable to both external and internal groups concerned with the way in which a firm uses its resources to meet its purposes (Bangladesh Cost Accounting Standards, 2019). Strategic cost management offers a structured means to compute the cost of main corporate processes by individual activity and service/product. Strategic cost management combines current financial accounting, work measurement information and workload to produce timely, useful and relevant information for managers (Grant Thornton, 2013). Strategic cost

management employs cause-effect relations to allocate direct, indirect, and manufacturing overhead resources to corporate activities. It then allocates these activity costs to services and products, again on a cause-effect basis. Consequently, it yields both correct, defensible calculations of full program cost and insight into the association between inputs and outputs by strategic cost management drives effectiveness and efficiency in a firm by integrating cost information with the decision-making framework to support the overall organizational strategy. It is not limited to controlling costs but using cost information for management decision making. The cost management techniques should be such that they improve the strategic position of a business apart from focusing

on controlling costs. These strategic cost management tools and practices can help resolve point problems quickly and can be combined with other agency initiatives such as value analysis, managerial cost accounting, target costing, analysis of alternatives, and activity-based costing (Yalcin, 2019).

The previous research of Abdelraheem, Serajeldin and Jedo (2017), it was found that strategic costing management help firm to decrease costs and to support the competitive advantage. Likewise, strategic costing management is a modern accounting method that helps firms provides cost information that helps management make decisions in addition to contribute to the development of strategies to complete the competitive advantages of the organization in the short and long term (Sayed, 2010). Moreover, strategic cost management is one of the methods of valuable strategic management accounting and it affects companies gained competitive advantage and increased success of business (Phomlaphatrachakom, 2018). In additional, strategic cost management is an instrument with usefulness for companies to increase competitive information richness, decision making, which has influence on their goal achievement (Wangcharoendate, 2015). Therefore, the associations are hypothesized as follows:

Hypothesis 1: Strategic cost management is positively related to a) accounting information quality, b) business creativity, c) business competitiveness and d) business success.

Comprehensive Budget Management

Comprehensive budget management is the second dimension of CMAPs. Budgeting is a powerful instrument for economic policy implementation, from prioritizing, generating applicable allocation to securing the steadiness of economics, up until influencing the economy as a full review is essential. Budgeting systems are significant component of financial results

control system. A budget refers to a quantitative expression of a plan of action by the firm for a specified period. Overall purposes of the firm are translated in to details by mutually agreement amongst firm members in budget preparation. Comprehensive budget management offers clear guidelines for executives to translate organizational purposes into specific task. It helps executives to communicate and coordinate attention directed to most important area (Janudin et al., 2019). Comprehensive budget management refers to the strategy-oriented, comprehensive forecasting and planning of business activities and corresponding financial results in a certain period of time in the future, scientifically and rationally allocating various financial and non-financial resources of the enterprise, and supervising the implementation process. And analysis, evaluate and feedback the implementation results, guide the improvement and adjustment of business activities, and then achieve the activities of the company's strategic goals (Wenming, 2019).

Comprehensive budget management purposes to improve the efficiency and effectiveness of expenditure by linking the funding of organizations to the results they deliver. It uses systematic performance information (indicators, program costings, evaluations etc.) to make this link. The impact of comprehensive budget management may be felt in improved prioritization of expenditure, and in improved service effectiveness and/or efficiency. It usually also emphasizes giving their managers greater flexibility in the use of resources than they would typically have under traditional tightly-controlled management systems (Centers for Learning on Evaluation and Results, 2016). Comprehensive budget management plays a vital role in corporate success as it supports in the business's operational planning, communication of goals, performance evaluation, controlling cost and strategy formation which helps the firm to achieve its overall objective (Song and Yi, 2015). Also, Perez

(2019) indicated that comprehensive budget management is fundamental aspects for the correct administration of the financial behavior of any business. It is complementary and necessary to guarantee smooth operation. Estimating a budget is the first step towards the stability of the business. The findings support the hypothesis that budgeting is a determining factor in organizational management and contributes significantly towards financial success. Moreover, Budget management effectively motivates employees and effectively enhances their business (Shi and Huang, 2013). Respectively, the related hypotheses are postulated as the following:

Hypothesis 2: Comprehensive budget management is positively related to a) accounting information quality, b) business creativity, c) business competitiveness and d) business success.

