

**CUSTOMER ACCOUNTING INFORMATION USAGE:***A Mixed-method Study***Hamzah Al-Mawali,**

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**Abstract**

This study aiming at evaluating the extent of customer accounting information usage for strategic purposes in context of Jordanian service companies by applying mixed methodology, specifically, sequential explanatory approach. The study consists of two main phases; in the first phase, quantitative data obtain from 95 responses from top management of all service companies listed on Amman Stock Exchange. The results of quantitative phase indicated that four out of five CA information items scored mean values above the midpoint score on a 7-point Likert scale measurement. Information related to customers' profitability analysis scored the highest level, life-time customers profitability analysis, and valuation customers as assets which scored mean values below the midpoint score on a 7-point Likert scale measurement. The second phase was done to validating the quantitative results by seven semistructured interviews. The results from the interviews give support and explained the results obtained from the quantitative analysis done in the first phase. The results of the current study drew conclusions regarding the extent of CA information usage in context of Jordanian services companies. Academics and practitioners should be aware to the importance of CA information and its role in the strategic decisions.

**Keywords:** Customers Accounting, Accounting information, Service Sector, Jordan, Sequential Explanatory Study, Mixed Methodologies.

**1. Introduction**

Accounting information, especially management accounting information, significantly contributes to the effective functioning of management process. The essence of such functioning centres of decision making is planning, organizing, directing and controlling. To meet this need, management accounting information system provides management with information that focuses on decision making (Horngren, 2004). The domain of management accounting information includes management control, dealing primarily with the use of management accounting information for planning and control activities. When a company faces increasing and tight competition, management frequently reviews the company's goals and strategies to cope with external as well as internal changes. Thus, management also needs an effective management control system. The objective of designing management control system in such a situation is to help the company achieve its goals. There is a continuum of management control system designs ranging from traditional to the most sophisticated control system. As a result, a higher level of management control system is expected to improve organizational performance through its managers.

The traditional management accounting practices are questionable in terms of its relevancy. Kaplan and Cooper (1998) and Johnson and Kaplan (1987) posited that the traditional management accounting practices are no longer valid for contemporary business environment due to the changes in competitiveness and technology. These changes require useful, relevant, and timely information related to the external and future events. Such information will assist organizations in their planning and controlling purposes. Unfortunately, the traditional management accounting systems have failed to provide such ex-ante information. Several researchers (Bromwich, 1990; Cadez & Guilding, 2008; Cravens & Guilding, 2001; Hoque, 2002; O'Connor & Cheung, 2007; Simmonds, 1981) argued that Strategic Management Accounting comes as a new management accounting system to provide strategic information and overcome the weaknesses of the traditional management accounting systems. According to many researchers (Cravens & Guilding, 2001; Guilding, 1999; Guilding, et al., 2000; Roslender & Hart, 2003; Simmonds, 1981) SMA is defined as the provision and analysis of external information that supports the organizational decisions in the long term, and is expected to have an important effect on organizational performance.

However, Customer Accounting (CA) represents a particular set of customer-focus practices that are created within strategic management accounting framework. This issue has become notable when it emerged that attention in CA began at the same time as when there was a growing need for management accounting to presume more of a strategic orientation (McManus & Guilding, 2008). CA includes all accounting practices for assessing profits, sales, or present value of earnings relating to a customer or customer group (Guilding & McManus, 2002).

The current study applied mixed methodologies to provide details regarding the extent of CA information usage in context of Jordan. The following two subsections will discuss the CA information dimensions. Then research methodology, results and discussions will be presented.

## 2. Customer Accounting

CA was considered as an interesting topic for both, practice as well as academia (Foster & Gupta, 1994; Foster, Gupta, & Sjoblom, 1996). Guilding, Kennedy, and McManus (2001) further discussed customer profitability analysis and customer asset accounting in a review regarding the potential of CA in the hotel industry. Their analysis demonstrated the importance of considering activities to generate further revenues after the initial sale of a hotel room; activities such as meals in hotel restaurants, telephone calls, room service, and so forth.

Furthermore, Guilding and McManus (2002) stated that they had found the following five CA techniques: (1) customer profitability analysis, (2) customer segment profitability analysis, (3) lifetime customer profitability analysis (4) valuation of customer as assets, and (5) customer accounting (the holistic notion).

