

Customer Profitability Analysis – Case examples and discussion of the use of CPA

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[Tutorial note:

As a learning exercise review the cases and discussion with a view to presenting a summary of the key benefits and limitations of implementing CPA. Identifying these for yourself from the narrative is a more valuable learning exercise than simply reviewing a bullet point list of benefits and limitations.]

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1.0 Introduction - the case examples and discussion

There are five case vignettes included within this section that describe the use of customer profitability analysis. The companies are known to the author and were chosen based on the knowledge that they utilised Customer Profitability Analysis and that access could be gained to key personnel that were involved with the CPA/CRM (Customer Relationship Management) process as a provider of information or a key user of the system. The five companies represent a range of industry sectors. The benefit of choosing five different companies enables a range of approaches to CPA to be described and provides for a degree of comparison to draw out similarities and differences. The presentation of five case companies also serves to illustrate the range and breadth of operational and strategic decisions where a form of CPA has the capability to assist management.

The vignettes are followed by a discussion of the use of CPA illustrated within the case companies drawing on the brief descriptions provided, and introducing aspects from the more detailed conversations held with employees within each company.

2.0 The case companies

This section provides vignettes of each of the case companies set out under the headings of: the company; the system; customer profitability analysis. The purpose is to provide an overview of how each company approaches CPA and illustrates key instances of its use in decision support.

3.0 Engineer

3.1 The company

Engineer is an international consulting engineering practice. It has offices in six countries with the head office in the UK. The company provides managerial, commercial and technical expertise to clients in the public and private sector. Operations include highways, power, property, housing management services, transportation, water and environmental services. The company is organised into divisions with each division based on an engineering specialism, for example, highway design. Overseas offices are separate subsidiary companies.

3.2 The system

The management information system tracks contracts via a unique seven-digit project number. Each project number can be further subdivided by a three-digit activity code. Each member of staff, including support staff, completes a timesheet recording time against the projects and activities. 'Non-chargeable' project numbers are utilised for administrative duties so that time spent on all activities can be monitored. The computer system can hold various charge-out and cost rates for each employee. Cost rates are calculated using a form of time-driven activity-based costing, with rates being calculated by dividing the estimated cost

of the activity by the estimated hours for the year. The estimates are made based on expected levels of activity tied to the annual planning cycle. This enables a comprehensive and detailed tracking of costs and charges for each activity, project and group of projects. Direct disbursements and costs are recorded against the nominal account code and the project/activity code. Engineer adopted a standard accounting package that utilises a multi-value database to which external consultants, and more recently in-house IT staff, have developed and maintained a bespoke project cost accounting system.

3.3 Customer profitability analysis

Note that the system adopted is more akin to contract costing, but the way the contracts are grouped, and costs allocated, enables the profitability of clients (customers) to be ascertained and monitored. This illustrates that in practice the theoretical aspects do not have to be strictly adhered to, so long as meaningful information can be provided to management.

The fee structure for consulting work in civil engineering can be a fixed fee contract, ad valorem fee, time-based contract, or a mixture of these forms. The accounting and marketing teams work together to provide project engineers with information to monitor the profitability of individual projects and clients. During the past five years the marketing and accounting teams have adopted a practice of seconding individual team members to work closely with and support the various divisions. The fees earned and costs to date are available from the accounting system. In addition, the costs to completion are updated and input to the system quarterly. The system is flexible enough to allow the reporting of profit to date, or projected outturn profit, by: project; client; engineer responsibility; division; and market segment served. The regular review of project reports (fees earned against project costs) allows Engineer to manage the projects. The emphasis is on attempting to manage contracts to high quality standards but within time and cost budgets. When problems are experienced the objective becomes to mitigate losses, whilst retaining quality.

The marketing department maintain a sequence of project numbers for proposals and bids. This enables the costs of project acquisition to be monitored and a crude form of return on investment to be calculated – end resultant profit divided by acquisition cost. By producing a report grouping projects by client code, or parent project number, this calculation can be produced for each client or group of projects. The marketing department monitor bid success rates which are fed into resource planning and forecasting. As it can take many months, even years, of negotiation and nurturing of clients to secure some contracts in various parts of the world, knowing how much to invest to obtain lucrative contracts is well worth the effort. All contact reports, enquiries, proposal documents and formal bids are coordinated and monitored by the marketing department. There have been occasions where opportunities to bid for work have not been taken up as, knowing the competition and the time and effort required to put the bid together, it would not be beneficial. Engineer takes into account the strategic and financial value of potential future work when making bids, that is, there is a

recognition by management of the nature of the potential contract, for example, a one-off opportunity, the potential for future work with the client, or the beneficial prestige and referral value leading to lucrative contracts with other clients in the same sector. Reference is made to the track record of profitability of contracts in the sector or with the client (if known) when making the decision to bid. The degree of competition in the industry and existence of compulsory competitive tendering processes utilised by many of its clients, is such that it is not always possible to be selective, but Engineer recognises the importance of understanding the client's potential for profit. The accounting department also play an important role in providing information for future proposals/bids, as many of the projects are run on tight margins where the management of costs is important. Proposals and bids are put together by the marketing and accounting departments working closely with the senior project engineers in each division. Track record can lead to decisions by senior management to leave certain sectors, or not to actively seek work with certain clients, or types of client.