Integrated Performance Evaluation

Integrated performance evaluation is a basic management method that becomes a means to determine performance and support strategic management functions. The benefits of integrated performance evaluation comprise decision making, communication, performance measurement, strategy management and learning and improvement. Integrated performance evaluation has been established to simplify and integrate the performance evaluation system in a single system and adapt to firm processes and activities, to create indicators that inspire continuous improvement of decentralized teams, and to link goals with external and internal needs (Olivella and Gregorio, 2015). Integrated performance evaluation is a systematic process for obtaining valid information about organizational performance and the factors that affect performance. It differs from other types of evaluations because the assessment emphasizes on the organization as the primary unit of analysis. To better understand what they can or should change

to improve their ability to perform, organizations can conduct organizational assessments. This diagnostic tool can help organizations obtain useful data on their performance, identify important factors that aid or impede their achievement of results, and situate themselves with respect to competitors (Gallagher, 2019). Integrated performance evaluation considers both non-financial and financial performance measures associated with external and internal views that allows a comprehensive and integrated performance management. For instance, balanced scorecard assumes an external and internal orientation paralleled with forward-looking orientation. Integrated performance evaluation occurs from knowledge combination and cross-functional co-operation and alignment of individual actions and interactions across the value chain. In this research, Integrated performance evaluation is defined as the comprehensiveness of the measures by providing firms' consistency with each other and according to business strategies that reflects to all appropriate features of business performance and value creation (Giovannoni and Maraghini, 2013).

Integrated performance evaluation is supports firms' capabilities and competences in dealing with the competitive corporate environments and achieving competitive advantage and success. Firms have implemented integrated performance evaluation to create competitive advantage and increase their performance and success (Lata, Boonlua and Raksong, 2019). Also, Hannimitkulchai, Phornlaphatrachakorn and Pratoon (2019) indicate that integrated performance evaluation is a main component of sustainable competitive advantage for enhance decision-making success, operational goal achievement, and firm growth. Consistent with Thapayom (2019), found that integrated performance evaluation has a significant positive effect on competitiveness and sustainable performance. Also, integrated performance evaluation is also a main factor of business creativity and firm

success (Phornlaphatrachakorn, 2017). Therefore, the associations are hypothesized as follows:

Hypothesis 3: Integrated performance evaluation is positively related to a) accounting information quality, b) business creativity, c) business competitiveness and d) business success.

Effective Decision-Making Practices

Effective decision-making practices is the last dimension of CMAPs. Reveal that effective decision-making practices is the most significant factor in today's fast and changing competitive environment. Management accounting includes procedure of supplying the executives with relevant information. It combines non-financial and financial information. In a broader perspective, the information will be use to making decision, allocate resources, evaluating performance and monitoring. Effective decision-making practices providing feedback about historical operations and prospective by predicting future events. Ideally, it can become a source of competitive advantage for firm and provides the managers for effective decision making (Janudin et al., 2019). An accurate information is the main component in developing strategy as well as to monitor end result of strategy implementation. The evolution of management accounting from cost measurement to planning has seen the introduction of product profitability analysis, cost-volume-profit analysis, variance analysis and customer profitability analysis (Hussein, 2018). In this research, effective decision-making practices is defined as a procedure structured from the activities of information collecting, processing and assessment that emphasize the use of statistical analysis; as a process of knowledge and information transformation in executive activities such as strategic pricing, strategic costing and brand valuation (Thiess and Müller, 2018).

Effective decision-making practices involve a set of instruments enabling data collection, analysis

and distribution, and taking action based on corporate information, with a view to making better corporate decisions. It focusses on the use of technology to support decision-making such as commonly used office software (e.g., MS Office, Open Office). Spreadsheets are used for numerical analyses, word processors to construct arguments and presentation packages to construct visually convincing arguments. Technology is also used for information collection, which is performed by means of web search tools and electronic accessing of journals (Turpin and Marais, 2004). It enables management to receive appropriate information for meaningful decision making. Effective decision-making practices contributed to the success of the entities (Alleyne and Weekes-Marshall, 2011). It increases the number of good decisions and cuts failure rates in half (Larson, 2016). The prior research shown that effective decision-making practices supported the firm structure and management accounting processes. Effective decision-making practices can offer relevant information for capital investment decisions, which allow accountants to estimate payback period, discounted cash flow, and accounting rate of return. The study of Alsoboa, found that decision-making practices have a positive influence on Jordanian hotels' performance. Moreover, effective decision-making practices is an important organizational practice, and strategic decisions are the most significant decisions made in a business because of its importance for firm achievement (Matic and Bulog, 2012). Therefore, the associations are hypothesized as follows:

Hypothesis 4: Decision making support is positively related to a) accounting information quality, b) business creativity, c) business competitiveness and d) business success.