In this context, it should be explained that although in Guilding & McManus's study CA has been conceptualized into five dimensions as shown, however, in more recent studies in the area of CA (such as that of Cadez, 2006; Cadez & Guilding, 2008) CA has been restructured to include three dimensions: customer profitability analysis, lifetime customer profitability analysis, and valuation of customers as assets). Because these three dimensions implicitly have included the other two remaining dimensions (i.e., customer segment profitability analysis and customer accounting as a holistic notion) therefore, there is no need to separate these two dimensions to avoid overlap (Cadez, 2006; Cadez & Guilding, 2008).

Nevertheless, the current study will discuss the information that was generated by the customer-focus techniques that have been pointed out in the recent study by Cadez & Guilding (2008). These techniques include customer profitability analysis, lifetime customer profitability analysis and valuation of customer as assets. The reason behind the selection of these three techniques is that implicitly they involve also the CA customer-focus techniques used in previous works. Furthermore, the present study shows the potential practice (such as customer equity analysis) which has the basic SMA characteristics that have been pointed by Guilding et al. (2000), in addition to the fact that it provides essential information for customers analysis.

As has been mentioned earlier, most of previous CA studies have investigated the extent of CA as techniques (see for example, Cadez & Guilding, 2008; Guilding & McManus, 2002) rather than the extent of CA information usage. The current study however, differentiated itself by conceptualizing CA information to incorporate the extent of its usage as well, rather than the mere collection of the information. CA was conceptualized as to include the extent of information usage for several strategic reasons.

First, organizations often generate enormous amounts of management information, but unless this information is put to actual use, very little can be accomplished (Koli & Jaworski 1990). Second, researchers argued that the organizations focused more on collecting and storing of management information, but putting no effort on improving and investing the quality and usability of the information collected (Zahay, 2008). Third, the new stream of research in management accounting are changing direction towards investigating the extent of accounting information usage rather than on collecting the information. For example, Chong and Eggleton (2003) have conceptualized MAS as the extent of usage of the broad scope MAS information for managerial decisions. In addition, Mia and Winata (2008) examined the impact of the extent of usage of MAS information

and its affect on organizational performance. Finally, accounting systems play a facilitating role in decision making through the generation and provision of information for decision-making purposes. It has been argued that the use of management accounting information was intended to improve the quality of management decisions, consequently bringing in better-informed action choices (Chenhall, 2003).

Based on these deliberations, this study has taken into consideration the external information that refers to the customers. Following these arguments, the present study has conceptualized CA as the level of the usage of external management accounting information relative to the organization's customers, namely customers profitably analysis, lifetime customers profitability analysis, valuation of customers as assets, and customers equity analysis. The following four subsections will discuss the idea of each of these elements.

### 2.1 Customer Profitability Analysis

Customer profitability analysis (CPA) is widely known in the management accounting literature. In fact, in some studies, customer account profitability is also referred to as CPA (Guiding & McManus, 2002). This technique provides the management information about the profitability of individual customers or customer groups. Basically, CPA calculates the costs and revenues from doing business with customers (Bellis-Jones, 1989; Foster & Gupta, 1994). Petty and Goodman (1996) considered revenues as simple to calculate. However, there are problems connected with tracing individual costs.

Malmi et al. (2004) saw that CPA could be more or less sophisticated; a form of full product/service costing is generally adopted where the costs are allocated to a customer according to the amount of products/services purchased. However, the most sophisticated level of analysis consists of activity-based costing system (ABC). Authors of ABC analysis maintained that by allocating overhead costs to particular customers depending on the activities made CA information more accurate (Kaplan & Narayanan, 2001). The reason behind this is that activity spending consumes resources and customers consume activities. Therefore, ABC provides activity information better than the traditional cost systems (Cooper, Kaplan, & Maisel, 1992; Kaplan & Cooper, 1998).

Smith and Dikolli(1995) discussed the use of ABC as a means of attributing costs to customers. They identified these four customer expense categories: purchasing patterns, delivery policy, accounting procedures, and inventory holding as related to customer profitability. Foster et al. (1996) agreed that CPA characterizes an important future path of management accounting. CPA gives management a direction to analyze customer sales and to determine if the company as a whole is profiting from doing business with a particular customer. However, most of MASs nowadays focuses on product cost and profitability by department or location, while CPA is a relatively new initiative; its premise is simple and easy to know.

