

# The External Orientation of Strategic Management Accounting: Customer Accounting, Business Strategies, and Customer Performance

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## Abstract

This study is added to the limited empirical studies concerning the practices of customer accounting (CA). The aims of this study were to explore the extent of usage of CA techniques in Jordanian industrial companies (JIC), to investigate the status of customer performance in JIC, to examine the influence of business strategies on the usage of CA, and to examine the influence of CA on customer performance in JIC. In addition, this study aims to determine the relationship between business strategies (cost leadership, differentiation and focus) and customer performance control for CA. A survey on Jordanian industrial companies (JIC) was conducted for data collection. A total of 90 questionnaires were distributed to these companies. Out of this number 68 were returned. The response rate was about 75.5%. Descriptive statistics showed that the customer performance' indicators in JIC are in a good status and there are good improvements in all categories of customer performance. One-sample t-test showed that CA techniques were used by the JIC. The results of multiple regressions showed that business strategies contribute significantly and show high levels of variation of CA in JIC. Cost leadership strategy and focus strategy had a statistically significant positive effect on CA in JIC. The results of simple regressions showed that that CA contributes significantly and explains a quarter of the variation in customer performance in JIC. It is also found that CA has a statistically significant positive effect on customer performance in JIC. A partial correlation revealed that there were moderate, positive partial correlations between business strategies and customer performance whilst controlling for CA. In addition, ZPC showed that there were statistically significant, moderate, positive correlations between these strategies and customer performance, indicating that CA have an important influence in controlling for the relationship between business strategies and customer performance. The positive signs of the r values are indication that when CA is enhanced, business strategies (cost leadership, differentiation and focus) and customer Performance are also enhanced. This study made an important contribution because it is first of its kind that addresses these relationships. This study suggested that customer performance should be considered as an important part of the future performance measurement and management systems in JIC. In context of cost-benefit approach, this study recommends JIC to continue adopting all of CA techniques in the future.

**Keywords:** strategic management accounting, customer accounting, business strategies, customer performance, Jordan.

## 1- Introduction

In the new changing business environment, the formulation and implementation of business strategies, as well as strategic analysis, require flexible effective administrative and financial information systems. Management accounting is also required to provide adequate information for making effective operational and strategic decisions to facilitate superior performance. According to Collier and Gregory (1995) provisions of information that assisted in the development of strategic plans is one of two main areas of strategic management accounting (SMA) application. Kaplan (1984, p 414) has stated that "management accounting must serve the strategic objectives of the firm". In this regard, Fraser (2012) has defined strategic management accounting as a body of accounting that aims to forge a stronger relationship with organizational strategy.

SMA has an important role to play in providing information about the major sources of competitive advantage of an enterprise (Moon and Bates, 1993). Dixon and Smith (1993) pointed out that in increasingly dynamic environments the provision of strategically relevant information is of paramount importance for the formulation and execution of business strategies. Dixon and Smith (1993) have considered SMA as a new method of providing such information.

Many consider customers as an important source of competitive advantage in the global competitive

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environment (Woodruff, 1997; Weir, 2014). According to Gupta and Lehmann (2003), customers are considered the most valuable assets to the firm. Therefore, there was a shift in thinking of managers and researchers from focusing on product management to focusing on customer relationship management (CRM) (Sheth et al., 2000; Villanueva and Hanssens, 2007). Despite this fact, the accounting literature on CA has been described as "little more than fledgling" (McManus and Guilding, 2008, p. 783), compared to the marketing literature.

When reviewing accounting and marketing literature reveals that customer-related techniques have been traced by researchers using three main techniques, namely, customer profitability analysis (CPA) (ICAEW, 2002; IMA, 2010), customer lifetime value (CLV) (Lai, 1995; Berger and Nasr, 1998; Gupta et al., 2004; Gupta and Lehmann, 2006; Kumar et al., 2006; Ivanauskienė and Auraskeviciene, 2010), and valuation of customers assets (Gupta and Lehmann, 2003; Bolton et al., 2004).

In recent years, the dynamic and competitive nature of the business environment has led to an increase in demand on information of performance measurement. Customer performance is considered one of the emergent issues in the field of managing and measurement of performance. Furthermore, it could be regarded as an important competitive issue in the current era.