Accounting Information Quality

Problems of information quality can influence on operations, lower worker job-satisfaction and increase costs, while increasing customer dissatisfaction. In a modern world, a quality of information is potent in that it directs the firm's future. This is because good information quality can lead to achievement while poor information quality can lead to failure of the corporate. Accordingly, information quality criteria have become significant considerations for any firm that wants to carry out a diversity of processes well (Wongsim and Gao, 2011). Valuable information is directly linked to how it helps decision makers complete their business's goals. It can help people and their firms perform their tasks more effectively and efficiently (Fardinal, 2013). Hejazi, Abdolvand and Harandi (2017) proposes that information quality dimensions consist of accuracy, relevance, timeliness, completeness, and summarizing. indicate that dimensions of information quality are accurate, timely, relevant and complete. In this research, accounting information quality defined as the accuracy, timeliness, completeness, consistency and relevance of the use accounting information applied to solve the problem and forecast the economic event correctly and clearly (Zhai and Wang, 2016).

Prior research found that accounting information quality helps executives to identify greater investment opportunities and improve superior investment decisions through greater identification of projects and more truthful accounting numbers for internal decision makers (Elaoud and Jarboui, 2017). Also, accounting information quality represents economic phenomena of operations and businesses and it needs to be complete, neutral and free from error (Drum, Pernsteiner and Revak 2017). Companies with more accounting information quality can generate better business value and encourage more success of business. Hence, businesses with

effective management accounting system can provide accounting information quality in order to reach their success (Phornlaphatrachakorn, 2020). Consistent with Thapayom and Ussahawanitchakit (2015), the finding reveal that accounting information quality is positively related to firm success. Therefore, the associations are hypothesized as follows:

Hypothesis 5: Accounting information quality is positively related to a) business competitiveness and b) business success.

Business Creativity

In unpredictably and dynamically changing environment becomes creativity a significant factor of businesses success because it affects innovation development and consequently the business profit and success (Sirková, Ali Taha and Ferencova, 2014). Creativity is important especially in the situations when established routines or experience do not work. In this context, creativity is perceived almost as a prerequisite to manage renewal and change (Reckhenrich, Kupp and Anderson, 2009). Also, business creativity explicitly focuses on useful, valuable and new product, idea, service, process and procedure by individuals working together in a complex social system of a firm. In this research, business creativity defined as a creation of ideas which are both applicable and novel to an identified opportunity of a business (Moultrie and Young, 2009).

Business creativity helps firms offer better and new solutions to customer and business problems, make new levels of quantity, quality, customer satisfaction, and cost and becomes an important to market success and improved operating competence through a generation procedure by teams, individuals and groups in their firms produce novel, new, original and useful ideas (Mostafa and El-Masry, 2008). It is key factor of competitiveness, innovative capacity and growing businesses performance. The importance of

business creativity lies mainly in its close link to innovation as well as the fact that it is perceived as a cause of socio-economic development of companies (Sirková, Ali Taha and Ferencova, 2014). Better business creativity tends to increase more business outcomes and success in the complex environments and markets. Then, business creativity becomes a valuable business asset that initials firms' competitive advantage and support firm to succeed in business activities and operations. Consequently, business creativity possibly has a positive influence on business effectiveness, business efficiency and business success (Phornlaphatrachakorn, 2020). Therefore, the hypotheses are proposed as follows:

Hypothesis 6: Business creativity is positively related to a) business competitiveness, and b) business success.

Business Competitiveness

A success of CMAPs implementation is a significant factor that affects businesses' competitive position and it positively improves firms to increase competitiveness. To improve competitiveness, companies need to adjust to competitors' environments with fast answers, reforming and improving operational procedures and applying valuable strategies appropriately. It leads to their competitiveness that relates to greater success and long-term survival (Abdelraheem, Serajeldin and Jedo, 2017). In this research, business competitiveness defined as a capacity of organizations to make a business difficult to be replaced by competitors (Chuang and Huang 2015).

Business competitiveness can support companies sustain revenue growth and profit margins. Business competitiveness is a significant mechanism for improving organizations' performance, growth and success. It positively leads to business success in the riotous markets. Moreover, companies with improved business competitiveness can acquire their greater success in

extremely turbulent environments. They are likely to increase success in doing business. Furthermore, business competitiveness refers to a capacity of organizations to sustain their long-term performance better than competitors in the markets (Venter, Turyakira and Smith, 2014). Also, Thapayom (2019) reveal that business competitiveness is a key determinant of organizational sustainable performance. The hypotheses are proposed as follows:

Hypothesis 7: Business competitiveness is positively related to business success.

Business Success

Business success is the last consequence of CMAPs in this research. Business success is a high level of confidence in businesses' capacities, abilities and competencies to complete their objectives and goals (Ahmad et al., 2010). Its measurements include financial characteristics, such as sales growth, sales turnover, market share, return on assets, sales margins, and survival rates, and non-financial characteristics, such as customer satisfaction, customer retention, business's image and reputation, good workplace relations, employee's satisfaction and social responsibility (Rahman et al., 2015). These financial characteristics seem to emphasis on short-term perspectives whereas non-financial perspectives tend to focus on long-term perspectives. Consequently, superior business success is likely to generate increased long-term survival. Therefore, business success becomes the highest goal achievement via implementing strategic business tool of CMAPs. In this research, business success is defined as a consequence of doing and operating business effectively and efficiently.