Foster et al. (1996) have pointed out some key characteristics of CPA that make it unique. First, CPA captures and allocates costs to customers not to products/services or departments. This allows management to decide if a particular customer is profitable or if the company should charge a higher price. Second, CPA analysis can be used at either a very comprehensive level or incomprehensive level. This gives management the flexibility to analyze a particular customer or a large customer group at a time of a period (Foster, et al., 1996). Third, CPA's emphasis is on many products or services sold to a particular customer rather than on particular products or services sold to several customers. This change from a product/service cost centred to a customer cost centred gives management a clearer image of downstream costs that are customer specific. Consequently, this will allow management to choose and aim at specific customers.

Noone and Griffin (1997) pointed out that the CPA provides fundamental information that is necessary to improve the decision-making process in the long term, and this will enhance the organization performance. The implementation of CPA within the organization requires an appropriate business environment for modification work on the traditional approach. The output from the CPA in the most sophisticated analyses level (ABC) is often described by a whale curve , which plots cumulative profitability versus customers. While cumulative sales usually follow 20% of the customers providing 80% of the sales (the normal 20-80 rule), the whale curve for cumulative profitability usually reveals that the most profitable 20% of the customers generate between 150% and 300% of total profits. The middle 70% of customers about break even, and the least profitable 10% of customers lose 50% - 200% of total profits, leaving the company with its 100% of total profits. Moreover, often, some of the largest customers turn out to be the most unprofitable. A company cannot lose large amounts of money with small customers. It does not do enough business with a small customer to incur large (absolute) losses. Only a large customer, working in a particularly perverse way can be a large-loss customer. Large customers tend to be either the most profitable or the least profitable in the entire customer base. It is unusual for a large customer to be in the middle of the total profitability ranking.

The organization should take into account some problems that face CPA (Foster et al, 1996). These problems are as follows: First, management is required to expand reliable customer revenue and customer cost data. Most often, the reason for unreliable information is insufficient information systems. CPA needs a system to build up information across all business purposes and geographic locations. Many of the systems used nowadays are not capable of completing this necessary function (Foster et al, 1996). Second, management has to identify and

approximate future cost of customers. CPA highlights the significance of drawing and retaining profitable customers. This is still a comparatively new area of management accounting, and there is yet a lot of research to be done (Foster et al, 1996).

Petty and Goodman (1996) also pointed out that firms face problems in calculating the cost to specific customers and failed to attribute costs because they do not have suitable information to make the calculation. Organizations that use CPA usually find that a low percentage of customers contribute a large percentage of the organizations' profits, and that more than 70% of the customers are unprofitable (Foster & Gupta 1994). The crisis with CPA is that it is somewhat unsophisticated. Therefore, the information does not consider the profit-making potential in the future that present unprofitable customers may have, because the information focuses on current short-term profitability only. Copulsky and Wolf (1993) argued that the costs and revenues of a customer must be regarded as long-term value and not as short-term periods as seen by the conventional systems.

However, going with the previous studies, the present study will conceptualize customer profitability analysis as the level of the usage of information about the revenues, costs, and profitability of individual customer or customer groups over a one period of time (Guilding & McManus, 2002).

## **2.2 Lifetime Customer Profitability Analysis**

Lifetime customer profitability analysis (LCPA) enables a organization to find out which customers are more profitable in long-life term, so that customer relationships can be changed or controlled to increase the organization's profitability (Smith, 1993). However, CPA has a different level of sophistication. This subsection will discuss the second generation of CPA that provides clearer information about customers.

High quality information is developed from high quality data inputs (Foster & Gupta, 1994). Lifetime customer profitability analysis (LCPA) expands the scope of time analysis to embrace past and future years to enhance the data inputs (Foster & Gupta, 1994; Lind & Stromsten, 2006); by recognizing the long-term nature of the customer relationship, and by incorporating the lifetime value of customers (Bellis-Jones 1989; Foster & Gupta 1994). However, LCPA focuses on future revenues and costs that are associated with a specific customer, and are calculated on accrual principles (Pfeifer et al., 2004). The revenues and costs associated with a specific customer are simply added together using a time horizon that expands further than normal annual measurement (Lind & Stromsten, 2006).

The LCPA provides the management with clearer information that consists of all costs and revenues that will occur in the duration of the relationship between the customer and the organization (Guilding & McManus, 2002). This information gives the management correct signals to pay attention to the concept of LCPA and the long-term life of customer costs, customer revenues, and customer profitability.