There is a limited amount of accounting literature on CA practices (McManus and Guilding, 2008; Tanima and Bates, 2011) and there is a lack of literature concerning customer performance. Cadez and Guilding (2008) also refereed that SMA, notably, suffers from a relative dearth of empirically based research. This study contributes to the SMA and CA in three ways. First, this study explores the extent to which Jordanian industrial companies (JIC) practice the CA within the field of SMA. Second, this is one of few studies that examine the influence of business strategies on the usage of CA, especially in developing countries. Third, this study investigates the status of customer performance in JIC. In addition, to the best knowledge of researcher, this is the first study that examines the influence of CA on the customer performance.

## **2- Theoretical and Literature review**

### **2-1 Strategic management accounting**

SMA has been defined as "the provision and analysis of management accounting data relating to business strategy: particularly the relative levels and trends in real costs and prices, volumes, market share, cash flow and the demands on a firm's total resources" (CIMA, 1991). SMA is a management accounting subset that emphasizes on how accounting information facilitates strategic decision and the strategic management process (Cadez and Guilding, 2012). Many studies have linked SMA with different aspects of strategy such as strategic decisions (Lords, 1996; Hogue, 2001; Cinquini and Tenucci, 2006), control activities (Cinquini and Tenucci, 2010), strategic management process (CIMA, 2015), strategic positioning (Roslender and Hart, 2003; Cinquini and Tenucci, 2006; Carmen and Corina, 2009).

However, the external dimensions of SMA are related to the external elements of a firm, which include external players such as competitors, suppliers and customers (Guilding et al., 2000). In general, SMA techniques cover five area include strategic costing, strategic decision making, strategic planning, control and performance management, competitor accounting and CA (Bromwich, 1990; Roslender and Hart, 2003; Cadez and Guilding, 2008, Alsoboa et al., 2015).

### **2-2 Customer accounting (CA)**

CA is the technique that considers customers or group of customers as unit of accounting analysis (Bellis-Jones, 1989). It includes all the practices directed to appraise profit, sales or costs deriving from customers or customer segments (Guilding and McManus, 2002; Cinquini and Tenucci, 2006). CA in its most simple form explores how customer groups and even individual customers may differ significantly in their consumption of the resources an organization deploys to provide a product and/or service, and thus more accurately measures customer value (Fraser, 2012).

According to Weir (2014), the attempts at valuing customer have followed three main waves. First, CA was introduced as a means of measuring proportionate profits attributable to specific customer groups when is then in the second wave is extended through customer lifetime valuation which seeks to estimate the relative value of a customer relationship over its expected life, and the final wave is the shift towards value which led to the establishment of customer equity calculations. More specifically, reviewing the SMA and CA literature in line with Weir (2014), CA includes the following techniques: customer profitability analysis, lifetime customer profitability analysis, and customer equity or valuation of customers as assets. In this study, these techniques have basically the main topic. Despite the growing interesting in this topic, there are very limited empirical research concerning the practices of CA (McManus and Guilding, 2008; McManus and Guilding, 2009; Tanima and Bates, 2011). Literature on CA and its subsets such as CPA, CLV, and customer assets has however grown significantly over the last two decade (for a review see, Jain and Singh, 2002; Guilding and McManus, 2002; McManus and Guilding, 2008).

A number of factors have had an impact upon the usage of CA practices including: industry/market

characteristics of cost differentials, revenue differentials, multiple products and competitors and the organizational characteristics of market orientation, size of customer base, and company size (McManus, 2011). Guilding and McManus (2002) found that the usage and perceived managerial merit of these CA practices in Australian companies are higher than expected usage rates. They also found a positive association between market orientation and CA usage. Comparing the study conducted by Guilding and McManus (2002), Shanahan et al. (2007) replication survey in New Zealand found lower CA usage and perceived merit rates in New Zealand. They also found no significant association between market orientation and CA usage. McManus and Guilding (2009) found that over half of the fourteen Australian organizations studied had adopted, or were planning to adopt, some form of CA in the future. Tanima and Bates (2011) found that the practices of CA in New Zealand in 2009 are similar to those found in Australia in 2002, and much higher than those found in New Zealand in 2007. Alsoboa et al. (2015) also found that CPA, CLV, and valuation of customer assets among the other 19 SMA techniques are adopted by JPIC.