METHODOLOGY

Sample selection and data collection procedure

The population is the firms in industrial estates in the Eastern Economic Corridor (EEC), Thailand. This population from the online data base of the Industrial Estate Authority of Thailand (IEAT) (www.ieat.go.th). In this research, the firms in industrial estates in the EEC, Thailand were selected as samples of the study because these firms are main parts of Thailand's economy and they have invested their high amount of money in the businesses. The EEC development lies at the heart of Thailand 4.0 scheme. The EEC is an area-based development initiative, aiming to revitalize the well-known Eastern Seaboard were, for 30 years. The EEC project initially focused on the three Eastern provinces, namely Rayong, Chonburi and Chachoengsao. The development plan of EEC imagines an important transformation of both social and physical development, plays a significant role as a regulatory sandbox uplifting the country's competitiveness. A combined infrastructure is established for EEC to become the major gateway to both the Asia Pacific and South East Asia in the upcoming years (The Eastern Economic Corridor Office of Thailand, 2020).

This study, the population available in the database totaling 2,741 firms that are active (information drawn on June 15, 2020). The equation under the 95% confidentiality rule is used to compute the suitable sample size using Krejcie and Morgan (1970). Accordingly, an appropriate sample size is 337 firms. Based on previous business research, a 20% response rate for a mail survey, without a suitable follow-up process, is deemed sufficient (Aaker, Kumar and Day, 2001). Thus, 1,685 mailed questionnaires are suitable for a distributed mail survey by using accounting executives as the key informants. As

a result, the questionnaires are directly distributed by random choice to 1,685 firms in industrial estates in the EEC, Thailand who are selected by a simple random sampling procedure. With regard to the questionnaire mailing, 102 surveys were undeliverable because some companies had moved to unknown locations. Removing the undeliverable from the original 1,685 mailed, the valid mailing was 1,583 surveys, from which 361 responses were received. Due to eight found incomplete and with response errors, they were removed from further analysis. Thus, finished questionnaires are 353. The effective response rate was approximately 22.30% which is considered suitable for the response rate for a mail survey because it is greater than 20% (Aaker, Kumar and Day, 2001). To test non-response bias and to detect and consider possible problems with non-response errors was examined by t-test (Armstrong and Overton, 1977). The researcher was compared early and late responses about firm capital and firm age. The results were not significant between early and late responses. Consequently, it was implied that these received questionnaires show insignificant non-response bias for the analysis in this research.

Variable measurement

To measure each construct in the conceptual model, all variables are anchored by five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), except firm size and firm age. Also, measurement sources for these constructs are established from existing literatures as shown in Appendix A. The variable measurements of this study are described as follows:

Business success is the ending dependent variable in this research. Business success refers to a consequence of doing and operating business effectively and efficiently. Five-item scale was developed to assess how firms achieve increased sales, market share, cash flow from operations, customer satisfaction, business growth, and profits.

Strategic cost management refers to the method of identifying, collecting, measuring, analyzing, interpreting, and reporting cost information valuable to both external and internal groups concerned with the way in which a firm uses its resources to meet its purposes (Bangladesh Cost Accounting Standards, 2019). Five-item scale was developed to assess how firms improve their strategic positions and reduce their operating costs and expenses via an application of cost management techniques.

Comprehensive budget management refers to the strategy-oriented, comprehensive forecasting and planning of business activities and corresponding financial results in a certain period of time in the future, rationally allocating various financial and non-financial resources of the enterprise, and supervising the implementation process (Wenming, 2019). Five-item scale was developed to assess how firms implement budget tools in financial and non-financial terms for forecast and plan the operations and resources of an enterprise for some specific period in the future.

Integrated performance evaluation refers to the comprehensiveness of the measures by providing firms' consistency with each other and according to business strategies that reflects to all appropriate features of business performance and value creation (Giovannoni and Maraghini, 2013). Four-item scale was developed to assess how firms implement measurement instruments, including traditional management accounting method, new management method strategy development and review, management by objectives, incentive and bonus schemes, non-financial performance measures, and personnel review and appraisal.

Effective decision-making practices refers to a procedure structured from the activities of information collecting, processing and assessment that emphasize the use of statistical analysis; as a process of knowledge and information transformation in executive activities (Thiess and Müller, 2018). Four-item scale was

developed to assess how firms implement an information management via process of data collecting, processing and assessment for support managerial activities.

