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Exploring the Impact of Customer Profitability Analysis on Firms' Strategic Performance

دراسة تأثير تحليل ربحية العملاء على الأداء الاستراتيجي لمنشآت الأعمال

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Abstract

This research aims to identify the relationship between the Customer Profitability Analysis (CPA), as a strategic management accounting technique (SMAT), and firms' strategic performance measured using the Balanced Scorecard (BSC). In addition, it aims to explore contingency factors that may influence firms' application of CPA. To achieve these two objectives, a survey was conducted in the first quarter of 2024, to collect data from a sample of 90 Egyptian firms operating in divergent industry sectors. Regression analysis was used to analyze collected data covering the research main variables; CPA proxied by three indicators (valuation of customers as an asset, customer profitability during short term, and customer profitability analysis during future periods), and firms' strategic performance, in addition to three contingency variables: firm size, strategy, and type of activity. In light of prior literature addressing the research variables, the research's hypotheses were developed. The first hypothesis addresses the significant positive relationship between applying CPA and firms' strategic performance. The second hypothesis indicates that the application of CPA, as a strategic management accounting technique, is influenced by a set of contingency variables. Findings showed a significant relationship between firms' application of CPA, as a strategic management accounting technique, and firms' strategic performance as measured through the balanced scorecard. Moreover, findings revealed the insignificance of the relationship between any of the three contingency variables and application of CPA.

Keywords; customer profitability analysis; customer profitability during short term; valuation of customers as assets; strategic performance; balanced scorecard; contingency factors.

ملخص البحث

يهدف هذا البحث إلى دراسة العلاقة بين تحليل ربحية العملاء (CPA)، كأحد أساليب المحاسبة الإدارية الاستراتيجية (SMAT)، والأداء الاستراتيجي للشركات المقاس باستخدام أسلوب بطاقة الأداء المتوازن (BSC). بالإضافة إلى ذلك، يهدف إلى معرفة العوامل المواقفية التي قد تؤثر على تطبيق الشركات لأسلوب تحليل ربحية العملاء. ولتحقيق هذين الهدفين، تم إجراء استبيان في الربع الأول من عام ٢٠٢٤ لجمع البيانات من عينة من ٩٠ شركة مصرية تعمل في قطاعات صناعية متباينة. استخدم أسلوب تحليل الانحدار لتحليل البيانات المرتبطة بمتغيرات البحث الرئيسية؛ CPA من خلال ثلاثة مؤشرات (تقييم العملاء كأصل، وربحية العملاء خلال المدى القصير، وتحليل ربحية العملاء خلال الفترات المستقبلية)، والأداء الاستراتيجي للشركات، بالإضافة إلى ثلاث متغيرات واقفية: حجم الشركة، الاستراتيجية المتبعة، ونوع النشاط. في ضوء الدراسات

السابقة التي تتناول متغيرات البحث، تم صياغة فرضيات البحث. وتتناول الفرضية الأولى العلاقة الإيجابية المعنوية بين تطبيق أسلوب تحليل ربحية العملاء والأداء الاستراتيجي للشركات. وتشير الفرضية الثانية إلى أن تطبيق أسلوب تحليل ربحية العملاء، بوصفه أسلوبا استراتيجيا للمحاسبة الإدارية، يتأثر بمجموعة من المتغيرات الموافقة. أظهرت النتائج وجود علاقة معنوية بين تطبيق الشركات أسلوب تحليل ربحية العملاء، كأسلوب استراتيجي للمحاسبة الإدارية، والأداء الاستراتيجي للشركات كما تم قياسه من خلال أسلوب بطاقة الأداء المتوازن. علاوة على ذلك، كشفت النتائج عن عدم معنوية العلاقة بين أي من المتغيرات الموافقة الثلاثة وتطبيق أسلوب تحليل ربحية العملاء.

الكلمات الدالة: تحليل ربحية العملاء؛ ربحية العملاء على المدى القصير؛ تقييم العملاء كأصول؛ الأداء الاستراتيجي؛ بطاقة الأداء المتوازن؛ العوامل الموافقة.

1. Introduction

Due to the intense competition and the globalization of business in recent years, it has become increasingly important for firms to achieve a sustainable competitive advantage. Companies are continuously searching for ways to improve their overall performance with the aim of achieving a competitive advantage.

Regarding the role of management accounting techniques, whether in achieving a sustainable competitive advantage or improving firms' financial and non-financial (strategic) performance, Chenhall and Langfield-Smith (1998) classified management accounting techniques according to their characteristics or outcomes into: traditional management accounting techniques TMATs such as budgeting, volume based costing VBC, standard costing, and strategic management accounting techniques SMATs such as Activity Based Costing ABC, Customer Profitability Analysis CPA, and Balanced Scorecard BSC. TMATs often deal with the firm's internal environmental factors, focusing more on operational aspects or activities than on external environmental factors. On the other hand, SMATs deal more with the firm external environmental factors rather than its internal environmental factors. As part of firm's strategy, these techniques often provide an integrated control and performance appraisal system for internal and external activities. Therefore, Strategic management accounting is usually described as interactive rather than diagnostic.

It is worth mentioning that accounting and management literature that support the idea that management accounting plays an effective role in supporting and achieving the firm's competitive advantage, did not agree on whether the competitive advantage achieved through management accounting system is a sustainable competitive advantage or a temporary competitive advantage characterizing a firm only in the short term (Cagwin & Bouwman, 2002; Crabtree & DeBusk, 2008).

CPA has become increasingly recognized as a critical tool in enhancing firms' strategic performance. By analyzing the profitability of individual customers, CPA enables firms to gain insights into their customer base and tailor their strategies accordingly (Kaplan & Anderson, 2007). This approach shifts the focus from traditional mass marketing to a more personalized and targeted approach, allowing firms to allocate resources more efficiently and effectively.

CPA facilitates the identification of valuable customers who contribute significantly to the firm's profitability. By comprehending the divergent preferences and needs of these customers, firms can develop customized products and services, thereby enhancing customer satisfaction and loyalty (Anderson & Narus, 2004). Additionally, CPA enables firms to identify and mitigate unprofitable customer relationships, either by reevaluating pricing strategies or by reallocating resources to more profitable segments (Kaplan & Norton, 2001b). Moreover, CPA provides valuable insights into the cost-to-serve different customer segments. By understanding the costs associated with servicing individual customers, firms can make informed decisions regarding pricing, distribution channels, and service levels (Cooper & Kaplan, 1991). This allows firms to optimize their resource allocation and improve overall operational efficiency. Overall, the implementation of CPA has profound implications for firms' strategic performance. By focusing on customer profitability, firms can enhance customer satisfaction, increase operational efficiency, and ultimately improve financial performance (Kaplan & Cooper, 1998).

There is a reasonable understanding of what constitutes a CPA system, and the potential benefits it can bring to a company (Martin, 1995; Cooper and Kaplan, 1991; Johnson and Kaplan, 1987). However, the empirical evidence supporting the claims made by the advocates of CPA, regarding its effects on behavior and performance, is limited in scope and is not currently aggregated in a systematic manner. In other words, there is little clear evidence to suggest that CPA leads to improved strategic management, compared to a company-wide system implemented relative to products in the form of a cost management accounting information system. This is due to the fact that previous studies have not distinguished between traditional product-oriented ABC and strategic management accounting and customer accounting. CPA is a difficult construct to test and has often been examined only indirectly through studying the profitability implications of changes in certain customer cost/profit centers, which fails to adequately capture the broader concept and implications of customer profitability accounting information system. This makes it difficult for decision makers to justify adopting such a technique, and thus has limited the diffusion of CPA beyond the early adopters in service and high-volume industries (Cooper and Kaplan, 1997)

This paper aims to assess the extent to which adopting CPA affects the strategic performance of a firm, this serves as a preliminary step in the larger research question: whether implementing cost and management accounting systems relative to customers, rather than products, leads to improved strategic management, as measured by the resultant

2. Historical background of research variables

The variables within the research fall into two groups: main variables, and contingency variables. The main variables are CPA, and firm strategic performance. The contingency variables are firm size, strategy, and type of activity.

2.1 The main variables

One of the research main variables is CPA, which is rooted in the marketing concept; Customer Relationship Management CRM which seeks to categorize firm customers according to their significance; where customer's significance is the extent to which the customer contributes to the firm's long-term profits (Keramati, Shapuri, 2016). Based on the CRM concept, accounting literature addressed its implications on the management accounting system, and hence CPA emerged. Bellis-Jones (1989) is considered one of the pioneers to address CPA, as he addressed the customer's profitability in retail stores.