From other side, CA has been found to have an effect on some variables such as strategy and performance. McManus and Guilding (2008) referred that there is considerable potential for accountants to draw on points of focus raised in the marketing literature to further advance customer focused accounting measures of performance. Al-Mawali et al. (2012) found that CA information leads to better organizational performance. They also demonstrate a different effect of CA information items on diverse dimensions of organizational performance. Aykan and Aksoylu (2013) found low level positive relationships between differentiation strategies and the perceived qualitative-quantitative performance of businesses and similarly low level relationships between the competitor-customer-oriented techniques and qualitative performance of the businesses. The result of the study conducted by Said et al. (2009) supports a strong positive relationship between the extent of customer-focused strategies and IT capability on organizational performance. Customer profitability analysis classified by CIMA (2015) as one of key techniques that are used in strategy formulation.

#### 2-2-1 Customer profitability analysis (CPA):

One of the most important types of customer information that help in reacting and responding to customer needs is information on the profitability of customers (Howell and Soucy, 1990). Measuring customer profitability and understanding the drivers of customer and corporate value can lead to the improvement of overall corporate performance (ICAEW, 2002). Measuring the profitability of segments and managing customer relationships based on customer value, both the customer and company win (Epstein et al., 2008).

Customer profitability management (CPM) is a strategy-linked approach to identifying the relative profitability of different customers or customer segments in order to devise strategies that add value to most-profitable customers, make less-profitable customers more profitable, stop or reduce the erosion of profit by unprofitable customers, or otherwise focus on long-term customer profitability (IMA, 2010). CPA was introduced as a powerful technique to provide a solution to the customer profitability measurement problem and can be used as a means of supporting a customer focused strategy (Bellis-Jones, 1989). It's also asserted that firms should have a customer profitability analysis system in place to support the strategy (Shanahan, 2002).

From a procedural standpoint, customer profitability is calculated as the difference between customer's revenues and costs (Foster et al., 1996). In these calculations, Hartfeil (1996) suggests that higher risk products should be the primary focus of CPA, because it exposes the greatest customer variations. It is also found that only a few banks have customer profitability models that take into account the true riskiness of a customer (Rose, 1991). Finally, it is worth mentioning that CPA could be conducted on the basis of individual customer or customer groups or market segments.

#### 2-2-2 Customer lifetime value (CLV):

Traditionally, the field of customer lifetime value (CLV) estimation has dramatically emerged as an important area of research in marketing (Bohari et al., 2012). From the marketing view, customer value has been defined as "a customer's perceived preference for and evaluation of those product attributes, attribute performances and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situations" (Woodruff 1997). To attain CLV, customer relationship management (CRM) approach could be used as an indicator to acquire, grow, and retain the "right customers" (Selvi and Vivekananda, 2013). Theoretically, CLV is a model to measure the contribution of a customer to the business, for the lifetime of the customer's relationship with the business (Bohari, et al., 2011). According to Guilding and McManus (2002), lifetime customer profitability analysis is a more sophisticated development of customer profitability analysis. However, CLV is a fundamental and quantitative measure of the financial consequences of the relationship a firm has with its customers. It provides a useful metric for judging both firm actions and financial market valuations (Gupta and Lehmann 2003).

In practice, there are different models that may be used for estimates of CLV where these potential to create different impacts on future prospects of the business (Bohari, et al., 2011). However, in accounting, CLV introduces a new dimension to understanding the value of that a customer provides as compared to margin-based calculation which focuses on the profits realized in the current period as a result of customer purchases (Epstein

et al., 2008). Dwyer (1989) defines the lifetime value as the present value of expected benefits (e.g. gross margin) less the burdens (e.g. direct costs of servicing and communicating) with customers. It is also defined as the present value of the future cash flows directly attributable to the firm's relationship with the customer (Gupta and Lehmann, 2003; Dreze and Bonfrer, 2009; Malthouse, 2009). These cash flows typically include revenues, product and servicing costs, and remarketing costs (Pfeifer, 1999).