Accounting information quality refers to the accuracy, timeliness, completeness, consistency and relevance of the use accounting information applied to solve the problem and forecast the economic event correctly and clearly (Zhai and Wang, 2016). Five-item scale was developed to assess how firms present content and format characteristics of information, namely accuracy, timeliness, completeness, consistency and relevance.

Business creativity refers to a creation of ideas which are both applicable and novel to an identified opportunity of a business (Moultrie and Young, 2009). Four-item scale was developed to assess how firms offer better and new solutions to customer and business problems and make new levels of quality, quantity, customer satisfaction and cost through novel, new and useful ideas.

Business competitiveness refers to a capacity of organizations to make a business difficult to be replaced by competitors (Chuang and Huang 2015). Four-item scale was developed to assess how firms offer long-term orientation of performance, controllability of numerous resources and abilities links to external conditions, relativity of capabilities to industrial measures and dynamic transformation of competitive abilities through the competitive procedure into outcomes.

Control variables in this research include firm age and firm size. Firm age may influence a firm's technological learning capacity, implementing business activities, actions and strategies, and the success of organizational operations (Phomlaphatrachakom, 2018). Based on the sample data, firm age was measured by the number of years a firm has been in existence by using a dummy variable as less than 15 = 0 and equal to or greater than 15 years = 1.

Lastly, firm size may affect the ability to learn and diversify operation and to compete and survive in the markets. Bigger firms are likely to have a higher level of innovation; to have a greater base of human, technical and financial resources under CMAPs than smaller ones (Ferreira, Moulang and Hendro, 2010). Firm size was measured by the amount of money a firm has invested in doing business by using a dummy variable as less than 100 million baht = 0 and equal to or greater than 100 million baht = 1

Test of Research Instrument

In order to confirm the validity and reliability of the research instruments, factor analysis, item-total correlation and cronbach alpha are applied. Firstly, factor analysis was applied to measure the underlying relations of a large number of items and to determine

whether they can be reduced to a smaller set of factors. A higher rule-of-thumb, a cut-off value of 0.40, was adopted (Nunnally and Bernstein, 1994). All factor loadings are more than the 0.40 cut-off and are statistically significant. Next, discriminant power was utilized to assess the validity of the measurements by item-total correlation. In the scale validity, item-total correlation is more than 0.30 (Churchill, 1979). Finally, the reliability of the measurements was measured by Cronbach alpha coefficients. In the scale reliability, Cronbach alpha coefficients are more than 0.70 (Nunnally and Bernstein, 1994). Therefore, the scales of all measures appear to produce internally consistent results and these measures are deemed suitable for further analysis as shown in Table 1. The descriptions of factor loadings and composite reliability for each question item are also presented in Appendix A.

Table 1 Result of measure validation

Variables	Factor Loadings	Item-total correlation	Cronbach's Alpha
Strategic Cost Management (SCM)	0.84-0.91	0.75-0.84	0.91
Comprehensive Budget Management (CBM)	0.83-0.90	0.75-0.84	0.92
Integrated Performance Evaluation (IPE)	0.89-0.91	0.80-0.82	0.92
Effective Decision-Making Practices (EDM)	0.78-0.94	0.65-0.88	0.91
Accounting Information Quality (AIQ)	0.78-0.91	0.67-0.84	0.91
Business Creativity (BCR)	0.90-0.93	0.82-0.87	0.93
Business Competitiveness (BCO)	0.78-0.88	0.63-0.76	0.86
Business Success (BSU)	0.86-0.94	0.78-0.89	0.94

Statistical techniques

The ordinary least squares (OLS) regression analysis is used to test all hypotheses following the conceptual model. Multiple regression analysis is appropriate to examine the relationships between the dependent variables and independent variables in which all variables are categorical and interval data

(Hair et al., 2010). This research was checked all the raw data for regression analysis assumptions include outlier, normality, linearity, homoscedasticity, and autocorrelation. The results of all test assumptions met the established criteria. From the conceptual model in Figure 1 and hypotheses, the following six equation models are formulated:

$$\text{Equation 1: } AIQ = \alpha_1 + \beta_{1SCM} + \beta_{2CBM} + \beta_{3IPE} + \beta_{4EDM} + \beta_{5AGE} + \beta_{6SIZ} + \epsilon_1$$

$$\text{Equation 2: } BCR = \alpha_2 + \beta_{7SCM} + \beta_{8CBM} + \beta_{9IPE} + \beta_{10EDM} + \beta_{11AGE} + \beta_{12SIZ} + \epsilon_2$$

$$\text{Equation 3: } BCO = \alpha_3 + \beta_{13SCM} + \beta_{14CBM} + \beta_{15IPE} + \beta_{16EDM} + \beta_{17AGE} + \beta_{18SIZ} + \epsilon_3$$

$$\text{Equation 4: } BSU = \alpha_4 + \beta_{19SCM} + \beta_{20CBM} + \beta_{21IPE} + \beta_{22EDM} + \beta_{23AGE} + \beta_{24SIZ} + \epsilon_4$$

$$\text{Equation 5: } BCO = \alpha_5 + \beta_{25AIQ} + \beta_{26BCR} + \beta_{27AGE} + \beta_{28SIZ} + \epsilon_5$$

$$\text{Equation 6: } BSU = \alpha_6 + \beta_{29AIQ} + \beta_{30BCR} + \beta_{31BCO} + \beta_{32AGE} + \beta_{33SIZ} + \epsilon_6$$