Measuring customer profitability is done by determining the value of each customer's sales and then deducting all direct costs made by the firm in order to complete customer sales to get the customer's contribution margin (Ward, 1992; Kaplan & Cooper, 1998; Noone & Griffin, 1999; Smith & Dikolli, 1995), this may be followed the deduction of the customer's share of overhead costs to reach to the customer's net profit. Guilding and McManus (2002) provided a comprehensive conceptualization of CPA, which defined it as all accounting practices undertaken by the firm to assess the profitability/sales/present value of sales for each customer or each customers group identified in accordance with the results of CRM activities.

CPA can provide a vast amount of information on which marketing and purchasing strategies can be based and will be able to monitor the success of subsequent strategies. An example of such a strategy is to attempt to make unprofitable customers more profitable or to improve the profitability of the best customers. This kind of strategy can only be monitored with customer profitability data. Furthermore, the customer profitability data is used to set the price that a customer is charged. With traditional cost-to-serve accounting, the price is often set at the cost of serving the customer. This is clearly not optimal because it is unlikely that charging a customer a price close to cost will generate a large profit and many customers are, in fact, unprofitable. The aim should be for the customer to bear the costs of resources used

and the price at which the customer is most profitable is when price equals its customer cost. This can only be implemented and monitored with customer profitability data. (Alkhafajia et al., 2020 ; Duci, 2021 ; Sedevich-Fons, 2022; Çolak, 2023)

CPA provides detailed information about customers and customer groups' profitability. While traditionally customer accounting focused on the cost-to-serve, CPA recognizes that different customers generate different revenues and profits for the firm and costs are assigned to customers on the basis of the resources they consume. CPA allocates not only costs directly assigned to customers (e.g. the cost of serving a customer's order), but also a share of the costs of activities that do not directly affect the customer but are required to be able to serve the customer (these are known as customer shared costs) and costs generated by the customers' orders on the products purchased (these are known as product costs). This provides a complete cost picture of the customer (Matsuoka, 2020).

Related to the time dimension of CPA, Holm et al. (2016) defined customer accounting methods as all accounting practices that assess the extent to which each customer or customer groups contributes to the profitability of the firm, whether it is related to the past or to the future. Thus, CPA includes two-time dimensions: the historical dimension of CPA (The Retrospective CPA), which seeks to analyze customers' profitability from accounting records prepared according to the accounting accrual basis, which will be referred to, in the research, as customer profitability during short term. The second dimension is the future dimension based on determined expectations of the firm's transactions with a customer or customer groups during the future and finding the present value of future sales to the customer or customer groups (Pfeifer et al. 2005), which will be referred to, in the research, as customer profitability during future period.

The second main variable is firm strategic performance. Historically, the financial and non-financial performance measurement date back to the 1930s when the Tableau de Bord (TDB) was presented by French engineers to be applied by French companies (Bourguignon et al, 2004; Sousi, 2008). By the end of the last century, Kaplan & Norton (1992, 1996, 2001, 2008, 2011) presented the BSC approach. Since then, researchers and global institutions have been increasingly interested in the importance of firms' strategic performance, as measured by the BSC.

Kaplan & Norton (1992, 1996, 2008) then presented BSC for performance evaluation through its various generations. It is a technique that connects the firm performance to the firm strategy through originally four perspectives: the financial, the customer, the internal business process, and the learning (innovation) and growth aspects. Applicability of BSC in the hospitality sector was addressed by Sainaghi (2010), as an approach addressing customer satisfaction, and internal and strategic aspects.

Since the advent of the BSC in 1992, various uses of this technique emerged, where each use represents a generation of BSC. With the emergence of the performance balanced scorecard in 1992, the first generation emerged between 1992 and 1996 and was used as a performance measurement tool, between 1996 and 2001, the BSC was used as a strategic management tool, and between 2001 and 2008 the BSC was used as a strategic control tool. Since 2008, the BSC has been used as a strategic alignment tool, or as a tool for firms harmonized strategic performance.

The concept of BSC is based on balancing long-term and short-term measures, financial and non-financial measures, objective (quantitative) and subjective (non-quantitative) measures, and general and specific measures. All these measures address the four aspects: financial, customers, internal process and, finally, learning and growth.

2.2 Contingency variables

Contingency theory plays a significant role in understanding various aspects of firms management and accounting systems, including CPA. CPA focuses on tracing revenues and costs to the customer or customer groups level. CPA models aim to aid resource allocation decision-making by incorporating net profitability, customer-related costs, and revenues in a single period in the past. On the other hand, Customer Lifetime Value CLV models estimate profits over future time periods, providing a forward-looking perspective. The integration of CLV and CPA models has been explored in studies which highlighted the importance of linking customer behavioral forecasting with the prediction of service capacity costs for key accounts (Ryals, 2005). Contingency theory emphasizes that the effectiveness of CPA models, like CPA and CLV, is determined by various factors such as firm size, firm strategy, organizational structure, technology, and environmental uncertainty. These factors influence the adoption and design of strategic management accounting systems, impacting the applicability and success of CPA within firms.

According to the Contingency Theory, contingency factors or variables can be categorized into two types; first type; variables related to the internal environment characterizing the firm; second type; variables relating to the external environment surrounding the firm. As a part of this research, contingency variables include firm size, strategy, and type of activity. Accordingly, it is worth mentioning that the contingency variables addressed in the research consist only of one type of contingency variables relating to the characteristics of the firm, without addressing any contingency variables relating to the external environment surrounding the firm, such as the economic status, the labor market, laws and regulations governing the firm operations, such as corporate income tax law, and value-added tax law. Thus,

excluding external environmental variables from the research model can be considered as one of the research limitations.

The empirical study of this research will examine how the main and contingency variables are related, where a set of indicators, identified from literature, will be used to measure research variables.

3. Literature review and hypotheses development

The accounting literature addressing descriptive/qualitative analysis or quantitative measurement of customers was initiated by Cooper & Kaplan (1991), where the ABC approach was used in measuring the profitability of a customer or customer groups. The study did not analyze customer profitability from a futuristic perspective, since the main concern was the historical measurement perspective of profitability of a customer or customer groups. In order to formulate the research hypotheses, this section of the research addresses prior literature on the strategic performance of firms, its measurement, and relationship with CPA.

3.1 Strategic performance

Over the past four decades, there have been numerous accounting and management literature calling for the review of strategic performance measurement systems (Kaplan & Norton, 1992, 1996, 2008; Shepherd & Gunter, 2006; Baird, 2017). These studies resulted in the need for the evaluation to move out of the scope of financial indicators to include non-financial indicators, and eventually resulted in the BSC emergence that addressed financial and non-financial indicators through four aspects, and addressed the relationship between inputs and outcomes.

The financial indicators used to assess performance in most of the studies addressing strategic performance assessment included traditional financial indicators such as, earnings per share, net cash flows, return on investment and equity, net profit to sales ratio (Golrizgashti, 2014; Yaghoobi & Haddadi, 2016). Few studies included non-traditional financial indicators such as, economic value added, and residual income (Yaghoobi & Haddadi, 2016; Felice et al, 2015). Non-financial indicators under the BSC came in three aspects: customers, internal business process, learning (innovation) and growth, and at the beginning of the present century a trend emerged in accounting literature towards the inclusion of new measures for non-financial indicators, including: intellectual capital and sustainability (Wudhikarn, 2016; Leo'n-Soriano et al, 2010).

The relationship between CPA and the firm's performance has been addressed by a number of accounting and marketing studies, the results of which are mixed. On one

hand, a number of studies confirmed the significant relationship between CPA as a SMAT, and improved firm performance (Baines and Langfield-Smith, 2003; Cadez and Guilding, 2008). On the other hand, other studies did not conclude the significance of the relationship between CPA and firm performance. Moreover, these studies provided negative results of the relationship between CPA and firm performance (Cadez and Guilding, 2008; Chong and Chong, 1997; Cravens and Guilding, 2001; Gul and Chia, 1994; Hoque & James, 2000; Mahama, 2006; Mia & Clarke, 1999; Mia & Chenhall, 1994; O'Connor & Cheung, 2007). Another group of studies indicated that there was either a significant negative relationship between the application of the customers accounting and firm performance, or no reflection of CPA on the firm performance (Agbejule, 2005; Ittner & Larcker, 1998; Perera et al., 1997; Malmi et al. 2004).