According to Foster et al. (1996), management is required to include a multitime horizon into the analysis. Unprofitable customers throughout one period would possibly turn out to be profitable in the long run. This may be because of the high costs happening at the beginning of the relationship and high revenues gathering as the relationship develops. If management only emphasizes on present period reports, they may make a wrong decision to drop the customer. In addition, the LCPA solves the major deficiency of CPA. LCPA permits suitable identification of lifetime revenues and costs. It expands CPA to include a cradle to focus on each customer (Foster & Gupta 1994).

The second improvement the LCPA provides is the classification of cost variables. Some cost variables might be short term (for example, account setup costs), while others are more long term in nature (for example, on-going administration costs). The customer profitability over time might also be affected by the change in customer numbers and/or customer service rank (Foster & Gupta 1994). These changes are more easily known and consequently, more accurately matched with revenues. In the LCPA report, this cost differentiation allows managers to look at the customer relationship and their short-term costs, and measure their profitability. If they are not profitable, management can decide ways of reforming the long-term cost structure and try to make the relationship profitable in the long run (Foster & Gupta 1994). Lastly, LCPA classifies cost hierarchies in cost pools to which relevant drivers are joined. Foster and Gupta also mentioned that costs could be distributed into three cost pools: customer specific costs, general customer costs, and general corporate costs.

Consequently, the present study will conceptualize lifetime customer profitability as the level of the usage of information about potential revenues, costs, and profitability of individual customer or customer groups over all the relationship with the customer or customer groups (Guilding & McManus, 2002).

## **2.3 Valuation of Customer as Assets**

Motivated by the interest of increasing the number of the firm's customers, facing strong competition, and fast technological change, many firms have aimed to carry better customer value (Day, 1994; Gale & Wood, 1994; Woodruff, 1997). Carrying better customer value is now perceived as one of the greatest critical elements for the success of any firm in the present as well as in the future (Yonggui & Hing, 2004).

Although the importance of customer value is widely known, research about customer value is somewhat minimal and there is no universal definition of this notion. For example, Zeithaml (1988) argued that value of the customer's overall assessment of the benefit of products or services based on the insight of what is taken and what is given. Dodds, Monroe, and Grewal (1991) considered it as the customer's perception of value illustrated

in a swap between the quality or benefits they get in the product or service, and the sacrifice they perceive in paying the price. Gale (1994) defined the value to be market perceived quality adjusted for a relative product or service cost.

In the valuation of customer as assets (VCA), customers are treated as future assets yielding revenue (Guilding & McManus, 2002). A specific customer's economic value in the customer lifetime value analysis is the current value of the future cash flows gained from the customer relationship (Pfeifer et al., 2004). However, Guilding et al., (2001) suggested five possible approaches to VCA. First approach is the historical cost. In this approach, money spent on acquiring an asset (customer) is the principal funds. It is an improper technique for VCA because customer value would relate poorly with such expenditures spent on getting customer loyalty. Furthermore, separating such expenditures cause problems.

The second approach is market valuation: This approach requires a trading market for the asset in question. For VCA, this valuation standpoint is inappropriate because customers are not commodities. The third approach is net present value (NPV). In this approach, asset-related cash flows are discounted to its present value. This approach is the most appropriate approach to VCA (Guilding et al., 2001).

The fourth is replacement costs. Estimated cost in replacing an asset with a similar asset forms the basis of this approach which might be an appropriate VCA valuation standpoint in some decision-making situations. These possibilities will be explained in detail in the following subsections. The last approach mentioned by Guilding et al., (2001) is premium price and brand strength methods. Nevertheless, these approaches are used for brand valuation and applied in the NPV technique, though they are not particularly appropriate VCA in valuation standpoint.

Therefore, valuation of customers as assets in the current study will be conceptualized as the level of the usage of information about the future cash-flows that may be yield value from an individual customer or customer groups.

### **3. Research Method**

#### *3.1 Research Design- Sequential Explanatory Mixed*

The mixed-methods sequential explanatory method consists of two separate phases: quantitative followed by qualitative (Creswell, Plano Clark, Gutmann, & Hanson, 2003). In this research design, a researcher first collects and analyzes the quantitative data, then collect and analysis the qualitative data in the second sequence phase to help explain, or elaborate on, the quantitative results achieved in the first phase. The second, qualitative, phase builds based on the first quantitative- phase, and the two phases are integrated in the discussion part in the study (Ivankova, et al., 2006). In the current study, during the first phase, the questionnaires were distributed to all population. Then, in the second phase of the current study, semi-structured interviews with 7 top management levels were conducted to validate and explain the quantitative results.