RESULTS AND DISCUSSION

Table 2 shows correlation matrix and descriptive statistics for all variables. Correlation coefficients are ranging from 0.46 - 0.67. With respect to potential problems relating to multicollinearity. Also, variance inflation factors (VIF)

were used to exam the intercorrelations among independent variable. The result found that the VIFs range from 1.60 to 1.96, well below the cut-off value of 10 (Hair et al., 2006), meaning that the independent variables are not associated with each other. Thus, there are no substantial multicollinearity problems encountered in this research.

Table 2 Descriptive statistics and correlation matrix

Variables	SCM	CBM	IPE	EDM	AIQ	BCR	BCO	BSU
Mean	4.08	4.08	4.02	4.08	4.10	4.12	3.88	4.06
S.D	0.52	0.52	0.55	0.51	0.56	0.53	0.57	0.55
SCM	1							
CBM	0.57***	1						
IPE	0.63***	0.60***	1					
EDM	0.50***	0.55***	0.49***	1				
AIQ	0.49***	0.49***	0.46***	0.50***	1			
BCR	0.54***	0.49***	0.52***	0.59***	0.60***	1		
BCO	0.49***	0.50***	0.52***	0.61***	0.57***	0.58***	1	
BSU	0.60***	0.53***	0.55***	0.50***	0.58***	0.67***	0.59***	1

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

Table 3 shows the results of OLS multiple regression analysis of the relationships among CMAPs, accounting information quality, business creativity, business competitiveness and business success. To test H1a, 1b, 1c and 1d, equation 1 to 4 were employed. The results show that strategic cost management has a significant positive effect on

accounting information quality ($\beta_1 = 0.215, p < 0.01$), business creativity ($\beta_7 = 0.221, p < 0.01$), business competitiveness ($\beta_{13} = 0.122, p < 0.05$) and business success ($\beta_{19} = 0.332, p < 0.01$). In existing literature, strategic cost management is a potential technique for identifying, collecting, measuring, analyzing, interpreting, and reporting cost information

valuable to both external and internal groups concerned with the way in which a firm uses its resources to meet its purposes. It is a critical ability helps firms provides cost information that helps management make decisions in addition to contribute to the development of strategies to complete the competitive advantages of the organization in the short and long term (Sayed, 2010). Firms with successful strategic cost management can help firm to decrease costs, increase competitive information richness, support decision making, which has impact on their goal achievement (Wangcharoendate, 2015). Accordingly, strategic cost management has a potential role in enhancing accounting information quality, business creativity, business competitiveness and business success. **Therefore, Hypotheses 1a, 1b, 1c and 1d are supported.**

To test H2a, 2b, 2c and 2d, equation 1 to 4 were employed. The results show that comprehensive budget management has a significant positive effect on accounting information quality ($\beta_2 = 0.192, p < 0.01$), business competitiveness ($\beta_{14} = 0.104, p < 0.10$) and business success ($\beta_{20} = 0.158, p < 0.01$). In existing literature, comprehensive budget management plays a

vital role in corporate success as it supports in the business's operational planning, communication of goals, performance evaluation, controlling cost and strategy formation which helps the firm to achieve its overall objective (Song and Yi, 2015). Furthermore, it offers clear guidelines for executives to translate organizational purposes into specific task. It helps executives to communicate and coordinate attention directed to most important area (Janudin et al., 2019). Accordingly, comprehensive budget management is critical to encourage firms to have improving accounting information quality, business competitiveness and business success. **Thus, Hypotheses 2a, 2c and 2d are supported.** Surprisingly, comprehensive budget management has no relationship with business creativity ($\beta_8 = 0.081, p > 0.10$). To reasonably explain the research result, comprehensive budget management methods mostly use historical data to plan for the future operations. But today, future events change rapidly and difficult to predict. As a result, the plan from comprehensive budget management may not meet the executive's desire to generate business creativity. **Therefore, Hypothesis 2b is not supported.**