2-2-3 Valuation of customer asset:

Understanding value, as defined by the customer, is the basis for creating an effective competitive strategy (McNair and Polutnik, 2001). Therefore, firms have come to realize that their customers are the most important assets and that they must keep those assets, grow them, and profit from them (Niraj et al., 2008). Customers are actually classified as intangible assets (Gupta and Lehmann 2003; Kumar and George, 2007). Like any other asset, customers value should be measured and managed (Gupta and Lehmann, 2003; Gupta et al., 2004; Gladly et al., 2009). Customer relationships should also be maximized in order to optimize firm performance (Blattberg et al. 2001). The shift from profit to value has been ingrained in organizations that view customers as assets (Rust et al. 2004). Therefore, classifying customers as asset makes them a part of firm value. Identifying and creating customer value (CV) is regarded as an essential prerequisite for long-term company survival and success (Porter, 1996; Huber et al., 2001). Dreze and Bonfrer (2009) recommended that customer equity is a beneficial metric to assess firm value and customer lifetime value. They found that firms that increase CE construct achieve higher profits and retain large customer base are the firms that improve CLV. Gupta and Lehmann (2003) referred that few attempts have been made to link CV to the value of the firm. Later on, Bauer and Hammerschmidt (2005) concluded that CE and all cash flows generated from non-operating assets yield the overall value of a firm. Marzouk (2014) found that both value equity and brand equity are good proxies of shareholder value and the association of these drivers to shareholder value is attainable and insightful. According to Gupta and Lehmann (2003), this link between CV and firm's value is essential if investors are to view customers as assets. From this viewpoint, customers are referred to as customer assets with customer equity (CE) (Gupta and Lehmann, 2003; Kumar and George, 2007; Villanueva and Hanssens, 2007; Marzouk, 2014).

Today, customer equity has established itself as one of the most dominant metrics for managers to measure and manage firm performance (Marzouk, 2014; Kumar and Shah, 2015). It also provides a framework and 'roadmap for effective strategy' for firms to fully evolve into customer-centered organizations (Rust et al., 2015). It is now frequently presented as the basis for marketing strategy (Sharma, 2006). CE refers to the valuation of customers or customer groups as assets when calculating the value of customers to the company (Guilding and McManus, 2002). CE commonly described as the sum of individual discounted lifetime values of both present and future customers for the duration of the time they continue to transact with the company (Weir, 2008). It also could be undertaken by computing the present value of all future profit streams attributable to a particular customer or group of customers (Guilding and McManus, 2002). Many view a link between CLV and customer equity. CE is described as the sum of individual discounted lifetime values of both present and future customers (Rust et al., 2004; Weir, 2008; Dreze and Bonfrer, 2009; Malthouse, 2009).

### 3- Business strategies

The strategy has been defined as a means "to create a position to increase the value of attributes of a business differentiating it from the competitors" (Porter, 1985). According to Barney (1991), company has a competitive advantage when it is implementing a value creating strategy different from the strategies of its competitors. Alsoboa and Aldehayyat (2013) have mentioned that achieving competitive priorities requires companies to adopt strategies that include the entire value chain, starting from the provision of good material, product design, improvements in operations, increased flexibility and reduced costs and the creation of marketing channels appropriate for delivering the products to the consumers immediately at competitive prices.

The literature suggested that business strategy is an important factor affecting the use of SMA techniques and, as a result, the use of SMA will differ with different strategic priorities (Auzair et al., 2013). Lord (1996) has suggested that SMA consist of three elements where one of them is matching the management accounting practices of the organizations to develop competitive strategy. Many forms of strategies have been discussed in management and accounting literature such as prospector, defender, analyzer, and reactor strategies (Miles & Snow, 1978). Porter (1980, 1985) has also presented a set of strategies that can help companies achieve their goals. Among the strategies addressed by Porter were three general strategies (i.e., cost leadership, differentiation and focus strategies). The focus of this study is on business strategies addressed by Porter.

The focus of cost leadership strategy revolves around reducing costs, which should include, as much as possible, all the activities of the value chain in the organization (Alsoboa and Aldehayyat, 2013). Porter (1980) concluded that the position of the low cost provides protection against all five of the competitive forces: rivalry among existing firms, consumer power, the power of suppliers, new entrants to the market and confronting the substitution of products or services. From other side, it could be said that the essence of differentiation strategy is to outperform the competitors in meeting the needs of the consumer and providing high-quality products; of



course, the firm will raise the prices for this quality (Alsoboa and Aldehayyat, 2013). Porter (1980, 1985) argued that this strategy achieves significant advantages for the enterprise in the face of competitive forces, including consumer loyalty, creates barriers to new entrants and establishes a better process for replacements. Auzair et al. (2013) found that Malaysian service organizations pursuing differentiation strategies place higher emphasis on competitor and CA compared to service organizations pursuing cost leadership strategies. Lay and Jusoh (2012) have supported that the SMA usage mediates partially the relationship between product differentiation strategy and firm performance. Finally, Strategic focus is a combination of the above two strategies and leading the organization's efforts to focus on a particular sector (niche) market instead of focusing on the market sector as a whole (Jusoh and Parnell, 2008).