The justification for this method is that the quantitative data and their subsequent analysis offer a general understanding of the research problem. The qualitative data and their analysis refine and explain the statistical results by exploring interviewees' point view in depth (Creswell et al., 2003). The advantages and disadvantages of mixed-methods design widely considered in the literature. Its strengths include straightforwardness and chances for the exploration of the quantitative findings in more detail. The sequential explanatory mixed design can be especially useful when unexpected results arise from a quantitative study (Ivankova, et al., 2006). The weaknesses of this design are lengthy time and feasibility of resources to collect and analyse both types of data.

#### *3.2 Sample*

The population of this study is all service companies listed in Amman Stock Exchange. Companies' Guide 2010 was used as the sampling frame for this study. The companies' Guide by Amman Stock Exchange is the only listing that specifically covers all sectors and industries in Jordan. This directory lists the names, titles, and the general information about the listed companies (e.g., the address and established year), from which a list of 192 companies in Jordan were indentified. To get the minimum sample requested for analysis, the researchers have distributed the questioner to all the publication.

This survey valued inputs from top management level managers; therefore, they were contacted by telephone requesting their participation in the survey. After obtaining consent, questionnaires were later hand-delivered to the managers, and collected. Additionally, the questionnaires were translated into Arabic by a bilingual native Arabic management accounting professors. The overall usable response is 95 questionnaires (or 49 %).

### **4. Measurement of Customer Accounting Information**

CA information was measured by instrument adapted from previous studies (Almawali, Zainuddin, & Kader Ali, 2012), where CPA information was measured by eight items, LCPA was measured by seven items, and five items to measure VCA. Measurement of the extent of usage achieved by posing the question: "To what extent do you use the following information for strategic decisions?" this question directly following by the items listed

together with a Likert-scale choice from “1” (Not at All), to “7” (To a greater extent). As shown in Table1 a reliability check for each and overall dimensions of CA measures produced Cronbach alpha values all above the lower limits of normal acceptability (Nunnally, 1978).

**5.Results**

*5.1 Goodness of measurement*

The techniques for testing the goodness of measures suggested by Sekaran (2003) were subsequently followed. These included factor analysis and reliability analysis. The Cronbach’s alpha measure of internal consistency was used to assess the overall reliability of the measurement scale. The results show that Cronbach’s alpha were greater than .70, which are in acceptable range (Nunnally, (1978). In conducting factor analysis, this study followed the six assumptions recommended by Hair et al. (2010). First, Kaiser-Meyer-Olkin of Sampling adequacy (KMO) measure must be greater than 0.5. Second, Barlett’s test of sphericity must at least be significant at .05 level. Third, antiimage correlation of items is greater than .50. Fourth, communalities of items must be greater than .50. Fifth, considering small sample size the minimum requirement of factor loading (cut-off point) was .55 based on a .05 significance level. Sixth, the minimum Eigenvalue for factor analysis extraction had to be 1. Factor analysis was performed on the eight items related to the organizational performance. The result of the factor analysis is presented in Table 1. The table shows that the value of KMO measure of sampling adequacy was .774(higher than the recommended level of 0.6) and the Bartlett’s test of sphericity was significant ( $p = .00$ ). This indicates that conditions of factor analysis were satisfactory met and the data matrix was appropriate for subsequent factor analysis.