Table 3 Results of OLS Multiple Regression Analysis^a

Independent Variables	Dependent Variables					
	AIQ Equation 1	BCR Equation 2	BCO Equation 3	BSU Equation 4	BCO Equation 5	BSU Equation 6
Strategic Cost Management (SCM)	.215*** (.059)	.221*** (.056)	.122** (.055)	.332*** (.055)		
Comprehensive Budget Management (CBM)	.192*** (.059)	.081 (.056)	.104* (.055)	.158*** (.055)		
Integrated Performance Evaluation (IPE)	.088 (.060)	.154*** (.056)	.175*** (.055)	.169*** (.055)		
Effective Decision-Making Practices (EDM)	.266*** (.054)	.356*** (.051)	.418*** (.050)	.170*** (.050)		
Accounting Information Quality (AIQ)					.349*** (.051)	.192*** (.049)
Business Creativity					.362***	.403***

Independent Variables	Dependent Variables					
	AIQ Equation 1	BCR Equation 2	BCO Equation 3	BSU Equation 4	BCO Equation 5	BSU Equation 6
(BCR)					(.052)	(.050)
Business Competitiveness (BCO)						.243*** (.048)
Firm Age (AGE)	-.017 (.089)	.061 (.084)	.076 (.083)	.115 (.082)	.113 (.086)	.094 (.077)
Firm Size (SIZ)	-.218** (.092)	-.093 (.086)	-.169** (.085)	-.178** (.085)	.006 (.086)	.002 (.078)
Adjusted R ²	.359	.436	.448	.454	.409	.522

*** p<0.01, ** p<0.05, * p<0.10, ^a Beta coefficients with standard errors in parenthesis

To test H3a, 3b, 3c and 3d, equation 1 to 4 were employed. The results show that integrated performance evaluation has a significant positive effect on business creativity ($\beta_9 = 0.154$, $p < 0.01$), business competitiveness ($\beta_{15} = 0.175$, $p < 0.01$) and business success ($\beta_{21} = 0.169$, $p < 0.01$). In existing literature, integrated performance evaluation has been established to simplify and integrate the performance evaluation system in a single system and adapt to firm processes and activities, to create indicators that inspire continuous improvement of decentralized teams, and to link goals with external and internal needs (Olivella and Gregorio, 2015). Firms have implemented integrated performance evaluation to create competitive advantage and increase their performance and success (Lata, Boonlua and Raksong, 2019). Accordingly, integrated performance evaluation enables firms to create business creativity, business competitiveness and business success in highly competitive markets. **Thus, Hypotheses 3b, 3c and 3d are supported.** Surprisingly, integrated performance evaluation has no relationship with accounting information quality ($\beta_3 = 0.088$, $p > 0.10$). To reasonably explain the research result, integrated performance evaluation focuses on integrated data processing of overall enterprise operations in order to support decision-

making of manager. However, accounting information quality developed from recording the relevant business transactions in accordance with accounting standards by using accounting information system and other factors in all operational processes, not only from performance information. **Therefore, Hypothesis 3a is not supported.** To test H4a, 4b, 4c and 4d, equation 1 to 4 were employed. The results show that effective decision-making practices has a significant positive effect on accounting information quality ($\beta_4 = 0.266$, $p < 0.01$), business creativity ($\beta_{10} = 0.356$, $p < 0.01$), business competitiveness ($\beta_{16} = 0.418$, $p < 0.01$) and business success ($\beta_{22} = 0.170$, $p < 0.01$). In existing literature, effective decision-making practices involve a set of instruments enabling data collection, analysis and distribution, and taking action based on corporate information, with a view to making better corporate decisions. It enables management to receive appropriate information for meaningful decision making. It contributed to the success of the entities (Alleyne and Weekes-Marshall, 2011). Also, it provides feedback about historical operations and prospective by predicting future events. A great effective decision-making practice can become a source of competitive advantage for organization and provides the managers for effective decision making (Janudin et al., 2019). Accordingly, effective decision-making practices has

a potential role in enhancing accounting information quality, business creativity, business competitiveness and business success. Therefore, **Hypotheses 4a, 4b, 4c and 4d are supported.** To test H5a and 5b, equation 5 and 6 were employed. The results show that accounting information quality has a significant positive impact on business competitiveness ($\beta_{25} = .349$, $p < 0.01$) and business success ($\beta_{29} = .192$, $p < 0.01$). In existing literature, accounting information quality helps executives to identify greater investment opportunities and improve superior investment decisions through greater identification of projects and more truthful accounting numbers for internal decision makers (Elaoud and Jarboui, 2017). Also, it represents economic phenomena of operations and businesses and it needs to be complete, neutral and free from error (Drum, Pernsteiner and Revak 2017). Companies with more accounting information quality can generate better business value and encourage more success of business (Phornlaphatrachakorn, 2020). Accordingly, accounting information quality can increase business competitiveness and business success. **Thus, Hypotheses 5a and 5b are supported.** To test H6a and 6b, equation 5 and 6 were employed. The results show that business creativity has a significant positive impact on business competitiveness ($\beta_{26} = .362$, $p < 0.01$) and business success ($\beta_{30} = .403$, $p < 0.01$). In existing literature, business creativity is key factor of competitiveness, innovative capacity and growing businesses performance. The importance of business creativity lies mainly in its close link to innovation as well as the fact that it is perceived as a cause of socio-economic development of companies (Sirková, Ali Taha and Ferencova, 2014). Moreover, it helps firms offer better and new solutions to customer and business problems, make new levels of quantity, quality, customer satisfaction,