3.2 CPA in literature

The beginnings of accounting and marketing studies in the field of customers accounting can be traced back to the beginnings of studies on CPA models (Berger & Nasr, 1998; Dwyer, 1997; Kaplan & Cooper, 1998, Noone & Griffin, 1999; Smith & Dikolli, 1995). However, accounting studies on customer accounting are few compared to marketing studies on customers in terms of how to manage customer relationships, the profitability of these customers, or customers as one of the firm assets (Customer Equity) (McManus & Guilding, 2008).

Prior studies at the end of the last century and the beginning of the current century indicate that few accounting studies addressed customers from accounting point of view, despite the emergence of a number of accounting studies on customers accounting (McManus, 2013). The beginnings of the accounting studies on customers included useful comments of a descriptive nature for the concept of CPA and did not provide any reflection of the practical or empirical application within firms (Foster and Sjoblom, 1996; Foster and Young, 1997; Chenhall, 2008; Luft and Shields, 2003).

The main interest in customers accounting literature was directed to measure the degree of customer satisfaction and attempting to measure the accounting implications of customer satisfaction on both the financial and non-financial performance of the firm. It is worth mentioning that the results of these studies regarding the relationship between customer satisfaction and the financial performance of the firm were inconsistent. In the telecommunications sector, Ittner & Larcker's (1998) confirmed a significant relationship between the degree of customer satisfaction on one hand and the retention of customers transactions with the business, the revenue generated and the change in revenue on the other hand. In financial institutions, the relationship was limited between customer satisfaction and the revenue generated. Banker et al. (2000) disclosed a set of results on the relationship between customer satisfaction and the

financial performance of 18 hotel establishments within six-years period starting 1991, the study indicated that there was a significant correlation between non-financial indicators to measure customer satisfaction and future financial performance, and that this correlation enclosed additional information that was not reflected in financial indicators.

Smith & Wright (2004) examined the relationship between the degree of customer satisfaction, measured by the degree of customer loyalty to the firm's products, and the firm performance. Results revealed a significant relationship between the degree of customer loyalty and average product prices, the degree of sales growth, and the rate of return on the firm's assets. In this context, Smith & Wright (2004) agreed with the Ittner & Larcker (1998), Banker et al. (2000) in terms of indicating the determinants or measuring indicators of customer loyalty, and in the results of statistical analysis conducted to examine the relationship between customer loyalty and the financial performance of the firm under study.

A compilation of studies has addressed the merge between the marketing concept of CRM and customers accounting as a SMAT (Tanima & Bates, 2015; Al-Mawali et al., 2012; McManus, 2013; Lin, 2002; McManus & Guilding, 2008; Holm et al. 2016; Helgesen, 2007). Although literature addressed the relationship between CRM and management accounting, yet as indicated by Bates & Whittington (2009), there is a lack of management accounting studies addressing the profitability of the firm customers, the future value of the customers, customers as a firm asset. McManus & Guilding (2008) also pointed out that empirical studies on CRM have revealed very limited CPA practices in firms. These results may highlight the importance of this research work and therefore the importance of studying and paying more attention to CPA as a SMAT under different contexts.

It should be noted, however, that many aspects of the firm's relationship with customers are dealt with in empirical cases in the textbooks, on one hand, some have analyzed the profitability of a particular group of customers with certain characteristics (segmented customer profitability) (Cooper & Kaplan, 19991; Hartfeil, 1996). On the other hand, other studies, in practical cases, addressed the present value obtained by the firm from a customer or customer groups (Foster & Gupta, 1994; Cooper & Kaplan, 1991), moreover, other studies dealt with determining the relative weight of customers (Customer Valuation Analysis) with the aim of identifying that group of customers through whom the firm's target profit is achieved (Foster et al. 1996).

CPA in accounting and marketing literature adopted two perspectives: first; control or assessment perspective, second, predictive perspective. The control perspective of CPA depends on studying historical data of customer or customer groups sales with

the aim of identifying customer or customer groups profitability, and then using this information to improve future sales of the firm. The predictive perspective of CPA relied on historical data of customer or customer groups profitability, with the aim of predicting customer or customer groups profitability in the future. Determining the profitability of a customer or customer groups for a future period of time, opens a new venue of accounting and marketing studies related to the possibility of finding the present value of customer or customer groups profitability, and thus considering this present value of profitability as a significant intangible asset.

Some accounting and marketing studies have dealt with customers as a firm asset, and therefore this asset must be managed according to its value and its contributions to maximizing the firm profitability and value (Gupta & Lehmann, 2005; Hogan et al., 2002; Srivastava et al., 1998; Berger et al., 2002; Bolton et al., 2004; Holm et al. 2016). The ability of the firm to manage customers as an asset requires that the allocation of the firm resources should be continuously based on customer's information in terms of the sales value of a customer, the cost associated with the sales and hence the profitability of the customer.

The accounting literature dealt with the CPA as a SMAT, thus it studied the relationship between CPA and firm performance and concluded that there was a significant positive relationship between CPA and firm financial performance (Kumar et al., 2008; Kumar and Shah, 2009; Ryals, 2005). However, this literature did not address what factors or determinants that create the needed environment for the firm to apply CPA, thus, identifying the determinants or factors that help to apply CPA is an added value that the current research provides.

Contingency factors in CPA include perceived environmental uncertainty, organizational performance, customer retention analysis (CRA), customer equity analysis (CEA), and lifetime CPA (LCPA). PEU, as a contingency factor, can moderate the relationship between CPA and firm performance, as well as the relationship between CRA and firm performance. Additionally, the use of CRA has the most significant effect on financial performance. These contingency factors are crucial in understanding the effectiveness of CPA models and their impact on firm performance (Albalaki, 2018; Al-Mawali & Lam, 2016).

Based on the contradicting results of previous marketing and accounting studies on the significance and direction of the relationship (positive or negative) between CPA as a SMAT and firm performance, the author indicates two fundamental facts:

First fact: The differences in accounting and marketing literature whether is addressing or asserting the relationship between CPA as a SMAT and firm performance is an indication of the importance of the continuous studying of the

significance of this relationship, shifting from the search for the correlation between them to the extent to which there is a causal relationship between CPA and firm performance.

Second fact: The accounting and marketing literature addressing the relationship between CPA and firm performance adopted a non-inclusive perspective, whether for the dependent variable and for the independent variable. For the independent variable, represented by CPA, few studies addressed the contextual factors or contingencies that impact firm's applicability of CPA. Determinants that might drive/hinder the applicability of CPA were considered by the researcher to indicate the extent to which contingency factors might influence applicability of CPA.

In terms of the dependent variable represented by the firm strategic performance, it is also noted that accounting and marketing literature in addressing firm performance, have mainly considered the short-term performance of the firm, without examining the relationship between CPA and firm performance over the long-term. Thus, the researcher can add a dimension in measuring the relationship between CPA as an independent variable, and firm performance, where the firm performance in this research reflects the firm strategic performance across the four aspects of the BSC: financial, customers, internal process, learning (innovation) and growth.

Based on the above discussion, the researcher can formulate the research hypotheses as follows:

H₀₁: There is a significant relationship between CPA as a SMAT and firms' strategic performance.

H₀₂: Applying CPA as a SMAT is determined by a set of contingency factors.

4. Research method

This section of the research addresses: sample and data collection, variables measurement, the research model to determine the statistical method for testing the research hypotheses, data analysis and discussion of results.

4.1 Sample and data collection

The minimum size of the sample in light of the of main and contingency variables included within the research model (CPA, strategic performance, firm size, type of activity, firm strategy), is determined to be 50 firms, considering that there are 10 firms for each of the research variables (Roscoe, 1975). A survey was distributed in the first quarter of 2024 to 200 business firms representing the sample, where 94 were received (47% response rate), from which 4 were excluded for invalidity as a result of

incomplete responses, and thus 90 were relied upon (45% usability rate) for statistical analysis.

The survey has been divided into four sections: Section I includes some demographic data on respondents as well as some data associated with the surveyed firm. Section II includes indicators for the set of contingency variables of the research model. Section III includes indicators measuring CPA representing the independent variable of the research model. Section IV includes indicators of the strategic performance representing the dependent variable of the research model.