Table 1- Goodness of Measurement

Items	Factors			Cranach's alpha
	I	II	III	
<b>Factor : Valuation Customers as Assets</b>				
VCA2The future cash outflow that may be yield from a particular customer	<b>.90</b>	.12	-.04	0.87
VCA5Analysis of vulnerability of future cash flows for customers	<b>.84</b>	.20	-.18	
VCA1The future cash inflow that may be yield from a particular customer	<b>.83</b>	.12	.02	
VCA4The future cash outflow that may be yield from customer groups	<b>.83</b>	.15	-.10	
VCA3The future cash inflow that may be yield from customer groups	<b>.83</b>	.11	-.18	
<b>Factor : Customers Profitability Analysis</b>				
CPA6Analysis on total profits of customers over number of customers	.01	<b>.83</b>	-.06	0.89
CPA5 Analysis of major customers contributing largest profitability to the company	.09	<b>.81</b>	-.09	
CPA8Classifications of customers e.g. profitable , break-even, and unprofitable	.17	<b>.81</b>	-.01	
CPA2 Revenue to the company from its customers	.06	<b>.74</b>	.01	
CPA4 Cost of servicing the customers	.16	<b>.73</b>	-.05	
CPA7Profit generated by profitable customers support losses generated by other	.26	<b>.70</b>	-.04	
<b>Factor : Life-time Customers Profitability Analysis</b>				
LCPA2The future potential revenue to the company from its customers	-.07	-.09	<b>.80</b>	.76
LCPA4The future potential cost of servicing customers	-.00	.16	<b>.77</b>	
LCPA3The future potential profits by customers	-.09	.06	<b>.76</b>	
LCPA5 The duration of customers relationship	-.03	-.07	<b>.76</b>	
LCPA7The future customers behaviour	-.15	-.13	<b>.71</b>	
LCPA1The future potential customers costs	-.06	-.13	<b>.70</b>	
Eigenvalue	3.60	3.57	2.80	
Percentage of variance explained	29.96	29.74	23.32	
Percentage of total variance			83.02	
Kaiser-Meyer-Olkin MSA			0.774	
Bartlett's Test of Sphericity			1551.61**	

Note: N = 98, \*\* $p < .01$

Table 1 shows that the items were loaded on three factors as conceptualized with eigenvalue higher than 1. The three factors cumulatively captured 83.02% of the total variance in the data. The loading values of all items were above the minimum value of .55.The three factors cumulatively explained 82.10 % of total variance. The Eigenvalues were 3.60, 3.57, and 2.80 for factor 1, factor 2, and factor 3 respectively.

5.2 Quantitative Results- Profile of sample firms

Table 2 shows the profile of sample firms from four demographic characteristics specifically: type of industry, age of the firm, ownership status, and number of employees. Almost 20% of the respondents' firms were in the insurance industry, 14.2% were classified into the banking industry, and 12.3% were in hotels and tourism industry. While the others were distributed between diversified financial services, commercial services, real estate, health care services, transportation, and technology and communication industries. In terms of firms' age, the majority of the respondents' firms were well-established firms: 42.5% having been more than 15 years in the industry, about 28.3% have been in existence between 10-15 years, while the rest have been there for not more than 10 years. With regard to ownership status, about half or 54.7% of the firms were joint ventures; Jordan fully-owned firms were about 41.5%, while the remaining 3.8% were foreign owned. Finally, the table also revealed that 35.8% of the respondents firms employed 200 employees or less, 27.4% of the firms were employing between 201 to 300 employees, the rest were distributed between 301 to 400 employees (15%), 401 to 500 employees (4.7%), and more than 500 employees (17%).

Table 2-Profile of Sample Firms

Variable	Categories	Frequency	%
Type of industry	Banks	14	14.2
	Insurance	21	19.8
	Diversified Financial Services	10	9.4
	Commercial Services	4	3.8
	Real Estate	12	11.3
	Health Care Services	4	3.8
	Hotels and Tourism	13	12.3
	Transportation	11	10.3
	Technology and Communication (Tech &Comm)	3	2.8
	Others	12	12.3
Age of firms	≤ 10 years	29	29.2
	10- 15 years	31	28.3
	> 15 years	44	42.5
Ownership status of the firms	Local firms	43	41.5
	Foreign owned	4	3.8
	Joint ventures	57	54.7
Number of employees	≤ 200	38	35.8
	201-300	29	27.4
	301-400	16	15.1
	401-500	5	4.7
	> 500	16	17.0

6.Descriptive Analysis of Customers Accounting Information Usage

Table 3 provides means, standard deviation, theoretical and actual range of the five dimensions of CA information. Taking into consideration that the scale used for CA information usage was 1 to 7 (with 4 as the middle point). The table shows that the most used CA information in the Jordanian companies was customers profitability analysis (mean = 5.02, SD = 1.27), followed by lifetime customers profitability analysis (mean = 4.14, SD = 1.41). Meanwhile, the lowest used information was valuation of customers as assets which was below the median value (mean = 3.24, SD = 1.53). This means that, on average, the Jordanian companies' usage of CA information was above average, except for valuation of customers as assets, which was used below average.