#### **4- Customer performance**

In general, organizational performance refers to the financial and non financial results achieved by organization. Organizational performance has defined as the organization's ability to attain its goals by using resources in an efficient and effective manner (Daft, 2000). In recent years, the dynamic and competitive nature of business environment has led to increase demand on information of performance measurement. Chenhall (2005) suggested that performance measures (strategic and operational, supplier orientation and customer orientation) could help firms to obtain competitive strategic outcome (low cost price, flexibility and delivery strategic).

Customer performance is considered one of the emergent issues in the field of managing and measurement of performance. Furthermore, it could be regarded as an important competitive issue in the current era. Customer performance has defined as a measurable monetary or non-monetary result of a customer relationship in a defined period (Zumstein, 2007). Customer performance measurement (CPM) also defined as the acquisition, analysis and the evaluation of performance-related customer information (Zumstein, 2007). Therefore, customer performance should be taken as an important part of the future performance measurement and management systems in the organizations.

However, there is a lack of literature concerning customer performance. Tucker and Pitt (2009) prove that strategic use of customer performance measurement processes can enhance the provided facility management services. Hyvönen (2007) indicated that the combination of financial and non-financial measures (e.g: balanced score card and qualitative measures) are not important for firms that apply customer-focused strategy (e.g: provide quality products, fast deliveries, unique product features, low price) in order to achieve high customer performance (e.g: market share, sales volume, development of new products).

#### **5- Methodology.**

The aims of this study were to explore the extent of usage of CA techniques in JIC, investigate the status of customer performance in JIC, examine the influence of business strategies on the usage of CA, and examine the influence of CA on the customer performance. In addition, this study aims to determine the relationships between business strategies (cost leadership, differentiation and focus) and customer performance controlling for CA. A total of 90 questionnaires were distributed to company managers or financial managers in these companies. Out of this number, 68 were returned and used. The response rate was about 75.6%, which is considered high. The questionnaire consisted of three main parts. The first part contained 16 items aimed at examining the extent of usage of CA techniques implemented by JIC over the past three years. The Likert scale was used to measure the usage of variables, ranging from minimum of 1="not used at all" to the maximum of 5="greatly used".

Part two contained 22 items to measure the variables related to business strategies. The questions of the study aimed to indicate the extent of the impact of the strategies implemented by JIC on their orientation towards the use of CA techniques from the perspective of the managers or financial managers of these companies. The study used a Likert scale to measure the variables of the study, ranging from (1) disagree strongly (sda) to (5) strongly agree (sa).

The third part of questionnaire was devoted to measuring customer performance on a 24-items scale. These items were selected from 173 indicators categorized primarily by Zumstein (2007) into six categories about customer performance. These categories are revenue and profitability, investment, relationship, recommendation, information, and cooperation. The managers or financial managers were asked to rate the level of improvements in customer performance indicators in their organization in the last three years compared to the previous years on a five-point Likert scale ranging from 1= "significantly worst" to 5= "Significantly better".

To aid interpretation the instrument, a description of all variables referred to in the questionnaire were provided to the respondents. The methods of analysis employed in the study were descriptive statistics, normality test, the variance inflation factor test (VIF), one sample t-test, simple regressions, multiple regressions, and Pearson partial correlation. In addition, Cronbach's alpha test was used to test reliability of the variables of the instrument. More specific, it was used to test the internal consistency of CA techniques, business strategies, and customer performance.

### 6- Reliability of the study instrument.

Cronbach's alpha was used to test stability of the measuring instrument. The values, as in Table 1, exceeded the level of 70%, which is an acceptable ratio (Hair et al., 2015).