4.2 Variables measurement

To measure each of the main variables of the study, the ordinal scale is used. Each variable is represented by a set of indicators, and each indicator is measured by a set of statements in the survey, and its degree of application by firms is determined according to 5-point Likert Scale, where (1) to express non-use at all, and (5) to express efficient and effective use of the indicator. The quantification and descriptive measurement are used to measure contingency variables; where firm size was measured quantitatively, and the descriptive measurement of both the type of activity and firm strategy was relied upon.

Each variable's indicators were selected and tested both in terms of content validity and reliability. In terms of content validity, a pilot study of the survey was prepared and distributed to a group of staff members from several faculties of commerce including accounting and marketing professors, as well as some corporate chairmen and board members. The survey questions were adjusted in the light of the survey participants' comments. In terms of reliability, Cronbach's Alpha coefficient was relied on to assess reliability and internal consistency of the survey.

4.2.1 Measurement of main variables

Firm strategic performance and CPA represent the main variables underlying the first hypothesis. For the purposes of statistically testing the hypotheses, it is necessary to quantify these two variables. This part of the research shows the indicators through which these two variables are measured.

Strategic performance

The firm strategic performance was measured by the BSC. In this regard, it should be noted that although there are different uses or generations of BSC, its use within the current research is merely as a tool for measuring strategic performance and not as a tool for strategic management, strategic control, or for achieving strategic alignment.

Table (1) presents the BSC indicators used to measure the strategic performance of the firm across its four aspects.

Table (1): BSC aspects used to measure firms' strategic performance

First indicator: Financial aspect

Realized net income before interest and taxes is consistent with that planned
The return on the investment actually achieved is consistent with that planned
The return on equity actually achieved is consistent with that planned
Sales growth rate already achieved is consistent with that planned
Working capital represents a positive value over the last three years
Planned/standard cost realization rate proceeds as planned
As a result of rationalization of expenditure, total costs tend to decrease without compromising quality

Second indicator: Customers aspect

Customer satisfaction rate
Firm rate of providing new services/products
Customer satisfaction about customers complaints section/department
The ability to attract new customers
The ability to retain existing customers
The market share is very acceptable for top management

Third indicator: Internal Business process aspect

The ability to innovate new processes in product design and development
The ability to innovate marketing, selling and after-sales service
High level of employee satisfaction with the firm
Low workforce turnover rate
Workers' productivity is classified as high productivity
The production process is simple and smooth
The production process characterized by the absence of bottlenecks

Fourth indicator: Learning and Growth aspect

The rate of technological development is in a continuous rise.
The firm response rate to technological developments is very high
Costs allocated to R&D activities are offset with very useful innovations
There is a very efficient R&D unit, or department in the firm.
There is enough budget for training programmes
Training programmes encompass all of the firm's activities
The production time of the product decreases by passage of time
The delivery time of the product decreases by passage of time
There is a strong improvement in performance as a result of training programmes

CPA

CPA was measured by three indicators: indicator I; valuation of customers as a firm asset, indicator II; customer profitability during short term, third indicator; and customer profitability analysis during future periods. To measure each of the three indicators, a set of proxies were relied upon.

Measuring indicators of CPA were drawn from prior studies addressing customer accounting (Mulhern (1999); Kaplan & Narayanan (2001); Guilding & McManus

(2002); Gupta & Lehmann (2003); Pfeifer et al. (2005)). Table (2) shows the set of proxies used to represent each of the three indicators used to measure CPA.

Table (2): indicators used to measure CPA

First indicator: Valuation of customers as a firm asset

- Expected cash flows from a customer
- Expected cash flows from each customer group
- Customers 's expected cash flow sensitivity analysis
- Sensitivity analysis of the of cash flows expected from each customer group

Second indicator: Customer profitability during short term

- Customer profitability against other customers' profitability
- Analysis of customers by extent of their contribution to the firm profits
- Customer analysis/classification by customer's level of importance
- Extent to which each customer's direct cost and overhead costs is determined
- Allocating overhead costs to customer or customer groups

Third indicator: Customer profitability analysis during future periods

- Expected revenue received by the firm from its customers
- The expected direct cost to serve firm's customers
- Expected profits received by the firm from its customers
- Future behaviour of the firm's customers
- Expected future time period for the firm's engagement with the customer
- The total expected cost to serve firm's customers

4.2.2 Measurement of contingency variables (determinants of CPA)

Determinants of CPA were identified by three variables: firm size, firm strategy, and type of activity.

Firm size

Firm size can be measured by the number of employees, the value of sales, and the size of firm assets. Although many measures are used to reflect the size of the firm, it should be noted that accounting studies didn't agree on a standard or basis according to which the firm is to be classified as large, medium or small. The indicator relied upon to measure the firm size in this research was the size of the firm's assets. The researcher classified the size of the assets invested in a firm into large, medium and small, based on the firm type of activity. In other words, it was assumed that firms engaging in production activity belonging to heavy industries represented a large enterprise. The size of these assets has therefore been viewed as a standard or measure of large-sized firms. Therefore, firms with assets of more than LE. 500 million are considered as large-sized firms, and those with assets of more than LE. 100 million and less than 500 million, as medium-sized firms. Firms with less than LE 100 million in assets serve as small-sized firms.

Firm Strategy

Many management studies addressed the firms' competitive strategy, and the different classifications of strategies followed by firms. Porter (1985) strategies classification is one of the most acceptable and widespread classifications where a firm can follow any of the following three strategies: cost leadership strategy, differentiation strategy, and focus strategy. In other classification of the competitive strategy that the firm can pursue four types of strategy- the strategy of introduction and growth, the strategy of maintaining market share, the strategy of harvesting market share, and the strategy of withdrawal - were identified by the Boston Consulting Group (BCG) as part of their Growth-Share Matrix framework. The Growth-Share Matrix was developed by the Boston Consulting Group in the 1970s as a tool to help firms analyze their product portfolio and determine the appropriate strategy for each product or business unit (Catana et al., 2022). As a part of the practical study of this research, and for the purpose of determining which competitive strategy could be a determinant to the firm application of CPA as a SMAT, Porter (1985) classification was used, as it is the most widespread and acceptable in practice, as well as for its measurability within the studied sample.

Type of activity

According to Egyptian stock exchange data, listed companies are classified to 17 industry sectors. These sectors were: banks, basic resources, chemicals, building and construction, financial services (other than banks), food and beverages, health care and medicines, automobile services and products, gas and petroleum, household and personal products, real estate, distributors and retail, media, technology, communications, tourism and leisure, utilities. Within the research framework, the firms from which data was collected, had been classified into six types of activities: construction, chemicals, banks and financial services, food and beverages, health care and medicines, household and personal products, tourism and recreation.

4.3 Research model

Figure (1) summarizes relationship between the research main and contingency variables. It shows two types of relationships between the variables included in the research model, and each type represents one of the research hypotheses. Type I; The relationship between CPA as a SMAT and the firm's strategic performance. Type II; The relationship between contingency variables and CPA.

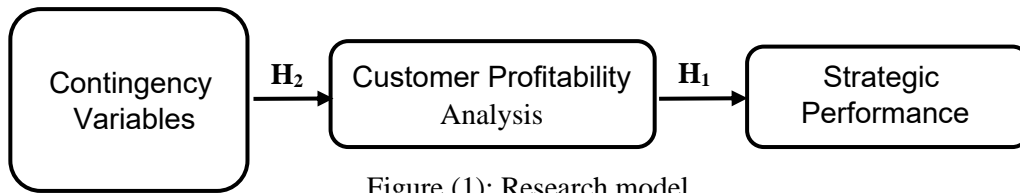


Figure (1): Research model

The researcher points out that the research model can be represented by two equations. The first equation refers to the relationship between CPA as the independent variable, and firm strategic performance as the dependent variable. Thus, equation No. (1) tests the first hypothesis of the research related to the relationship between CPA as a SMAT and the firm strategic performance, in the presence of contingency variables.

$$Y_{BSC} = B_0 + B_1X_{CPA} + B_2X_{size} + B_3X_{strategy} + B_4X_{Activity} + e_i \dots \text{Equation (1)}$$

Where: Y_{BSC} : Firm strategic performance and measurement based on balanced scorecard, X_{CPA} : Customer Profitability Analysis, X_{size} : Firm size, $X_{strategy}$: The firm's competitive strategy, $X_{Activity}$: Type of activity of the firm, B_i : Regression equation coefficients, e_i : random error.