Engineer also recognises the power that some clients have due to their dominance in an industry sector, for example, The Highways Agency in the UK, or Public Works Authority in Middle Eastern States, or NNB Gen Co in the UK power industry, means that understanding the acquisition costs and potential profitability is important in setting parameters for the contract terms that can be negotiated. Having such clients, however, can have a significant influence on winning other contracts in the sector, so the significance of having high risk (in terms of profitability) contracts/clients in the portfolio is recognised. Each industry sector tends to be dominated by one or two clients and the management seeks to avoid putting all the eggs in one basket and spreads the risk by attempting to ensure that there are other clients contributing to profits, hence there is a sense of a portfolio of clients within each division. Engineer has over the years built itself into a diversified group in terms of the geographic markets, industry sectors, and engineering specialisms offered.

4.0 Educator

4.1 The company

Educator is a UK subsidiary of an American private provider of professional and higher education. The case described here is based on the professional education part of the business that prepares students for their professional accountancy examinations, predominantly for the major UK based accounting bodies. It is predominantly based in the UK with training centres in 29 locations across the country but has growing interests in Europe and English-speaking parts of the world. The largest part of the business is the provision of 'public courses' which are courses open for anyone to attend. Approximately 80% of these students are sponsored by their employers, that is, the tuition fees are paid for by the employer. The company also has what they describe as major clients which are the large accountancy firms where, for example, the company tenders for the contract to train the KPMG, or PwC, graduate intake. These clients have more

bargaining power and in the words of the CEO are: 'always looking to get more for less'. The prestige associated with being the preferred trainer of one of the major accountancy firms can attract smaller firms to send their trainees to Educator, as well as enhancing the reputation in the eyes of the individual students.

4.2 The system

The costs are primarily establishment and staffing costs. There is no sophisticated costing system in place, but ABC style exercises, using time-driven activity-based costing, have been performed to assess the cost of administering and marking student mock exam scripts; the cost associated with registering students onto the course and establishing the relevant student record; dealing with the cost of developing a new product, such as revision packs, podcasts or online videos; the costs of updating material; and the cost of providing a classroom course. The cost of staffing and resources to provide a classroom course is known based on both historical and forecast cost data, the challenge is then to attract sufficient students to the course to make it profitable. 'We have a good idea of the break-even point for each course, so we can monitor the profitability of different types of courses' (Course manager).

4.3 Customer profitably analysis

The main unit of analysis is the course, but these are attended by students studying for one of the professional qualifications. Educator is therefore able to set targets and monitor the profitability of revenue streams, for example, within the accountancy courses division to set targets and monitor the courses/products for each professional body such as the Institute of Chartered Accountants for England and Wales, Institute of Chartered Accountants for Scotland, Chartered Institute of Management Accountants, Association of Chartered Certified Accountants, Chartered Financial Analyst, and so on. When Educator wins a contract as preferred trainer for one of the major firms such as KPMG it is for an exclusive course. Therefore, the profitability of providing an exclusive course, and hence client, can be monitored. Educator is effectively using customer profitability analysis, when it negotiates and subsequently monitors the profitability of a major client exclusive course, and customer segment profitability analysis where it monitors the profitability of professional courses, such as CIMA, by segmenting the accountancy and financial training market by professional body.

Exercises have been undertaken to ascertain the profitability of Home Study course students as a market segment. These figures are utilised to set targets for market share and student numbers per revenue stream and mode of study. On one occasion a new training facility was established to service a major client, specifically PwC. The facility was established in a location that was close to the London office of the client, knowing that it could also attract sufficient public course students to the location to make it a worthwhile investment. Conversely contracts have been won with major accounting firms based on the location of regional offices and its ability to service the client's students. Educator also has

major corporate clients, such as Ford, GSK, and Shell, that may negotiate a discount on course fees for their employees to attend the 'public courses', that is, the students are not taught separately but attend the open public courses and the client pays a reduced fee. Understanding the impact this will have on the 'mix' of full fee-paying students in the classroom is an important consideration in negotiating the discount offered by the 'Client Liaison Managers', who are also part of the tutorial team but take a special interest in looking after the needs of specific corporate clients, for example, a tutor may also be designated as the Client Liaison Manager for Shell.

The CPA is undertaken as an annual exercise for review and target setting of customer segments and is used in conjunction with product costs. For example, establishing the profit from certain types of customer, such as PwC, or customer segment, such as self-funding students on open public courses. This information is considered together with the cost of providing online courses, or classroom courses for each professional qualification, or as a decision support technique when opportunities arise to bid for major clients with preferred trainer status. Predictions can be made for profit targets to be achieved from a PwC contract where students attend closed courses for PwC students only, or the profit earned from self-funding students on an open public course for the CIMA qualification. The reports are produced for the Managing Director, the Operations Director, the Marketing Manager, and are disseminated to interested parties such as Client Liaison Managers and course managers during the annual planning process and used for target setting and resource planning.

The main benefit of understanding the potential profitability of the various customer segments is in negotiating the fee or level of service provision for major clients. There are other benefits in that major clients can also be wooed by providing new and more effective pedagogical methods and learning materials (products). To make these cost-effective Educator seeks to achieve scale benefits by rolling these products out on all courses and made available to all students, in some cases as part of the course, or as a separate purchasable element. Many of the learning products have been developed from an initiative with a major client. Effectiveness of learning materials and learning media is important in customer retention as Educator tries to retain the students throughout the course of their studies towards the professional qualification which on average takes about three or four years to complete. The marketing and accounting departments have done exercises in estimating the lifetime profitability of students over the three or four-year period to understand the impact of inducements or customer retention, for example, free repeat revision course if a student fails the professional exams at the first attempt having completed a classroom course.