Table 3  
Descriptive Statistics of CA Information

Variable	Mean	SD
Independent Variables		
Customers profitability analysis	5.02	1.27
Lifetime customers profitability analysis	4.14	1.41
Valuation of customers as assets	3.23	1.53

Note: All the variables were measured using a 7-point Likert scale with (1 = not at all, 7 = to a greater extent)

### 6.1 Qualitative Results

One of the main purposes of applying the interview method in the current study was to confirm and validate the extent of CA information that has been mentioned at the questionnaire findings. Interviewees were required to rank order or rate the extent of usage of the three CA information factors (customers profitability analysis, lifetime customers profitability analysis, and valuation of customers as assets) for strategic purposes. The interviewees were asked to add any CA information that they have used but were not listed in the main questionnaire. Further inquiries were posted to clarify the reasons behind the differences of the extent of usage of CA information factors.

Through the semistructured interviews, the managers indicated that CA information factors that were listed in the questionnaire were commonly utilized in a different extent among Jordanian services companies. Overall, they indicated that, CA information was used in their companies for various strategic purposes, such as for customers pricing, maintain their customers, customers relationship management, as well as, to update and modify their business strategy. In total one new CA information element was added by the three interviewees. This CA information element was cost of lost customers analysis.

Furthermore, six out of seven managers have ranked three CA information dimensions, namely customers profitability analysis, higher than the remaining two CA information dimensions, namely lifetime customers profitability analysis and valuation of customers as assets. These qualitative findings were consistent with, and confirmed the descriptive findings of the questionnaire survey results outlined earlier in this chapter; the result showed that valuation of customers as assets was ranked at the bottom of the list.

In this regard, the managers provided some reasons behind the comparatively low extent of usage of lifetime customers profitability analysis and valuation of customers as assets.

First, they quoted the reason as the cost involved in making improvement on CA system to generate such information (lifetime customers profitability and valuation of customers as assets). Second, they said that the current CA information (i.e., customers profitability analysis, customers equity analysis, and customers retention analysis) was adequate to support their market strategy. Third, they quoted the reason as the problems associated with gathering relevant raw data especially about the future events. Fourth, they mentioned about the problems of subsystems integration faced by their computer systems and also the lack of software available.

## 7. Discussion

The current study was aiming at evaluating the extent of CA information usage in Jordanian context. The study contributes to the literature by offering detailed evidence of the level of usage of CA information by Jordanian services companies. The level of CA information usage was shown using descriptive statistics and was validated by the results of the semistructured interviews with seven top management level managers. In addition, the current research found that services companies in Jordan used CA information to a moderate extent. Out of the three CA dimensions, two dimensions scored mean values above the mid-point score of the 7-point Likert scale of measurement. Customer profitability analysis was rated higher than the other two CA information dimensions, followed by lifetime customer profitability analysis and valuation of customers as assets were equally rated the lowest.

The quantitative results concerning the extent of CA information usage were supported and validated by the qualitative output. Most of the top management managers in the seven different Jordanian industrial sectors, had confirmed the quantitative results regarding the extent of CA information usage. The comments provided by managers G and E were especially insightful.

Manager G cited,

*"...in our company, we generated and used the information related to costs, like customer profitability and customers retention, more than other CA information that you mentioned [lifetime customer profitability analysis and valuation of customers as assets] when we take a strategic decisions..."*

Other citation by Manager E:

*"...Yes, we need CA information to maintain our strategy, but what you mentioned [lifetime customers profitability analysis and valuation of customers as assets] will not add too much to our strategy development..."*

These findings (quantitative and qualitative) from the current study are in line with that of some previous studies (Guilding & McManus, 2002; O'Connor & Cheung, 2007). and contrasted with other works on CA

technique usage, such as that of Lord, Shanahan and Nolan (2007) who found that customer accounting technique usage was below the midpoint on a 7-point Likert scale, and that of Cadez (2006) who found that two out of three customer accounting techniques measured below the midpoint on a 7-point Likert scale. The reasons behind their findings may be explained by their research design, which used one single question to measure each customer accounting technique, which potentially created bias. There are also other strategic management accounting studies that contrasted the current study's findings (Guilding, 1999; Guilding, et al., 2000). However, the potential explanation is that over the last decade, services companies had started to appreciate the usefulness of CA information for strategic decision-making purposes, and the study result showed that CA information has definitely made progress. Generally, the results of the current study draws conclusions about the reality of CA information usage in Jordanian services companies, which previous studies had failed to discover. Moreover, customers profitability information and analysis provide companies with valuable information that could be used to track their profitable customers and maintain them and enhance the company profitability. Through such information, Jordanian services companies would be able to determine which customers are low-margin customers so that the relationship with these unprofitable customers can be managed, by selecting the appropriate approach for dealing with unprofitable customers to convert them into profitable customers.