The second equation refers to the relationship between contingency variables; as a set of independent variables, and CPA, as dependent variable of this relationship. Thus, equation No. (2) tests the second hypothesis of the research related to the relationship between contingency variables as determinants of CPA and its applicability as SMAT.

$$X_{CPA} = B_0 + B_1X_{size} + B_2X_{strategy} + B_3X_{Activity} + e_i \dots \dots \dots \text{Equation (2)}$$

Where: X_{CPA} : Customer Profitability Analysis, X_{size} : Firm size, $X_{strategy}$: The firm's competitive strategy, $X_{Activity}$: Type of activity of the firm, B_i : Regression equation coefficients, e_2 : random error.

5. Analysis of data and discussion

Data was initially tested for reliability and consistency, then analyzed descriptively, and statistically to determine the appropriateness of the model using the Analysis of Variance, and Correlation coefficients to determine the significance of the relation between variables, causal or not. Finally multiple regression analysis is used to test and analyze the research hypotheses.

5.1 Descriptive Analysis

Descriptive analysis indicates some data through which the sample can be described. On one hand, frequency analysis indicates that 16.7%, 37.7%, and 45.6% of the responses of the sample were done through the firm's chief executive officer, the members of the firm board of directors, and the firm top management respectively. On the other hand, the descriptive analysis of contingency variables included in the research model; firm size, firm strategy, and type of activity, indicates that concerning

firm size, 20% of firms included within the sample had a total asset more than LE. 500 million, 22.2% of firms had total assets over LE.100 million and less than LE. 500 million, and finally, 57.8% of firms had total assets of less than LE.100 million. Regarding the firm strategy, 54.4% of firms adopt cost leadership strategy, 21.2% adopt differential strategy, and finally 24.4% of firms adopt a focus strategy.

In relation to firm' type of activity, data analysis revealed that 14.4% of the firms belongs to the construction and chemicals sector, 5.6% belongs to the financial sector, 31.1% belongs to the food and beverage sector, 21.1% belongs to the healthcare sector, 22.2% belongs to the household products sector, and 5.6% belongs to the tourism sector.

5.2 Reliability and consistency tests

Prior to conducting any statistical analysis to identify the impact of either CPA on firm strategic performance or that of contingency variables on CPA application in firms, Cronbach's Alpha coefficient was relied on to assess reliability and internal consistency of the indicators included in the survey representing the research variable. The coefficient was determined to be (0,923). Since the coefficient is greater than (0,900), this indicates that the survey questions are highly consistent and reliable (Hair et al., 2007).

Testing the reliability of the model relevant to the first hypothesis which explores the influence of CPA on firm strategic performance in the presence of contingency variables, table (3) represents the model fitness summary, where adjusted R² of 0.375 indicates that almost 40% of the variation in firm strategic performance can be explained by CPA. Therefore, the dependent variable is moderately explained by the independent variable.

Table (3): Explanatory level of the first hypothesis model

R	R ²	Adjusted R ²	St. Error of the Estimate	Durbin-Watson
0.635	0.404	0.375	0.44316	1.512

-Predictors: (Constant), CPA, Firm size, Firm strategy, Type of activity

-Dependent Variable: Firm strategic performance

Testing the reliability of the model relevant to the second hypothesis which explores the impact of contingency variables on CPA application, table (4) represents the model fitness summary, where adjusted R² of -0.026 indicates that the model is unproductive. In other words, the application of CPA in firms is not justified or determined by either the firm size, or strategy, or type of activity.

Table (4): Explanatory level of the second hypothesis model

R	R ²	Adjusted R ²	St. Error of the Estimate	Durbin-Watson
0.092	0.009	-0.026	0.67657	1.181

-Predictors: (Constant) Firm size, Firm strategy, Type of activity

-Dependent Variable: CPA

5.3 Pearson Correlation

Pearson Correlation matrix in table (5) is used to investigate multicollinearity between independent variables. Multicollinearity is detected if the correlation coefficient exceeds 0.7 between independent variables (Anh et al., 2018). According to the correlation matrix given in table (6); correlation coefficients between research variables with each other are less than 0.7. Although, there is a positive significant relationship between CPA and firm strategic performance, yet an insignificant relationship exists between all three contingency variables and CPA. For further investigation of the relationships across research variables, regression analysis is used to explore the significance/insignificance and direction whether positive or negative between research variables.

Table (5): Correlation Matrix

Variables		Firm Size	strategy	Type of activity	CPA	BSC
Firm Size	Pearson Correlation	1				
	Sig. (2-tailed)					
Strategy	Pearson Correlation	-.130	1			
	Sig. (2-tailed)	.222				
Type of Activity	Pearson Correlation	.303**	.018	1		
	Sig. (2-tailed)	.004	.868			
CPA	Pearson Correlation	.072	-.051	.057	1	
	Sig. (2-tailed)	.497	.634	.596		
BSC	Pearson Correlation	.041	-.172	.115	.612**	1
	Sig. (2-tailed)	.701	.104	.279	.000	

** Correlation is significant at the 0.01 level (2-tailed).

5.4 Analysis of Variance

As shown in Table (6), Analysis Of Variance (ANOVA) results indicates that the independent variables (CPA, firm size, strategy, type of activity) are correlated with the dependent variables (firm strategic performance) with a 99% confidence level and sig = 0.000 (Sig. ≤ 0.01). This statistical result revealed that there is strong, positive, and significant relationship between CPA and firm strategic performance in the presence of contingency variables, where the probability value of the regression equation is less than the significance level accepted in this research (5%).

Table (6): Analysis of Variance- ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.292	4	2.283	14.375	.000
Residual	16.693	85	.196		
Total	27.986	89			

-Dependent Variable: Firm Strategic Performance

-Predictors: (Constant), CAP, Firm size, Firm strategy, Type of activity

5.5 Regression Analysis

Regarding the relationship between CPA and the firm strategic performance measured by the BSC with its four aspects: Financial, Customers, Internal business process, and Learning and Growth, results in table No. (7) indicate the significance of the relationship between CPA as SMAT and the firm's overall strategic performance, where the probability value of the relationship was (0.000), which is less than the significance value accepted under this research (0.05), which statistically means accepting the first hypothesis indicating the significant relationship between CPA and the firm strategic performance. This result agrees with studies that revealed positive relationship between CPA and firm performance measured by financial indicators (Baines and Langfield-Smith, 2003; Ryals, 2005; Kumar et al., 2008; Kumar and Shah, 2009; Cadez and Guilding, 2008).

Table (7): Analysis of the Relationship between CPA and firm strategic Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.804	.273		6.607	.000
CPA	.513	.071	.612	7.252	.000

Testing the relationship between each component of CPA, and each aspect of the firm's strategic performance can provide a range of results that may benefit management in improving the overall performance of the firm. First, statistical analysis of data related to the relationship between financial performance aspect of BSC, as a dependent variable, in its relationship with the three components of CPA individually; customers as an asset, customer profitability during short term, customer profitability analysis during future periods, indicates the insignificance of the relationship with customer as an asset and customer profitability during short term, where their probability value relevant to financial aspect are: (0,097), (0,523) respectively. However, there is a significant relationship between financial aspect of BSC and customer profitability during future periods, where the probability value is (0,000) which means that management should focus on analyzing long-time analysis of customers cashflow and profitability to improve firms' financial performance.

Table (8) shows the results of statistical analysis between the components of CPA and the firm's financial performance.

Table (8): Analysis of the Relationship between the Components of CPA and firm Financial Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.014	.295		3.432	.001
Assets	.172	.103	.190	1.680	.097
Profitability	.065	.101	.070	.642	.523
Future cash Flow	.487	.098	.535	4.995	.000

Second, statistical analysis of data related to the relationship between customer aspect of BSC, as a dependent variable, in its relationship with the three components of CPA individually; customer as an asset, customer profitability during short term, customer profitability during future periods, indicates the insignificance of the relationship with customer as an asset and customer profitability during short term, where their probability value relevant to customers aspect are: (0,051), (0,548) respectively. However, there is a significant relationship between customer aspect of BSC and customer profitability during future periods, where the probability value is (0,009), which means that management should focus on upgrading customers loyalty and long-term engagement to improve customers satisfaction. Table (9) shows the results of statistical analysis between the components of CPA and the customers aspect of BSC.