A pass assurance scheme was implemented in return for preferred trainer status with major clients following an investment appraisal exercise to establish the cost benefit of such a scheme to a client, and following a customer lifetime profitability style of analysis, a pass assurance scheme was subsequently made available to individual participants on public courses at no extra charge. Educator employs aggressive advertising to maintain a presence in the market, but word of

mouth and reputation plays an important part too. Hence the much lower margins earned on the major accounting firms in exchange for preferred trainer status is viewed as part of the marketing costs of sustaining the brand as a leading provider of accountancy training.

5.0 Collectibles

5.1 The company

Collectibles is a UK based subsidiary of an American company that sells collectible items via mail-order. The items can be individual one-off commemorative items, for example, Royal baby plaque, or more likely items that form part of a collection that is collected over time, for example, months of the year decorative wall plates, delivered at a rate of one per month over a year.

5.2 The system

The company operates a computer system based on a multi-value database from which it is possible to track the purchases of individual customers and, by matching with the direct product cost of purchases, can calculate the gross contribution of each customer. The accounting team in conjunction with the operational staff undertook an ABC exercise to ascertain the cost of processing orders, both online and via post; customer returns; dealing with payments; customer complaints; quality control of stock items; inventory holding cost; postage and despatch. This analysis was undertaken outside of the system but was then combined with typical 'types' of customer as determined by the marketing team to understand the profitability of various customer 'types'. It is possible from the system to ascertain customers who purchase regularly and purchase certain styles of product, for example, figurines.

5.3 Customer profitability analysis

The accounting team worked closely with the marketing team to analyse the customer database by customer type. This was determined with references to frequency and volume of purchases, type of products ordered, for example, collections or one-off commemorative items, and length of time as an 'active' customer. Customers are also invited to complete a short questionnaire, sent with their first purchase, telling Collectibles about their motivation to purchase and other interests. Customers are invited to sign up for newsletters and participate on social media sites. As the customer database consists of thousands of customers the marketing team found it necessary to cleanse the data of inactive customers. This was achieved by inserting a flag on the database denoting current customer. Any customer that had ordered in the last year was deemed 'current'. Profitability by customer channel is also calculated, for example, online orders, telephone, or postal orders.

Based on the analysis of the customer database the marketing and accounting team work together to estimate the customer lifetime profitable of a typical customer in the various customer segments identified. Segmentation is attempted predominantly using a behavioural basis but with elements of

demographic and geographic, for example, an over 50 female who regularly purchases low priced collections, or a 30-45-year-old male who has purchased several single item event related products. A field on the database is used to indicate to which segment the customer account belongs, facilitating the extraction of data by customer segment. The analysis by customer segment is only analysing approximately 60% of the customer database and the marketing department are constantly trying to gather information about customers to increase this figure, but the company believes that it provides enough understanding to be able to utilise it for supporting pricing decisions and targeted marketing of products. It is also used to develop new products that could be targeted to the more profitable segments.

The company, following the lead of the American parent company had also experimented with making amendments to the offering and monitoring the impact on sales patterns. For example, only offering free postage and packing for orders over a certain value, and offering promotions such as 15% off first purchase, followed by promotions on subsequent purchases. Also, during the last three years encouraging customers to order online and to 'manage' their own account. Initiatives can now be tested on a computer model developed two years ago to judge the potential impact on overall profitability. The impact on contribution of customer groups is monitored and the effect on costs. The model is being utilised to try and build a better understanding of the customer base and the impact of marketing activity. The model took considerable time and effort to build and involved the marketing, IT, accounting teams and the product managers.

6.0 Fashion

6.1 The company

Fashion is a designer and manufacturer of fashion accessories based in the UK servicing the UK, Ireland and European markets. The customer base is mainly large high street retailers which includes some of the leading stores in Europe. Fashion also sells directly to small independent retailers via sales agents. Products are manufactured in the UK and the Far East.

6.2 The system

Fashion operates an enterprise resource planning system. The nature of the business is that they have thousands of product lines, all operating on small margins, with major customers demanding a Just-In-Time service. The management realised a long time ago that to make money in the business careful control of all costs was a strategic imperative. The employees are paid a basic salary plus productivity bonus. As a consequence, the company pays very close attention to productivity levels and product costs. ABC is used to help understand the cost base and for product pricing. For CPA purposes the costs are divided into product costs, order processing, inventory holding, delivery, customer visits, returns handling, payment handling (including credit days). The non-financial data is recorded via the Enterprise Resource Planning (ERP) system and the accounting team apply costs to the data to provide reports for customer segments on a

monthly basis, and for individual customers on an ad hoc or by exception basis. The target is to review all major customers at least once a quarter, and all customers at least once a year.

6.3 Customer profitability analysis

Fashion monitors its customers based on segmenting the customer base by volume of business and revenue. The large 'high profile' customers with whom they have a long-standing relationship are monitored closely. They are likely to have a close working relationship with these customers and the design staff will often work closely with the customers commercial buyers to spot emerging trends as the business depends on being able to offer products that fit with the up-to-the-minute fashion trends. Product cost information is shared with the supplier to facilitate pricing of the product in the retail market. Over the years Fashion has developed innovative production techniques to keep product costs low. As the margin per product is low, Fashion recognises the need to monitor the ancillary costs of servicing the customers. It is easy to eat into profits by developing exclusive product lines for major customers, so Fashion is conscious that they need to leverage the knowledge they gain from working with major high street stores.