Table 1. Cronbach's alpha reliability coefficients for variables

<i>Variables</i>	<i>dimensions</i>	<i>alpha</i>
Customer accounting	16	.92
Customer profitability analysis (CPA)	5	.83
Customer lifetime value (CLV)	6	.79
Valuation of customer asset	5	.76
Business strategies	22	.92
Cost leadership strategy	8	.83
Differentiation strategy	7	.80
Focus strategy	7	.87
Customer performance.	24	.89
Customer indicators for revenue and profitability	8	.73
Customer investment indicators	4	.70
Customer relationship indicators	5	.71
Customer recommendation indicators	2	.76
Customer information indicators	3	.71
Customer cooperation indicators	2	.72

### 7- Customer performance in JIC.

The managers or financial managers in JIC were asked to rate the level of improvements in customer performance indicators in their organization in the last three years compared to the previous years on a five-point Likert scale. As in Table 2 customer performance was analyzed as overall performance (24 items) or either separately in six categories including revenue and profitability, investment, relationship, recommendation, information, and cooperation. In general, good improvements in customer performance were evidenced in all six categories. The top three convergent mean scores were: cooperation (score=4.03), information (score=4.00), and recommendation (score=4.01). These results followed by investment (score=3.92), the relationship (score=3.87), and revenue and profitability (score=3.84). Finally, overall improvements in customer performance indicators achieved (mean score=3.95).

Table 2. Descriptive Statistics for JIC's customer performance indicators in the last three years comparing to the prior years.

<i>Customer performance variables</i>	<i>Mean</i>	<i>SD</i>
Overall customer performance	3.95	.60
Customer indicators for revenue and profitability (8 items)	3.84	.66
Customer investment indicators (4 items)	3.92	.69
Customer relationship indicators (5 items)	3.87	.77
Customer recommendation indicators (2 items)	4.01	.91
Customer information indicators (3 items)	4.00	.85
Customer cooperation indicators (2 items)	4.03	.82

Customer performance: 1=significantly worst; 2=worst; 3=same; 4=better; 5= significantly better.

### 8- Hypotheses testing.

In this study, one-sample t-test was conducted for testing hypothesis  $H_01$  to find out whether CA techniques were used by JIC or not. Multiple regression analysis was conducted for testing hypothesis  $H_02$  to find out whether the Business strategies have an influence on the CA in JIC. Simple regression was conducted for testing hypothesis  $H_03$  to find out whether the CA has an influence on the customer performance in JIC. Pearson partial correlation was used to test the hypothesis  $H_04$  to find out whether the CA has a moderating influence on business strategies and customer performance in JIC. The basic assumptions of regression tests for hypotheses  $H_02$  and  $H_03$  have been met. For normality test, the scatter plot scheme showed that 95% of the errors (standardized residuals) fall within the range (2, -2), indicating that these errors are distributed normally (Anderson et al., 2008). Variance Inflation Factor (VIF) test was used to test multicollinearity between independent variables. VIF for all variables were less than 10, which indicates no real problem in this study (Kohler, 2000).

$H_01$ : the customer accounting techniques are not used by JIC.

In Table 3, one-sample t-test show that all of CA techniques were used by JIC; where the values for these variables were as follows: customer profitability analysis  $t(67)=11.28$ ,  $P<0.001$ ; customer lifetime value  $t(67)=$

12.91,  $P < 0.001$ ; and valuation of customer asset  $t(67) = 11.30$ ,  $P < 0.001$ . Taken together as a group all these techniques show that there is a significant usage of CA techniques,  $t(67) = 12.69$ ,  $p < 0.001$ . In addition, as it appears in Table 3, the descriptive statistics support one-sample t-test results. The statistics show that using CA techniques achieved a mean score of more than the general mean in this study, which is moderately used (mean=3). Using of Customer profitability analysis (mean score=4.07) achieved the highest mean score, followed by Customer lifetime value (mean score=4.04), whereas Valuation of customer asset technique achieved the lowest mean score (mean score=3.97). Overall, these results indicate that the usage of CA techniques was evident in all three variables.

**Table 3. Descriptive statistics and one-sample t-test for usage of customer accounting techniques.**

Variables	Descriptive statistics		One-sample t-test	
	Mean	SD	t	Sig.
Customer profitability analysis	4.07	.78	11.28	.000
Customer lifetime value	4.04	.66	12.91	.000
Valuation of customer asset	3.97	.71	11.30	.000
Customer accounting (The group)	4.03	.67	12.69	.000

Extent of use CA techniques: 1=not used at all; 2=slightly used; 3=moderately used; 4=frequently used; 5=greatly used.