Table No. (9): Analysis of the Relationship between CPA and Customer aspect

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.776	.386		4.601	.000
Assets	.265	.134	.278	1.980	.051
Profitability	-.080	.132	-.081	-.604	.548
Future cash Flow	.339	.127	.355	2.661	.009

Third, statistical analysis of data related to the relationship between internal business process aspect of BSC, as a dependent variable, in its relationship with the three components of CPA individually; customer as an asset, customer profitability during short term, customer profitability during future periods, indicates the insignificance of the relationship with customer profitability during future periods and customer profitability during short term, where their probability value relevant to customers aspect are: (0,591), (0,410) respectively. However, there is a significant relationship

between CPA and customer as an asset, where the probability value is (0,001), which means that management should focus on treating customers as firm assets to improve firm internal business process and maximize its value. Table (10) shows the results of statistical analysis between the components of CPA and the internal process aspect of BSC.

Table (10): Analysis of the Relationship between CPA and Internal process aspect

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.443	.268		9.122	.000
Assets	.314	.093	.480	3.380	.001
Profitability	-.049	.092	-.073	-.539	.591
Future cash Flow	.073	.088	.111	.828	.410

Finally, statistical analysis of data related to the relationship between learning and growth aspect of BSC, as a dependent variable, in its relationship with the three components of CPA individually; customer as an asset, customer profitability during short term, customer profitability during future periods, indicates the insignificance of the relationship with customer profitability during short term, where its probability value relevant to learning and growth aspect is: (0,331). However, there is a significant relationship between learning and growth aspect of BSC and customer as an asset and customer profitability during future periods, where the probability value are (0,016), (0.017) respectively, which means that management should focus on both treating customers as firm assets and also focusing on customer profitability during future periods to improve firm learning and growth aspects. Table (11) shows the results of statistical analysis between the components of CPA and the learning and growth aspect of BSC.

Table (11): Analysis of the Relationship between CPA and learning and Growth Aspect

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.959	.332		5.902	.000
Assets	.282	.115	.344	2.446	.016
Profitability	-.111	.114	-.132	-.977	.331
Future cash Flow	.266	.110	.324	2.425	.017

In summary, the previous analysis indicates the significance of the relationship between CPA components and the firm's strategic performance, although there is a discrepancy in the level of significance of relationship between the components of each of these variables. The most component of CPA that didn't relate to any of the four BSC aspects, is customer profitability during short term. This refers to the fact

that customer profitability during short term depends on short term measurement of profitability of customers while the BSC concept is oriented to future long-term assessment of firms' strategic performance. This result implies accepting the first hypothesis assuming that there is a significant and positive relationship between CPA application and strategic firm performance.

In connection with the identification of the set of contingency variables that represent the determinants of the firm's application of CPA, the researcher made two levels of analysis; first the testing of the significance of the relationship between the three contingency variables and CPA. Second, the testing of the significance of the relationship between the three contingency variables and each component of CPA individually.

Table (12) shows the relationship between the contingency variables identified in the research as; the firm size, strategy, and the type of activity, and CPA variable in general encompassing its three components: customers as an asset, customer profitability during short term, customer profitability analysis during future periods. Table (12) indicates the insignificance of the relationship between the set of contingency variables and CPA, where their probability value relevant to CPA are: (0,635), (0,682), and (0,718) respectively. This indicates that the set of contingency variables proposed under this research work are not determinants of the application of the CPA within firms. This result indicates rejecting the second hypothesis assuming that contingency variables are determinants of CPA application.

Table (12): Relationship between CPA and the contingency variables

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.685	.303		12.154	.000
Total Assets	.045	.095	.054	.477	.635
Strategy	-.035	.086	-.045	-.411	.682
Type of Activity	.019	.053	.041	.363	.718

For the combination of factors determining the firm application of the first component of CPA; valuation of customers as an asset of the firm, the results of the analysis showed the insignificance of the relationship between any of the three contingency variables and valuation of customers as an asset of the firm, where the significance of this relationship are (0,185), (0,796) and (0,637) respectively, where values greater than the significance value accepted under this research by (0.05).

For the combination of factors determining the firm's application of the second component of CPA; customer profitability during short term, the results of the analysis showed the insignificance of the relationship between any of the three

contingency variables and customer profitability during short term, where the significance of this relationship are (0,306), (0,720) and (0,341) respectively.

Finally, in connection with the determinants of the firm's application of the third component of CPA; customer profitability analysis during future periods, the results of the analysis showed the insignificance of the relationship between any of the three contingency variables and customer profitability analysis during future periods, where the significance of this relationship are (0,285), (0,631) and (0,156) respectively.

These results don't agree with many studies in literature which favored contingency theory as an approach to management accounting research, and that there is no one management accounting and control system that fits all types of industry sectors or one that match all contexts of application (Gupta & Lehmann, 2005; Heiens & Pleshko, 2011; Holm, 2012; Nguyen et al., 2023).

6. Conclusion

CPA is a relatively recent topic in the field of strategic management accounting, although many marketing studies deal with the concept of customer relationship management. The research idea is to strengthen the relationship between management accounting and marketing research. This research aims to identify the relationship between CPA, as SMAT, and the strategic performance of the business firms measured through the BSC. CPA components in the research include: customers as an asset of the firm, accounting for the customer's profitability over the past periods or analysis of the profitability, and finally accounting for the customer's profitability over future periods. The strategic performance is measured by BSC through its four aspects: financial, customer, internal process, learning and growth.

To test the significance of the relationship between CPA and the firm's strategic performance, the researcher used a survey filled up by respondents from 90 firms representing several industry sectors. Overall, the results of the statistical analysis indicated a significant relationship between the application of CPA and firm strategic performance, despite the different levels of significance of relationship between the three components of CPA and the four components BSC. With respect to contingency variables that can influence the application of CPA, which was confined to internal environmental factors (size, strategy, and type of activity), the results indicated the insignificance of the relationship between these three contingency variables and CPA.

The unexpected results regarding the determinant factors of CPA application imposes the need for further academic research to study what determinants help or hinder the firm to apply CPA as long as there is a significant relationship between the application

of CPA and the firm's strategic performance, and thus the application of CPA would improve the firm's performance, as measured by financial and nonfinancial indicators.

References

- Agbejule, A. (2005). The relationship between management accounting systems and perceived environmental uncertainty on managerial performance: a research note. *Accounting and Business Research*, 35(4), 295-305.
- Anderson, J. C., & Narus, J. A. (2004). *Business marketing: Understanding what customers value*. Harvard Business Press.
- Annick B., Véronique, M., Hanne N. (2004). The American balanced scorecard versus the French tableau de bord: the ideological dimension, *Management Accounting Research*, Volume 15, Issue 2, pp. 107-134.
- Albalaki, F. (2018). Customer Profitability Analysis, Cost System Purposes and Decision Making Process: A Research Framework. *Account and Financial Management Journal*, 3, 1547-1552.
- Alkhafajia, A. A., Almusawib, E. G., & Isam, S. (2020). Customer profitability analysis and resource consumption accounting: a holistic approach. *Management*
- Al-Mawali, A., & Lam, T. (2016). Customer Accounting and Environmental Uncertainty: Sequential Explanatory Study. *International Review of Management and Marketing*, 6(3), 537-549.
- Al- Mawali, Hamzah; Zainuddin, Yuserrie; & Ali, Noor Naseir Kader. (2012) Customer accounting information usage and organizational performance, *Business Strategy Series*, 13, 215-223.
- Anh, L. H., Dong, L. S., Kreinovich, V., & Thach, N. N. (2018). *Econometrics for Financial Applications* (1st ed.). Springer Publishing Company, Incorporated.
- Baines, A. and Langfield-Smith, K. (2003). Antecedents to management accounting change: a structural equation approach. *Accounting, Organizations and Society*, 28 (7-8), 675-98.
- Baird, Kevin. (2017). The effectiveness of strategic performance measurement systems, *International Journal of Productivity and Performance Management* Vol. 66 No. 1, pp. 3-21.
- Banker, R.D., Potter, G., Srinivasan, D. (2000). An empirical investigation of an incentive plan that includes nonfinancial performance measures. *Accounting Review* 75, 65–92.
- Bates, Ken & Whittington, Mark. (2009). The Customer Is King. Enthroned or In Exile? An Analysis of the Level of Customer Focus in Leading Management Accounting Textbooks. *Accounting Education*. 18. 291-317.
- Bellis-Jones, R. (1989), "Customer Profitability Analysis", *Management Accounting*, Vol. 67, No. 2, pp. 26-28.
- Berger, P.D., & Nasr, N.I. (1998). Customer lifetime value: Marketing models and applications. *Journal of Interactive Marketing*, 12, 17–30.
- Berger, P.D., Bolton, R.N., Bowman, D., Briggs, E., Kumar, V., Parasuraman, A., & Terry, C. (2002). Marketing actions and the value of customer assets: A framework for customer asset management. *Journal of Service Research*, 5, 39–54.
- Bolton, Ruth & Lemon, Katherine & Verhoef, Peter. (2004). The Theoretical Underpinnings of Customer Asset Management: A Framework and Propositions for Future Research. *Journal of The Academy of Marketing Science*, 32. 271-292.
- Bourguignon, A., Malleret.V. and Norreklit.H (2004). Balanced scorecard versus French tableau de