and cost and becomes an important to market success and improved operating competence (Mostafa and El-Masry, 2008). Accordingly, business creativity is a main determinant of business competitiveness and business success. **Thus, Hypotheses 6a and 6b are supported.**

Finally, the results found that business competitiveness has a significant positive impact on business success ($\beta_{31} = .243$, $p < 0.01$). Business competitiveness can support firms maintain their revenue growth and profit margins. It is a significant mechanism for improving organizations' performance, growth and success. It positively leads to business success in the riotous markets. Furthermore, companies with improved business competitiveness can acquire their greater success in extremely turbulent environments. Accordingly, business competitiveness is a critical antecedent and a valuable driver of business success. **Therefore, Hypothesis 7 is supported.**

CONTRIBUTIONS AND DIRECTIONS FOR FUTURE RESEARCH

Theoretical contribution and directions for future research

This study attempts to integrate four components of CMAPs, namely, strategic cost management, comprehensive budget management, integrated performance evaluation and effective decision-making practices in the same model. In congruence with the existing literature, those components play important roles in determining, driving, and explaining organizational outcomes (accounting information quality, business creativity, business competitiveness and business success). This study also confirms existing literature of contingency theory and stewardship theory in which firms implement CMAPs as a valuable source of their business success. As a result, this study confirms the previous literature of CMAPs and its

consequences of business in industrial estates in the Eastern Economic Corridor, Thailand and expands the contribution by focused on four dimensions of CMAPs that have an impact to organizational outcomes in accounting field. Moreover, future research should cover a reconceptualized literature review linking to CMAPs and its consequences and antecedents in order to verify and confirm the results of current study and upgrade usable results of the study. Also, future research may need to gather more data and/or larger sample group for potentially increasing and encouraging the research results and gather data from different samples in order to create the generalizability of this research. Also, future research may apply either partial least squared (PLS) or structural equation model (SEM) to exam the research relations in order to verify the research results and add the contributions of the research.

Managerial contribution

According to the results of current study, CMAPs can help firms increase accounting information quality, business creativity and obtain superior business competitiveness and business success. Accordingly, firms need to consider and utilize CMAPs as valuable strategic instrument to define their practices and guidelines for competing in rapidly changing business environments. They must allocate assets, resources and capabilities to CMAPs and invest advanced innovations and technologies to these systems. Effectiveness of the CMAPs can help create their benefits. Furthermore, companies need to improve their employees in learning, understanding and implementing the concepts of CMAPs. Therefore, studying and training in these concepts are important. Employees' good knowledge can apply CMAPs well. Consequently, they can use them to produce their accounting information quality, creativity and competitiveness and increase business success.

CONCLUSION

Contemporary management accounting practices are valuable strategic mechanisms in enhancing firms achieve accounting information quality, business creativity, business competitiveness and business success. Therefore, the effectiveness of CMAPs is important for successfully doing businesses. Accordingly, the objective of this study is to investigate the effects of CMAPs on business success through accounting information quality, business creativity and business competitiveness. CMAPs includes strategic cost management, comprehensive budget management, integrated performance evaluation and effective decision-making practices. In this research, 353 firms in industrial estates in the Eastern Economic Corridor, Thailand are the samples of the study. The results indicated that strategic cost management and effective decision-making practices have a significant positive influence on accounting information quality, business creativity, business competitiveness and business success. Also, comprehensive budget management has a significant positive influence on accounting information quality, business competitiveness and business success. While integrated performance evaluation has a significant positive influence on business creativity, business competitiveness and business success. Besides, accounting information quality and business creativity have a significant positive influence on business competitiveness and business success. Likewise, business competitiveness has a significant positive influence on business success. The executives of firms need to develop, implement and improve CMAPs in order to create accounting information quality, business creativity, business competitiveness and generate business success by investing appropriate valuable resources to support these techniques aspects. Future research may need to review more literature relating to these CMAPs issues and their characteristics, relationships

and effects in order to verify the current study. To expand the research results and prove the generalizability of the study, future study may need

to collect data from larger samples and from different businesses and industries.

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