*H<sub>02</sub>: There is no influence of business strategies (cost leadership, differentiation and focus) on the usage of customer accounting by JIC.*

The results of regression analysis in Table 4 show that all of business strategies contribute significantly ( $F(3, 64) = 40.15$ ;  $P < .001$ ) and explain ( $R^2 = .65$ ) of the variation in the CA in JIC. The regression results in Table 4 also show that two explanatory variables (cost leadership strategy and focus strategy) were found to be statistically significant and contributed to the interpretation of the power of influence on the dependent variable (CA) at the level of significance ( $\alpha = 0.05$ ) and degrees of freedom (3, 64), where P-value for these two variables were  $P < .001$ ,  $P = .037$  respectively. Accordingly, the null hypothesis was rejected with regard to these variables. On the other hand, the third explanatory variable; differentiation strategy do not has a statistically significant effect on CA in JIC, where P-value for this variable was  $P = 0.607$ . Consequently, the null hypothesis was accepted with regard to this variable.

**Table 4. Multiple regression results for the influence of business strategies on the usage of customer accounting in JIC.**

Independent variables	Coefficients <sup>a</sup>			
	B	t	P	VIF
Cost leadership strategy	.506	4.10	.000	3.04
Differentiation strategy	.065	.517	.607	2.91
Focus strategy	.230	2.13	.037	2.99

$R^2 = .65$ ;  $F = 40.15$ ,  $P < .001$

a. Dependent variable: customer accounting

*H<sub>03</sub>: There is no influence of customer accounting on customer performance in JIC.*

The result of simple regression analysis in Table 5 shows that CA contributes significantly ( $F(1, 66) = 22.83$ ;  $P < .001$ ) and explain ( $R^2 = .26$ ) of the variation in the customer performance in JIC. The simple regression result also show that the explanatory CA was found to be statistically significant and contributed to the interpretation of the power of influence on the dependent variable (customer performance) at the level of significance ( $\alpha = 0.05$ ) and degrees of freedom (1, 66), where P-value for this variable was  $P < .001$ . Accordingly, the null hypothesis was rejected with regard to this variable.

**Table 5. Simple regression result for the influence of customer accounting on customer performance in JIC.**

Independent variable	Coefficients <sup>a</sup>			
	B	t	P	VIF
Customer accounting	.453	4.78	.000	1.00

$R^2 = .26$ ;  $F = 22.83$ ,  $P < .001$

a. Dependent variable: customer performance

*H<sub>04</sub>: Customer accounting does not significantly moderate the relationships between business strategies (cost leadership, differentiation and focus) and customer performance.*

A partial correlation was run to determine the relationships between business strategies (cost leadership, differentiation and focus) and customer performance controlling for CA. The results shown in Table 6 revealed that:

- A. There was a moderate, positive partial correlation between cost leadership strategy and customer performance whilst controlling for CA, which was statistically significant,  $r(65)=.247, N=68, p=.044$ . However, ZPC showed that there was a statistically significant, moderate, positive correlation between cost leadership strategy and customer performance  $r(66) =.530, n =68, p <.001$ ), indicating that CA had an important influence in controlling for the relationship between cost leadership strategy and customer performance.
- B. There was a moderate, positive partial correlation between differentiation strategy and customer performance whilst controlling for CA, which was statistically significant,  $r(65)=.302, N=68, p=.013$ . However, ZPC showed that there was a statistically significant, moderate, positive correlation between differentiation strategy and customer performance  $r(66) =.534, n =68, p <.001$ ), indicating that CA had an important influence in controlling for the relationship between differentiation strategy and customer performance.
- C. There was a moderate, positive partial correlation between focus strategy and customer performance whilst controlling for CA, which was statistically significant,  $r(65)=.268, N=68, p=.028$ . However, ZPC showed that there was a statistically significant, moderate, positive correlation between focus strategy and customer performance  $r(66) =.527, n =68, p <.001$ ), indicating that CA had an important influence in controlling for the relationship between focus strategy and customer performance.