Medium level business is monitored as a segment. These customers generally don't have the same buyer power but can still be quite demanding. The interaction with customers and purchasing habits are monitored by the marketing teams, and customers are flagged if it looks as though the ancillary costs will begin to exceed the margin. This will trigger a report by the accounting team and then if necessary, some form of action by management. Typically, this will take the form of the sales and marketing director meeting with the customer to discuss how well the relationship is working. These are set up as review meetings. Fashion are quite open about discussing their costs with the customers as they realise that the whole sector operates on low product margins – it is volume that produces the profit.

Low level business is monitored as a segment. Prices are usually higher for smaller orders so one-off purchases are discouraged. The independent customers usually pay higher prices, mainly to cover the cost of the sales agents, who are paid a retainer and commission. There are plans to develop an online catalogue to service independent customers more cost effectively.

7.0 AirCon

7.1 The company

AirCon is a SME UK company that provides heating, ventilation and air-conditioning services primarily to commercial customers. The company provides advice, design services, product and installation and training as well as ongoing monitoring and maintenance. It prides itself on adding value to the customer. Many of the customers are acquired via referral marketing from architects, engineers, contractors, and recommendations/testimonials. The larger customers

include local authorities, commercial property owners, residential developers, hotel chains, universities, and major corporations.

7.2 The system

The accounting is outsourced to an accounting firm. The style of accounting is primarily contract costing. The company operates from a single site which consists mainly of offices and a training facility/showroom. The sales teams and operational staff work off site, which keeps overheads low. This means that most of the costs are materials and labour. The company has grown significantly during the five years. Contracts/jobs are priced and monitored by the sales and commercial (marketing and legal) teams working together, and the Managing Director has monthly/quarterly meetings with the sales team members.

7.3 Customer profitability analysis

The company can monitor direct costs, material and labour of each contract that it undertakes. The office costs and warehouse costs are treated as overheads and are not included in the customer analysis on the basis that there is no ideal basis to allocate these to individual customers. These are essentially monitored and controlled with the intention of making these processes as efficient as possible.

Each month a report is compiled showing the profitability of each major customer. A spreadsheet is maintained for each customer showing the revenue and direct costs (materials and labour) allocated to each customer. Essentially this is a summary of the contracts with each customer. This can then be extended to cover the length of any subsequent maintenance contract. For the larger customers where new contracts have been acquired, but not yet commenced, estimates are made of the likely cash flows and included within the projections. This produces a projected profit for the customer. The resultant customer profitability is combined with a customer rating (Figure 1) and used as the basis of a discussion between the sales staff and the MD. The customer rating is ascertained for each customer based on a range of factors:

- Loyalty - reference to past purchases and number of other suppliers the customer does business with;
- Core market - is the customer in a core market already serviced by AirCon;
- Finance - reference to payment record and financial strength of the customer;
- Value added factor - is there potential for AirCon to add value to the customer?
- Growth potential - the potential for growth in business with the customer;
- Degree of support required - how demanding is the customer? Are they a high maintenance customer?

These factors combine to create an overall rating of between 1 and 5 for the customer. The position is then plotted on a grid with the axes denoting profitability and rating as illustrated in Figure 1.

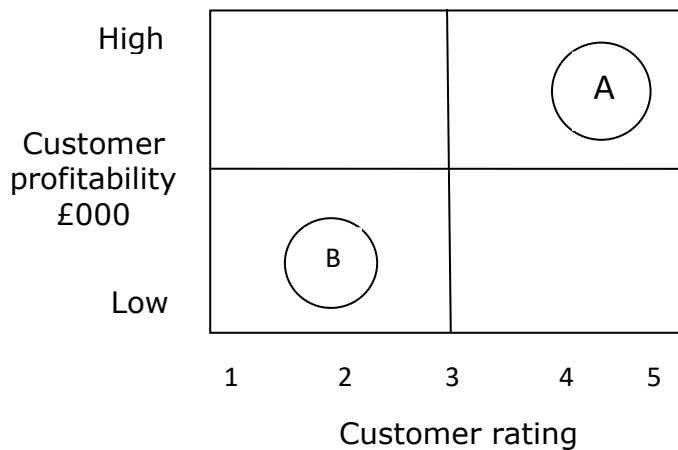


Figure 1 – Customer positioning grid

The focus of the discussion is on how to move customers, such as customer B, into the top right-hand box with customer A, as well as how to keep customer A in its high position. The MD feels that this has been the motivation behind the growth of the firm in recent years, that is the fact that he is using the CPA as a motivational tool for sales staff. It is recognised that it is not a precise tool, but sales staff have welcomed being actively involved in the development of customers and seeking out those customers that are 'right' for AirCon. They have a much better understanding of which sectors to target for new customers and to find customers that they can work with to add value on a mutual basis. It is also very evident that this is seen as a process of managing the customer base and actively seeking profitable customers in profitable segments. Based on this information AirCon can identify the sectors to target, based on potential volume of business and level of margin.

8.0 Discussion based on a comparison of the case studies.

This section briefly discusses the cases based on the conversations and information gathered whilst researching the companies' usage of CPA.