In this point, Manager F cited that:

*"...Not all the customers must be maintained, only the profitable ones... we classified the customers to profitable and nonprofitable based on this type of information [i.e., customers profitability information], then we target the more profitable customers..."*

This notion is supported by the literature. Petty and Goodman (1996) showed that customers profitability information improves organizational profitability by enhancing the management of customer relationships. This is also in line with the argument by many authors who asserted that companies could use price negotiation (Booth, 1994; Hudson, 1994) or segmentation (Berry & Britney, 1996) to deal with unprofitable customers.

Another important CA information element utilised by Jordanian services companies is lifetime customer profitability analysis, which provides high quality information regarding customers' profitability, lifetime revenues and costs, and expanding customer profitability analysis to incorporate the whole life of customers' relationship. This detailed information provides Jordanian services companies a clear picture of customers' current and potential profitability, so reported unprofitable customers can, with corrective actions, be recognised as profitable over the lifetime of the relationship. As Foster and Gupta(1994) pointed out, lifetime customers profitability provide information about relationship from "cradle to grave" and focus on individual and customers groups. Typically, at the beginning of a customer relationship high acquisition costs occur and higher revenues accumulate as the relationship develops, so lifetime customer profitability analysis, through examining the association between customer revenue and costs, assesses profitability and retention probabilities. Armed with this information, services companies can establish ways of restructuring the long-term cost structure of unprofitable customers in an attempt to create a profitable long-term relationship. This CA information provides early signals to Jordanian services companies to monitor and review their customers strategies.

A noticeable aspect of the findings concerns the gap between the level of usage of the four highest rated CA dimensions (customer profitability analysis, customer equity analysis, customer retention analysis, and lifetime customer profitability analysis) and the lowest rated CA information dimension, (valuation of customers as assets). Valuation of customers as assets did not seem to be popular among Jordanian services companies, probably because the concept was rather complex and difficult to use, and it is a longer-term orientation (Guilding & McManus, 2002). The comparatively low usage attached to valuation of customers as assets, could be explained by highlighting the problem of reconciling the accounting practice with marketing management's concept of what comprises an asset (Foster & Gupta, 1994; Guilding & Pike, 1990). However, the interview results provided deeper justifications concerning the comparatively low

usage for lifetime customers profitability and valuation of customers as assets. The managers cited several reasons that could justify this result. For example, they mentioned that to generate such information many costly improvements must be taken on CA system, and there are problems for gathering relevant raw data which are related to future events. Other managers also indicated that there was a problem with computer systems integration and lack of software. The comments provided by interviewees were especially insightful. For example, manager C cited,

*"...the cost of generating such information [lifetime customers profitability analysis] is too high ..."*

Manager D cited,

*"...All these costs to upgrade our information systems, to generate this type of information [valuation of customers as assets], are unjustified..."*

Manager E cited,

*"Regarding this issue [problems affecting the generation and usage of CA information] I see two main problems, the first one is the systems integration, and the second one is related to the lack of software..."*

Generally, the findings of the current study show that CA information dimensions were used to a moderate level by Jordanian services companies. These results did not come as a surprise as the World Competitiveness Yearbook (WCY), issued by the Institute for Management Development in Switzerland, have ranked Jordan at position 44 out of 57 countries (rank 1 is the best) in terms of management practices and was ranked 27 for the audit and accounting practices (WCY's report, 2009).

#### **8. Limitation and future research**

The current study has been designed as sequential explanatory and employed a mainly quantitative approach as the main research methodology with partially qualitative data only to validate the quantitative results. Furthermore, interviews are sensitive issues for Jordanian companies because they are more used to participating in studies through paper-based questionnaires. In addition, funding and time bound prohibited the researcher from using a larger sample for interviews. Moreover, the most of these limitations is the sample was taken only from the Jordanian services companies. Consequently, even the sample was considered all service' companies in ASE, still it is not comprehensive enough. Thus, future studies might extend the survey to include other industries such as manufacturing.

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