- bord: The ideological perspective, *Management Accounting Research*, Vol.15, no.2, pp.107-134.
- Breffni Noone, and Peter Griffin. (1999). Managing the long-term profit yield from market segments in a hotel environment: a case study on the implementation of custom profitability analysis, *International Journal of Hospitality Management*, Volume 18, Issue 2, pp. 111-128.
 - Cadez S, and Guilding C. (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. *Account Organ Soc* 33:836–873.
 - Cagwin, D., & Bouwman, M.J. (2002). The association between activity-based costing and improvement in financial performance. *Management Accounting Research*, 13, 1–39.
 - Chenhall, R. (2008). Accounting for the horizontal organization: A review essay. *Accounting, Organization and Society*. 33, 517–550.
 - Chenhall, R. H. & Langfield-Smith, K. (1998). The relationship between strategic priorities, management techniques and management accounting: an empirical investigation using a systems approach. *Accounting, Organizations and Society*, Elsevier, vol. 23(3), pages 243-264, April.
 - Çolak, O. (2023). The Use of Activity-Based Customer Profitability Analysis in Yield Management: A Case Study in Aquapark. *Sosyal Bilimler Araştırma Dergisi*.
 - Cooper, R., & Kaplan, R. S. (1991). Profit priorities from activity-based costing. *Harvard Business Review*, 69(3), 130-135.
 - Crabtree, A.D., & DeBusk, G.K. (2008). The effects of adopting the Balanced Scorecard on shareholder returns. *Advances in Accounting*, 24, 8–15.
 - Cravens, K. S., & Guilding, C. (2001). An Empirical Study of the Application of Strategic Management Accounting Techniques. *Advances in Management Accounting*, 10, 95-124.
 - Duci, E. (2021). The relationship between management accounting, strategic management accounting and strategic cost management. *Academic Journal of Interdisciplinary Studies*.
 - Dwyer, F.R. (1997). Customer lifetime valuation to support marketing decision making. *Journal of Interactive Marketing*, 11, 6–13.
 - Felice, F., Petrillo, A., & Autorino, C. (2015). Development of a framework for sustainable outsourcing: Analytic Balanced Scorecard Method (A-BSC). *Sustainability*, 7(7), 8399-8419.
 - Foster, G., Gupta, M. (1994). Marketing, cost management and management accounting. *Journal of Management Accounting Research* 6, 43–77.
 - Foster, G., Gupta, M., Sjoblom, L. (1996). Customer profitability analysis: challenges and new directions. *Journal of Cost Management* 10, 5–17.
 - Foster, G., Young, S. (1997). Frontiers of management accounting research. *Journal of Management Accounting Research* 9, 63–77.
 - Granlund, M., & Lukka, K. (1998). It is a small world of management accounting practices. *Journal of Management Accounting Research*, 10, 153–179.
 - Golrizgashti, S.F. (2014). Supply chain value creation methodology under BSC approach, *Journal of Industrial Engineering International*, DOI 10.1007/s40092-014-0067-5, 10(67) pp1-15.
 - Guilding, C., & McManus, L. (2002). The incidence, perceived merit and antecedents of customer accounting: An exploratory note. *Accounting, Organizations & Society*, 27, 45–59.
 - Gupta, S. and Lehmann, D.R. (2003). Customers as assets. *Journal of Interactive Marketing*, Vol. 17 No. 1, pp. 9-24.
 - Gupta, S., & Lehmann, D.R. (2005). *Managing customers as investments: The strategic value of customers in the long run*. New Jersey: Wharton School Publishing.

- Habib Mahama. (2006). Management control systems, cooperation and performance in strategic supply relationships: A survey in the mines, *Management Accounting Research*, Volume 17, Issue 3, Pages 315-339.
- Hartfeil, G. (1996). Bank one measures profitability of customers, not just products. *Journal of Retail Banking Services*, 18(2), 23-30.
- Heiens, R.A. & Pleshko, L.P.(2011). A contingency theory approach to market orientation and related marketing strategy concepts: Does fit relate to profit performance? *Management & Marketing*, 6(1), 19-34.
- Helgesen, Øyvind. (2006). Customer segments based on customer account profitability. *Journal of Targeting, Measurement and Analysis for Marketing*. 14, 225-237.
- Helgesen, Øyvind. (2007). Customer accounting and customer profitability analysis for the order handling industry- A managerial accounting approach. *Industrial Marketing Management*. 36, 757-769.
- Hogan, J.E., Lemon, K.N., & Rust, R.T. (2002). Customer equity management: Charting new directions for the future of marketing. *Journal of Service Research*, 5, 4–12.
- Holm, Morten; Kumar, V.; Plenborg, Thomas. (2016). An investigation of Customer Accounting systems as a source of sustainable competitive advantage. *Advances in Accounting, incorporating Advances in International Accounting*, 32, 18–30.
- Holm, M. (2012). *Customer Profitability Measurement Models: Their Merits and Sophistication across Contexts*, PhD Series, No. 12.2012, ISBN 9788792842510, Copenhagen Business School (CBS), Frederiksberg.
- Hoque, Z., James, W. (2000). Linking balanced scorecard measures to size and market factors: Impact on organizational performance. *Journal of Management Accounting Research*, 12, 1-17.
- Ittner, C.D., Larcker, D.F. (1998). Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of Accounting Research* 36, 1–35.
- Johnson , H. T. and Kaplan , R. S. (1987). *Relevance Lost: The Rise and Fall of Management Accounting* , Harvard Business School Press .
- Kaplan, R. S., & Anderson, S. R. (2007). *Time-driven activity-based costing: A simpler and more powerful path to higher profits*. Harvard Business Press.
- Kaplan, R. S., & Cooper, R. (1998). *Cost and effect: Using integrated cost systems to drive profitability and performance*. Harvard Business Press.
- Kaplan, R.S. and Narayanan, V. (2001). 'Customer profitability measurement and management. Harvard Business School, May 1, ss. 1, 12.
- Kaplan Kaplan, R. S., and Norton, D. P. (1996a). Using the Balanced Scorecard as a strategic management system. *Harvard Business Review* (January-February): 75-85.
- Kaplan, R. S., and Norton, D. P.(2008). *The Execution Premium: Linking Strategy to Operations for Competitive Advantage*. Harvard Business School Press, 2008.
- Kaplan, R. S., and Norton, D. P. (1992). *The Balanced Scorecard: Measures that drive performance*. Harvard Business Review (January-February): 71-79.
- Kaplan, R. S., & Norton, D. P. (2001). *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*. Harvard Business Press.
- Kaplan, R. S., and Norton, D. P. (2001b). Transforming the Balanced Scorecard from performance measurement to strategic management, Part II. *Accounting Horizons* 15, 87-104.
- Kaplan, R. S., and Norton, D. P. (1996). Linking the Balanced Scorecard to strategy. *California Management Review*, 39, no.1:53-79.
- Kaplan, R.S., & Cooper, R. (1998). *Cost and effect: Using integrated cost systems to drive*