The accountants are involved in the CPA in all five of the reported cases, but the significant factor is that they are 'involved', rather than driving the use of CPA. It was evident from the discussions that it was the marketing professionals who were the prime instigators of CPA, perhaps due to the more natural stimulus and attention given to understanding the customer in marketing texts (Swift 2001; Kotler *et al.* 2010; Jobber and Ellis-Chadwick 2012). It was also noticeable that the CPA is not used in isolation but is utilised as part of a wider CRM system (Zaman 2008) to aid the development of customer relations and the customer base (Kumar *et al.* 2004; Boulding *et al.* 2005). In all cases the product contribution or contract profit data was provided from the accounting system, but this was then invariably combined with other data to create the CPA and contribute

to the CRM. This included qualitative as well as quantitative data, which was contributed by other personnel, for example, project engineers, client liaison managers, product managers, designers, and sales personnel, as well senior decision makers. It was clear that the information provided by the accountant was only part of the process and that the resultant CPA was part of a wider system. This is probably due in part to the fact that the case companies are mature users of CPA and committed to CRM. Much of the existing literature on CPA does not necessarily make the case for CPA as part of CRM, as the reporting of many research studies is restricted to the use of CPA as a single technique. The case companies here, however, promote the use of CPA as a means of not just identifying the customers with whom the companies would wish to build a long-term relationship (Christopher *et al.* 1991) but about utilising CPA as part of a wider CRM system to develop relationships for mutual benefit (Gronroos 1990). As Ellegaard and Ritter (2006) point out it is not just about the profitability but about the nature of the relationship.

All five companies adopted what could be described as a customer focused or marketing orientation (Bell and Emory 1971). It was clear, even when talking to operational staff, that there was an acute awareness of the importance of the customer or client within all the companies. This prompts the question as to whether this was the motivation behind the use of CPA as a performance measure, for example, whether the customer focus naturally led to CPA as a measure, or whether the act of undertaking CPA promoted a more customer focused approach. In all companies, except Engineer, the use of CPA was driven by the marketing teams and viewed as part of the marketing systems (Estrella-Ramon *et al.* 2013) as opposed to an accounting measure (Ward 1992; Hoque 2003), so in these cases adopting a customer focused approach led to the use of CPA. In Engineer's case the use of CPA was initiated by the accountants who, with the aid of the IT staff, began to produce project profitability reports that grouped the projects of various major clients together to create a client profitability report. The realisation that most divisions within the company were dominated by one or two large clients that could have, and in some cases were having, a significant impact on the profitability of the division, raised the profile of CPA as a useful technique. At this time the marketing function within Engineer was largely under-developed but has since grown in importance such that members of the marketing and accounting teams are now seconded to each division. This contrasts with AirCon, where the Managing Director, who has a marketing background, instigated a mechanism for monitoring customer lifetime profitability from the very first day of starting the company as part of a wider CRM system. This indicates that undertaking CPA exercises can stimulate a focus on customers (van Raaij *et al.* 2003) but, as shown here, it is more likely that companies which utilise CPA as a technique are already aware of the significance of understanding the customer base, and potentially utilise some form of relationship marketing (Johnson *et al.* 2012).

The use of CRM to increase customer satisfaction, aid retention and acquisition, influence customer behaviour (Ngair 2005) and partnering with selective customers (Helgesen 2007) was a key element of the marketing

philosophy adopted by each company, including Engineer following the stimulus to pay more attention to the mix of customers. The use of CRM was not just to build a long-term relationship with customers (Blattberg and Deighton 1996) but also to gain a better understanding of the customer base (King and Burgess 2008). CPA formed part of the information set considered in understanding the customers but in all cases customer satisfaction levels were also monitored directly, in most cases by surveying customers. Marketing staff were also quick to point out that maintaining high levels of customer satisfaction did not necessarily directly equate to profitable customers, nor did customer loyalty. Engineer, Educator and Fashion noted that their more strategic customers were aware of their significance to the business which supports Kumar and Rajan's (2009) findings that loyal customers know their worth and can be more demanding. It is perhaps of significance that there is an awareness within the companies of the complexity of the relationship between intangible elements such as customer satisfaction and loyalty, and profitability. The marketers agreed that customer loyalty manifests itself in repeat purchases and lower overall acquisition costs resulting from positive messages (Zeithaml 2000; McManus and Guilding 2008), and that customer satisfaction impacts on customer loyalty (Fornell 1992). But, the trick is making sure that your profitable customers remained loyal by keeping them satisfied. There was no guarantee that having highly satisfied customers increased profits (Tornow and Wiley 1991). It was more a case of managing the customer mix. For example, Educator, Engineer and Fashion reported that some of their more strategic customers are very demanding which can mean lower profits to keep them satisfied. It is therefore important to monitor a range of customer related performance indicators and that automatically assuming that one impacts positively on another can give a misleading picture, unless a range of indicators are monitored over time. The dangers of focusing on financial measures alone are now well documented (Kaplan and Norton 1992) and it is perhaps reassuring that all case companies indicated that CPA is utilised as a guide as to how overall profits can be improved, together with other indicators, rather than a key decision-making tool on its own (Bruns and McKinnon 1993; Zaman 2008).