**Table 6. Partial correlations Co-efficient of the moderating role of customer accounting on the relationships between business strategies (cost leadership, differentiation and focus) and customer performance.**

Variables	Zero Order Partial Correlations (ZPC)		Controlled Partial Correlations (CPC)	
	ZPC	Sig.	CPC	Sig.
Cost leadership strategy	.530**	P<.001	.247	P=.044
Differentiation strategy	.534**	P<.001	.302	P=.013
Focus strategy	.527**	P<.001	.268	P=.028

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

*Moderator variable: customer accounting.*

## 9- Findings

The descriptive statistics presented in Table 2 revealed that the customer performance' indicators in JIC are in a good status and there are good improvements in all six categories of customer performance which are revenue and profitability, investment, relationship, recommendation, information, and cooperation. In this study, CA has represented by three techniques which are CPA, CLV, and valuation of customer asset. In this study, also Porter's generic strategies represent the independent variables which are cost leadership, differentiation and focus strategy.

This study adds knowledge to the limited empirical researches concerning the practices of CA. The results presented in Table 3 show that the usage of all three CA techniques by JIC was evident. The overall descriptive results in Table 3 shows that using of CPA achieved the highest mean score followed by CLV, while valuation of customer asset achieved the lowest mean score. These findings are consistent with studies conducted by Guilding and McManus (2002), Shanahan et al. (2007), McManus and Guilding (2009), Tanima and Bates (2011), and (McManus, 2011). These studies have confirmed the usage of CA techniques in Australia and New Zealand. Alsoboa et al. (2015) have also found that CPA, CLV, and valuation of customer assets that are used by JPIC.

The results in Tables 4 have shown that business strategies contribute significantly and explain high levels of variation of CA in JIC. Furthermore, two explanatory variables (cost leadership strategy and focus strategy) have statistically significant positive effect on CA in JIC. This result may add to the business strategies to the factors determined by McManus (2011) that found having an impact upon the use of CA practices. The result in Tables 5 has shown that CA contributes significantly and explains a quarter of variation in customer performance in JIC. The explanatory variable (CA) has a statistically significant positive effect on customer performance in JIC. This result is consistent with study conducted by Al- Mawali et al. (2012) where they found that CA information leads to better organizational performance. Others have found different results; Aykan and Aksoylu (2013) have found low level relationships between the competitor-customer-oriented techniques and qualitative performance of the businesses.

The results shown in Table 6 revealed that there were moderate, positive partial correlations between business strategies and customer performance whilst controlling for CA. in addition, ZPC showed that there were statistically significant, moderate, positive correlations between these strategies and customer performance, indicating that CA had an important influence in controlling for the relationship between business strategies and



customer performance. This study makes an important contribution because it is the first of its kind to address this relationship.

#### 10- Summary and conclusion.

The aims of this study were to explore the extent of usage of CA techniques in JIC, investigate the status of customer performance in JIC, examine the influence of business strategies on the usage of CA, and examine the influence of CA on the customer performance in JIC. In addition, this study aims to determine the relationships between business strategies (cost leadership, differentiation and focus) and customer performance controlling for CA.

The study revealed that the customer performance' indicators in JIC are in a good status and there are showed improvements in all six categories of customer performance compared to the prior years. It is also found that CA techniques were used by the JIC. In this study, it is found that Porter's generic strategies contribute significantly and explain high levels of variation in CA in JIC. Furthermore, two explanatory variables (cost leadership strategy and focus strategy) showed a statistically significant positive effect on CA in JIC, where the explanatory variable (differentiation strategy) did not show a statistically significant effect on CA in JIC. In addition, the study revealed that CA contributes significantly and explains part of variation in customer performance in JIC. It is also found that CA has a statistically significant positive effect on customer performance in JIC.

The results shown in Table 6 revealed that there were moderate, positive partial correlations between business strategies and customer performance whilst controlling for CA. In addition, ZPC showed that there were statistically significant, moderate, positive correlations between these strategies and customer performance, indicating that CA has an important influence in controlling for the relationship between business strategies and customer performance. The positive signs of the  $r$  values are an indication that when CA is enhanced, business strategies (cost leadership, differentiation and focus) and customer Performance are also enhanced. This study made an important contribution because it is the first of its kind to address these relationships. This study suggested that customer performance should be viewed as an important part of the future performance measurement and management systems in JIC. In context of cost-benefit approach, this study recommends JIC to continue adopting all of CA techniques in the future.

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