- profitability and performance. Boston, MA: Harvard Business School Press.
- Keramati, A., Shapouri, F. (2016). Multidimensional appraisal of customer relationship management: integrating balanced scorecard and multi criteria decision making approaches. *Inf Syst E-Bus Manage* 14, 217–251.
 - Kobayashi, H.; Kato, M.; Maezawa, Y.; Sano, K. (2011). An R&D management framework for eco-technology. *Sustainability*, 3, 1282–1301.
 - Kumar, V. & Shah, Denish. (2009). Expanding the Role of Marketing: From Customer Equity to Market Capitalization. *Journal of Marketing*. 73. 119-136. 10.1509/jmkg.73.6.119.
 - Kumar, V., Venkatesan, R., & Reinartz, W. (2008). Performance Implications of Adopting a Customer-Focused Sales Campaign. *Journal of Marketing*, 72(5), 50-68.
 - Leon-Soriano, Raul, oz-Torres, Maria Jesu's Mun and Chalmeta-Rosalen, Ricardo. (2010). Methodology for sustainability strategic planning and management, *Industrial Management & Data Systems* Vol. 110 No. 2, pp. 249-268
 - Lin, Chin Feng, (2002). Segmenting customer brand preference: demographic or psychographic. *Journal of Product & Brand Management*, Vol. 11 Issue: 4, pp.249 – 268.
 - Lopez-Valeiras, Ernesto; Gomez-Conde, Jacobo; David Naranjo-Gil. (2015). Sustainable Innovation, Management Accounting and Control Systems, and International Performance. *Sustainability*, 7, 3479-3492.
 - Luft, Joan & Shields, Michael. (2003). Mapping Management Accounting: Graphics and Guidelines for Theory-Consistent Empirical Research. *Handbooks of Management Accounting Research*. 28. 27-95.
 - Maková, K. and Šírok, J. (2014). Long-term sustainability of the use of taxes as an economic policy instrument: on the example of European Union member states during the economic crisis. *Journal of Sustainability Science and Management*, Vol. 9 No. 1, pp. 99-111.
 - Maletič, M.; Maletič, D.; Dahlgard, J.J.; Dahlgard-Park, S.M.; Gomišček, B. (2014). Sustainability exploration and sustainability exploitation: From a literature review towards a conceptual framework. *J. Clean. Prod.*, 79, 182–194.
 - Malmi, T., Raulas, M., Gudergan, S., & Sehm, J. (2004). An empirical study on customer profitability accounting, customer orientation and business unit performance. Paper presented at the EAA conference, Prague.
 - Martin, C.L. (1995). The customer compatibility scale: measuring service customers' perceptions of fellow customers. *Journal of Consumer Studies & Home Economics*, 19: 299-311.
 - Matsuoka, K. (2020). Exploring the interface between management accounting and marketing: a literature review of customer accounting. *Journal of Management Control*.
 - McManus, L. (2013). Customer accounting and marketing performance measures in the hotel industry: evidence from Australia. *International Journal of Hospitality Management*, 33, 140-152.
 - McManus, L. and Guilding, C. (2008). Exploring the potential of customer accounting: a synthesis of the accounting and marketing literature. *Journal of Marketing Management*, Vol. 24 Nos 7/8, pp. 771-795.
 - Mia, L. and Chenhall, R.H. (1994). The Usefulness of Management Accounting Systems, Functional Differentiation and Managerial Effectiveness. *Accounting, Organisations and Society*, Vol. 19, No. 1, pp. 1-13.
 - Mia, L. and Clarke, B. (1999). Market Competition, Management Accounting Systems and Business Unit Performance. *Management Accounting Research*, 10, 137-158.
 - Mulhern, F.J. (1999). Customer profitability analysis: measurement, concentration, and research directions. *Journal of Interactive Marketing*, Vol. 13 No. 1, pp. 25-40.

- Nguyen, T. H., Nguyen, D. T., Nguyen, T. A., & Nguyen, C. D. (2023). Impacts of contingency factors on the application of strategic management accounting in Vietnamese manufacturing enterprises. *Cogent Business & Management*, 10(2).
- O'Connor, N. G., & Cheung, C. L. (2007). Product/service adoption strategies and bank customer accounting in Hong Kong. *Pacific Accounting Review*, 19(1), 31-46.
- OECD. (2011). *Better Policies to Support Eco-Innovation*; OECD Publishing: Paris, France.
- Patel, P.C.; Fernhaber, S.; Mcdougall-Covin, P.-P.; van der have, R.P. (2014). Beating competitors to international markets: The value of geographically balanced networks for innovation. *Strat. Manag. J.*, 35, 691–711.
- Perera, S., Harrison, G., Poole, M. (1997). Customer-focused manufacturing strategy and the use of operations-based non-financial performance measures: A research note. *Accounting, Organizations and Society*, 22(6), 557-572.
- Pfeifer, P.E., Haskins, M.E., & Conroy, R.M. (2005). Customer lifetime value, customer profitability, and the treatment of acquisition spending. *Journal of Managerial Issues*, 17,11–25.
- Porter, M.E. (1996). What is strategy? *Harvard Business Review*, 74, 61–78.
- Porter, M.E. (1985) *Competitive Advantage. Creating and Sustaining Superior Performance*. Free Press, New York, 557p.
- Ratapol Wudhikarn. (2016). An efficient resource allocation in strategic management using a novel hybrid method, *Management Decision*, 54. 7, pp. 1702-1731.
- Roscoe, J.T. (1975), *Fundamental Research Statistics for the Behavioral Sciences*, Vol. 265, Holt, Rinehart and Winston, New York, NY.
- Ryals, L. (2005) Making Customer Relationship Management Work: The Measurement and Profitable Management of Customer Relationships. *Journal of marketing*, 69, 252-261.
- Sainaghi, R. (2010). Hotel performance: state of the art. *International Journal of Contemporary Hospitality Management* 22, 920–952.
- Schaltegger, S.; Beckmann, M.; Hansen, E.G. (2013). Transdisciplinarity in corporate sustainability: Mapping the field. *Bus. Strateg. Environ*, 22, 219–229.
- Sedevich-Fons, L. (2022). Incorporating customer profitability analysis into quality management systems. *The TQM Journal*.
- Shepherd, C. and Gunter, H. (2006). Measuring supply chain performance: current research and future directions. *International Journal of Productivity and Performance Management*, Vol. 55 Nos 3/4, pp. 242-58.
- Smith, M., & Dikolli, S. (1995). Customer profitability analysis: An activity-based costing approach. *Managerial Auditing Journal*, 10, 3–7.
- Souissi, Mohsen. (2008). A comparative analysis between the balanced scorecard and the french tableau de bord, *International Business & Economics Research Journal*, July 2008 Volume 7, Number 7, 83-86.
- Smith, R.E., Wright, W.F. (2004). Determinants of customer loyalty and financial performance. *Journal of Management Accounting Research* 16, 183–205.
- Srivastava, R.K., Shervani, T.A., & Fahey, L. (1998). Market-based assets and shareholder value: A framework for analysis. *Journal of Marketing*, 62, 2–18.
- Shuaib, M., SeEVERS, D., Zhang, X., Badurdeen, F., Rouch, K. E., Jawahir, I. S. (2014). Product Sustainability Index (ProdSI)-A Metricsbased Framework to Evaluate the Total Life-cycle Sustainability of Manufactured Products, *Journal of Industrial Ecology*, 18, 4, p. 491-507.
- Stefan-Alexandru, C. & Sorin-George T. & Catalin G. (2022). The Product Life Cycle And The

Boston Consulting Group'S Growth- Share Matrix In Marketing Simulations. *Annals - Economy Series*, Constantin Brancusi University, Faculty of Economics, vol. 4, pages 319-324, August.

- Tanima, Farzana Aman; Bates, Ken. (2015). The incidence and perceived managerial merit of customer accounting in New Zealand. *Pacific Accounting Review*, 27, 466-485.
- Tosi, H. L., Jr., & Slocum, J. W., Jr. (1984). Contingency Theory: Some Suggested Directions. *Academy of Management Review*, 9(1), 9-21.
- Van Hemel, C., & Cramer, J. (2002). Barriers and stimuli for eco design in SMEs. *Journal of Cleaner Production*, 10(5), 439–453.
- Wagner, M. (2010). The role of corporate sustainability performance for economic performance: A firm-level analysis of moderation effects. *Ecol. Econ.*, 69, 1553–1560.
- Ward, K. (1992). Accounting for Marketing Strategies. In: Drury, C. (ed.). *Management Accounting Handbook*, Oxford: Butterworth-Heinemann.
- Wudhikarn, R. (2016). Implementation of the overall equipment cost loss (OECL) methodology for comparison with overall equipment effectiveness (OEE). *Journal of Quality in Maintenance Engineering*, Vol. 22 No. 1, pp. 81-93.
- Yaghoobi, Tahere and Haddadi, Firoozeh. (2016). Organizational performance measurement by a framework integrating BSC and AHP, *International Journal of Productivity and Performance Management*. 65, 7, pp. 959-976.