One aspect that was noticeable was a recognition by those companies principally operating in B2B markets of the need to attract and retain certain 'strategic' customers that provided additional or alternative intangible benefits to profit, such as influence and knowledge (Epstein *et al.* 2008). This was particularly relevant in Engineer, Educator and AirCon where the major players in the industry being serviced were seen to have influence in the supply market. It was less evident in Fashion where major customers were seen as driving a hard bargain but were important in terms of providing volume in a business where the margin for error is very small. Although the profit margin earned from smaller independent customers can be greater the volume would not be as high, hence the need to retain the major retailers. The close working relationship with major players also enabled Fashion to keep up-to-date with current and future trends, thus in Fashion the knowledge aspect was more significant than the potential to influence other customers. Although Collectibles does not have major customers

to the same extent they attempted to leverage the influence of loyal customers via the use of testimonials in marketing literature and 'refer a friend' benefits, so it was CRM, more than CPA in this case, that was a key factor in its approach to developing the customer base.

All companies adopted an approach to managing a customer portfolio (Tasari *et al.* 2011). This was again most noticeable in the B2B element of the companies where the significance of the 'strategic' customers was balanced by strategies to attract more profitable customers, and in Engineer a deliberate policy of diversifying the customer base as well as the markets targeted and engineering specialisms offered was operated to help manage the overall risk and volatility of cash flows (Verhoef and Lemon 2013). Engineer tries to ensure that they have a range of customers in each division to reduce the reliance on one or two major customers, for example, the Highways division could be heavily dependent on the UK Highways Agency, and therefore actively seeks highways projects in overseas locations and from other customers. Educator can suddenly find that a large proportion of resources are taken up by winning a preferred trainer contract with a major accountancy firm. In this case the management will increase resources but offset this by targeted marketing at the B2C public courses to increase the number of full price paying students. In one instance additional premises were acquired to accommodate the cohort of a major client, PwC. The courses for PwC students are typically provided in blocks of time during the normal working week suitable to the client. Educator advertised the new location to public courses which are more popular on weekends and evenings. The profit on these courses offset the lower margins on the preferred trainer contact whose main benefit was the referral power of being the preferred trainer. Being aware of the need to supplement a major customer that can negotiate lower prices and hence provide lower margins, with more profitable customers, ensured that the resources were utilised more effectively as the peak demand occurs at different times of the day. This is logical and could be explained by good commercial acumen, but the information on CPA provides some numerical support for the decision and the provide information on the boundaries of negotiation with the major client.

The concept of a portfolio of customers also manifested itself in the segmentation of the customer base to aid the identification of the profitability of segments and the strategies and tactics, both marketing and operational, adopted as a result (Storbacka 1997; Mulhern 1999). None of the companies actively demonstrated a tendency to want to stop supplying non-profitable or less profitable customers, but there was effort put into attempting to increase the profits that could be made. This was done by seeking to improve the profitability of customers via increasing the gross margins earned from customers or by reducing the costs to serve. All companies utilised the information from CPA to target the more profitable segments and focus product development more on the needs of the 'strategic' and profitable customers. The benefit of CPA was therefore to understand the profitability of different customers and customer segments as a means of improving the profitability of all customers (Zeithaml 2000; Rigby *et al.* 2002). This can create a dilemma as, for example, Fashion achieves a higher

margin on independent customers than it does on major retail chains, but it does not focus marketing activities on the independent retail market, but instead focuses attention on major retail chains as the volume provides a higher overall profit. The decision is driven from the total profit generated by the customer rather than contribution per product. Highlighting, in this case, the significance of customer profitability over direct product profitability. Fashion does not, however, stop marketing through channels that attract independent customers, as they increase the overall profit of the company with little effort.

A further example is provided by Educator who was keen to secure preferred trainer contracts with major accountancy firms and viewed the strategic benefits as outweighing the ultimate profitability of the contract. The potential lower margin or loss-making scenario would then stimulate additional marketing effort on more profitable customer segments to make up the short fall, that is, compensate within the mix of customers, reinforcing the concept of managing a portfolio of customers (Paltschik and Storbacka 1992). There were also instances of management actions being taken to discourage or improve the profitability of the less profitable customers (McManus 2007), for example, Collectibles charging postage on single purchase items, but allowing free postage on subscribing to a collection; Fashion developing an online catalogue to reduce reliance on sales visits, and hence sales agents' costs, to independent customers; Educator leveraging new initiatives developed for major customers across all customers to achieve scale economies. These actions support the view that companies were not just using CPA to target or select customers, but consciously managing the potential acquisition, retention and costs to serve of a portfolio of customers (Johnson and Selnes 2004).

Four of the five companies undertake more than one form of CPA. This supports Lind and Strömsten (2006) in that the type of CPA calculated relates to the type of interface/relationship that the company has with the client/customer. The marketing literature, however, suggests that CLV is the most appropriate measure (Berger and Nasr 1998; Wang and Hong 2006), but only AirCon undertakes a form of CLV as a regular measure. Educator and Collectibles have conducted CLV style calculations to ascertain product development decisions and type of customer to target respectively. It is noteworthy that AirCon has the most developed sense of using CPA to develop the business in that it involves the sales personnel in discussions about the customer (Vaivio 1999) and utilises it as a motivational tool. Despite this being the most developed use of CPA, it is not calculated using ABC, as the nature of the business means that indirect costs are quite small in comparison and the company has decided the cost benefit of analysing these further is counterproductive (Smith and Dikolli 1995), preferring to manage the indirect costs separately within a more traditional budgetary control system.

The other four companies have utilised ABC to some degree, even if only as an aid to pricing and gaining a better understanding of the cost base. They recognise the benefits of ABC but are also highly conscious of the resources required to undertake the analysis as a routine system (Reka and Vasile 2014).

Only Engineer has managed to incorporate an element of time- driven ABC (Anderson and Kaplan 2004) within its routine system, by virtue of a bespoke system that facilitated the process (van Raaij *et al.* 2003). Collectibles and Fashion calculate the ABC elements outside of the normal system and Educator utilised ABC as an ad hoc exercise. The significance of this is that the companies appear to recognise the benefits (Kaplan and Cooper 1998) but are mindful of the cost benefit and selectively utilise aspects of the concept dependent on perceived need (Shea *et al.* 2012). This is also true of their use of CPA.

The fact that only AirCon used a form of customer lifetime profitability, which utilise future estimated cash flows, means that the other four opted for a more simplified version and were calculating CPA retrospectively (Pfeifer *et al.* 2005). It was therefore a lagging indicator, but the marketers felt that by adopting an iterative approach, and the frequency of reviewing CPA on a quarterly or annual rolling basis, meant that it was possible to learn from improvements in mix and profitability of customers and segments (Ward and Ryals 2001). It was also highlighted that costs to serve were still monitored as cost centres and efforts made to continually improve the efficiency and effectiveness of these aspects of the business, for all customers. The CPA, however, provided a guide as to where targeted effort might be most effective and aided the development of marketing strategy to leverage the more profitable customers (Guracaronu and Ranchhod 2002; van Raaij *et al.* 2003; Cugini *et al.* 2007).

All companies had invested time and resources in undertaking CPA (Reka and Vasile 2014) but only Engineer was able to integrate the analysis into its normal MCS systems, by adopting a bespoke system with in-house developments and a relational database that enabled considerable flexibility in reporting data items held. Cooper (1991) points out that it is often more expedient to calculate CPA outside of the normal system due to the resources required to achieve integration. This is true of the four case companies that opted for stand-alone methods, but the degree of flexibility and modelling that could be undertaken with a stand-alone system based around a spreadsheet package was also a factor in the decision, particularly in Collectibles and AirCon. The fact that using ABC to enhance the analysis of in-direct costs to serve in CPA requires the merging of non-financial and financial data made integrating into the normal systems difficult (Noone and Griffin 1999). Engineer achieved it as they 'are essentially selling time, so every activity is recorded, costed and recorded against the project/activity code' (Group Accountant, Engineer). There was, however, on further investigation, considerable effort put into establishing the cost rates to use, which are calculated and updated annually. The effort expended in calculating CPA impacted on the frequency of the analysis and the degree of complexity. In most cases the calculation of costs to serve based on customers, or customer groups, was updated annually.

Of the five cases, however, only Collectibles and Fashion encompassed the sale of a product which incurred separately identifiable costs to serve. In the case of AirCon, Educator and Engineer once the contract is won, the clear majority of cost is incurred as an integral part of fulfilling the service which can be traced

directly to each contract or course. This has an impact on the ease with which a meaningful CPA can be calculated. It might also be part of the reason why these three companies took more interest in the cost of acquisition, in the case of Engineer calculating a crude ROI, in that it is possible to identify the cost of acquiring a major contract more easily than it is for Collectibles or Fashion. This indicates that companies are likely to monitor the costs that can be easily identified and hence influenced more directly. In all cases there was a recognition by the personnel involved that CPA was an approximation and not a statement of fact. This is possible because all case companies are relatively mature users of CPA and therefore potentially had gone through the education stage identified by Noone and Griffin (1999).

The companies that had business-to-business customers demonstrated a willingness and a belief that it was beneficial to work closely with the customer (Chang *et al.* 2013). For Engineer, it could be deemed part of their business as they are providing consultancy services; Educator worked closely to provide tailored services as part of winning the preferred trainer contracts; Fashion worked closely with the major retailers as their products needed to satisfy the same fashion trends as the end consumer, so both Fashion and their customer had the same end consumer; and AirCon was differentiating itself in the market by 'adding value to the customer'. Only Collectibles did not work closely with their customers in the same sense as the business-to-business companies, but they attempted to develop a relationship via social media.

All companies saw value in understanding their customer base and consciously gathered information to help them achieve it (Ryals 2005; Gupta *et al.* 2004). They therefore sought information outside of the accounting system and did not rely solely on CPA. Much of the informal information was gathered from customer facing systems, for example, senior project engineers that dealt directly with the customer, customer liaison managers in Educator, social media and customer questionnaires in Collectibles, product designers in Fashion and sales representatives in AirCon. They were all engaged in some form of CRM, although only Collectibles and AirCon used the specific term in discussion. The CPA was utilised as an indicator of profitability with the other information being utilised to manage the relationship and potentially improve profitability (Payne and Frow 2005). It demonstrates that CPA is best used as part of a wider CRM system, hence inevitable the marketing and operational staff need to be involved.

An interesting aspect of the case studies is that the CPA reports were mainly utilised by middle managers and not the Board of Directors. Senior executives were in receipt of CPA information, such as marketing directors, but it was not reported regularly as part of the regular management information presented to the Board of Directors. This supports the view of Stein *et al.* (2013) who noted that CRM, including CPA, information was structured and prepared to provide tactical guidance for managing individual customers and sales opportunities. However, information on customer segments which invariably corresponded to the market segments was reported to the Board more regularly than individual customer CPA. Only a few occasions were recalled when individual customers had

been discussed at Board level, which usually involved a decision on a contract that had significant strategic importance to the company's future.

The four companies involved in B2B markets were conscious of the benefit of having undertaken CPA when negotiating with customers. Engineer and Educator with major customers explicitly stated that they utilised the knowledge in setting limits for its negotiations, but only Fashion shared information about costs and margins with its customers. It did this on the basis that their business as a supplier was inherently linked to the success of the product in the end consumer market and therefore there was a mutual benefit to sharing (Chang *et al.* 2013). This is possible due to the nature of the business being more part of a clearly defined value chain leading to the end consumer, whereas this is not so explicit in the relationship between the Engineer and Educator and its customers. Interestingly neither Collectibles nor Fashion were aware as to whether its suppliers undertook CPA, although Fashion did work closely with its suppliers in negotiating costs and in product developments. Collectibles tended to work at arm's length with its suppliers in that they set the design for the product and then negotiated a price (cost) based on volume. They were very keen to understand their own customer base without involving the whole supply chain. One wonders if this would yield more benefits.

The marketing literature often claims that CPA can be utilised to allocate resources (Zhang *et al.* 2010; Holm *et al.* 2012). In the five case companies there is evidence that they utilise CPA to allocate marketing resources but only Educator had a specific example of allocating resources more generally which was more to satisfy their strategic customers. The example of the additional premises near the PwC offices is a case in point, where operational resources were allocated for the purpose of servicing a customer in the form of a connective or strategic relationship (Lind and Strömsten 2006). However, this is more in reverse in that the knowledge that CPA provided enabled the company to make the decision to take on the additional resources, so it is not so much that the CPA allocated resources, but that CPA was able to justify the allocation of resources. This was also an occasion when the decision was discussed at Board level. Fashion does allocate most of its resources to satisfying the major customers due to the high volume required to make a profit (facilitative/integrative relationship) whereas it does not allocate so many resources to servicing independent customers, from whom it makes a higher profit margin, simply because the volume would not be there. Also, many of the products are developed with the major customers and the information exchange on fashion trends is invaluable, such that without the major customers the company could not sell enough to independent customers to make the product development costs worthwhile. It would therefore not be able to keep the product range as current as it does. Fashion recognises that it is in a low margin, high volume business and it utilises CPA more as a means of keeping control of the cost to serve, that is, for cost management purposes. It sells to independent retailers as a by-product of the major retailers.

The evidence within all five cases of using CPA to set specific targets for individual customers was not strong, but Educator does use it to set targets for

customer segments, such as student numbers for each professional body, but more in relation to target revenue generation than profitability. AirCon however, demonstrated how they involved the sales representatives in utilising the CLV and customer rating, illustrated in Figure 1, to set targets for the future development of individual customers. The use of the customer rating system and the CLV enabled the MD and the sales representatives to jointly decide on actions to develop and improve the customer relationship which would impact on the profitability. This is interesting in that the focus is on improving the CRM and as part of this, improving the CLV (Zeithaml 2000; Rigby *et al.* 2002; Verhoef and Lemon 2013). The CLV is seen as part of CRM. Specific monetary targets were not set but a motivational target of improving the position of the customer on the grid shown in Figure 1. The involvement of the sales representative in the discussion ensured a commitment to improving the CRM and an understanding of the implications of the cash flows on the organisation. The MD maintains a spreadsheet model in which he can demonstrate the impact of individual customer's cash flows on the company's overall position. In the early days of the company this was utilised in discussion with sales representatives to demonstrate the importance of managing the cash flow in the SME. In this particular case the CLV is not based merely on the numerical data but includes the views and opinions of those who are in direct contact with the customers (Vaivio 1999). The act of being involved in the process also serves as a motivational factor for the sales representatives (Herzberg 1966).

9.0 Conclusion

CPA, although being included as an accounting technique in surveys of SMA, is more marketing led than accounting led. To gain the most benefit it needs to be utilised as part of a wider CRM system with accountants working with marketing and operational professionals. It is possible to utilise more than one form of CPA within a single company depending on customer relationships and, to some extent, on the information available. The degree of sophistication that is applied to calculating CPA needs to be appropriate to the organisational context. The danger of making it too complex is that the time and effort required may be prohibitive, but the danger of being too simplistic could lead to misleading information. There is a degree of interpretation required in using CPA. It is not a blunt instrument but can be utilised to understand the impact of customer related decisions on the overall profitability of the customer portfolio. The underlying principle is to increase total profits by managing the customer portfolio, which will inevitably include some customers that are not as profitable as others, and that the value of customers includes intangible elements, such as referral power, or knowledge transfer.

The use of CPA as part of a wider system means there is the need for formal and informal mechanisms to be employed to gather information, and systems need to be established to aid the collection and analysis of such data. For CPA to be effective it requires time and effort to create these systems for data collection and analysis to undertake the CPA on a regular basis. It is part of gaining a better understanding of the customer base, both current and potential, and is therefore

not a one-off exercise, but an iterative approach from which the intention is to learn and understand.

The long-term benefits of understanding the customer base can justify the investment in time and resources. Management therefore need to commit to the process and treat CPA as an iterative learning tool that contributes to a better understanding of the customer base. There may be an element of education required before all recipients of CPA are able to interpret the information to aid decision making, but appreciating CPA for what it is, a guide rather than a definitive answer, can significantly aid the successful management of the customer portfolio to improve the overall profitability of the company. CPA is undoubtedly a useful technique that provides maximum benefit when utilised as part of a CRM system in managing the customer portfolio and provides an ideal opportunity for accountants to work closely with other professionals in the business, particularly the marketing department.

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