

**MARKET ORIENTATION  
AND ACCOUNTING INFORMATION  
- A PRODUCT-LEVEL STUDY**

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Master of Philosophy from the University of Stirling**

## **DECLARATION**

I certify that the work contained in this thesis is mine alone and it has not been submitted previously, in whole or in part, for the purpose of obtaining any other academic award; and the content of the thesis is the result of work which has been undertaken since the official commencement of this approved research program.

**Robert M. Inglis**

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# Chapter 1

## Introduction

### 1.1 Background

Contemporary management thought maintains that the integration of an organisation's functional areas and activities is essential to business success (Webster 1988; Wind and Robertson 1983; Maltz and Kohli 2000), yet the cognate business disciplines of marketing and management accounting would appear, at least in the literature, to have failed to adequately make this transposition. Each discipline has reported insightful developments, theoretically and empirically, in which both are implicated, yet the points of interface between the two are not developed. In marketing, research on 'market orientation' has highlighted the linkages between customer and competitor information and competitive advantage. In accounting, research into 'strategic management accounting' has also emphasised the notion of competitive advantage and the importance of customer and competitor information in decision-making.

Why then do two such seemingly interdependent areas of business (literature) fail to explicitly recognise the integration of the other's information? What are the points at which information from each discipline interact or combine and how does this information assist in organisational decision-making? The search for the answers to these broad questions is the motivation behind this thesis.

## 1.2 Marketing and market orientation

The last decade has seen increased emphasis within the marketing literature on 'market orientation' (Narver and Slater, 1990; Jaworski and Kohli 1993; Ruekert 1992; Balakrishnan 1996; Liu and Davies 1997; Horng and Chen 1998; Mavondo and Farrell 2000; Pulendran et al. 2000). Market orientation research has sought to operationalise the marketing concept (Levitt 1960; McKitterick 1958) by embracing customers within a wider 'market' setting by incorporating information about competitors, market factors, and the way in which organisations coordinate functional activities in response. The research has focussed attention on the links between market orientation and competitive advantage (Day 1990; Day and Wensley 1988; Bromwich 1990), the impact of a market orientation on business performance (Narver and Slater 1990; Diamantopoulos and Hart 1993; Jaworski and Kohli 1993; Fritz 1996; Appiah-Adu 1998; Kumar et al. 1998; Doyle and Wong 1998; Dawes 2000; Slater and Narver 2000) and the barriers or antecedents to market orientation (Kohli and Jaworski 1990, Harris 2000).

The use of accounting information to measure the performance (*output*) of adopting a market-orientated approach to business indicates one point of interface between accounting and marketing. While much debate surrounds the choice, accuracy and reliability of accounting measures of *business* performance, there is a notable absence of discussion within the literature about accounting information (as an *input*) and market orientation in *product* decision-making. This would seem unusual as the market orientation literature highlights several points of interface between accounting and a market orientation at the product level including the seller's cost to competitively provide product attributes (benefits, characteristics, features of the product) required by

the customer and competitors' costs to provide comparable attributes. While the market orientation literature acknowledges the need for accounting (cost) information of this type, detail of its operation and application is found wanting.

### **1.3 Management Accounting**

A relatively recent phenomenon in the management accounting literature has been the adoption of a strategically orientated approach to the development of accounting information (Shank and Govindarajan 1989; 1993; Ward 1992; Fisher 1995; Roslender, 1995; Lord 1996; Bromwich 1990; Kato, 1993; Ryan, 1995; Bhimani and Keshtvarz 1999). With a focus on customer and competitor accounting (cost) techniques, the literature reflects a similar orientation to the marketing literature, however, no one technique has been developed with the accounting needs of a market orientation as the point of departure. With the notable exception of the recent work of Roslender and Hart (2002, 2003), very little explicit evidence exists in the accounting literature to indicate that the disciplines of marketing and management accounting are well integrated (Foster and Gupta 1994).

### **1.4 The research agenda**

There is no research to date that has clearly identified and/or described the accounting information needs/requirements of a market orientation at a product decision-making level despite the potential insight into competitive advantage that this may provide (Smith, Andrews and Blevin, 1992; Bromwich 1990). Furthermore, there is very little empirical research that has investigated how accounting and a market orientation operate in an organisational setting. This study aims to contribute to the development of theory and reduce the knowledge gap within marketing and accounting by

investigating, both theoretically and empirically, market orientation and accounting information in product decision-making.

### **1.5 Structure of the thesis**

In this first chapter an overview of the thesis and the motivation for its undertaking is presented. The literature in the related business disciplines of marketing and management accounting are briefly reviewed and the need for research on the integration of marketing (market orientation) and accounting information is established.

In Chapter 2, literature on the marketing concept is reviewed, with particular reference to the operationalisation of the marketing concept - referred to in the literature as a market orientation. The components of a market orientation are identified and discussed together with the extant research on market orientation, antecedents, business performance and moderating variables. Points of interface between market orientation and accounting information are identified, summarised and the limitations of the existing information outlined.

In Chapter 3 the extant literature in management accounting is reviewed to ascertain the extent to which this discipline provides information to meet the accounting requirements of a market orientation identified in Ch 2. Six accounting techniques are identified, comprehensively examined and the benefits and limitations presented.

Chapter 4 is the first of two chapters which detail and discuss the aims, objectives and methodology of the research. In Ch 4, key research issues and questions are outlined together with a detailed discussion of the selection of a single case-study approach for

the research. In Chapter 5, a comprehensive description of the case study design is presented including the procedures and general rules - case study protocol - adopted in collecting and analysing data.

Chapter 6 is the first of four chapters which describe, analyse and discuss the case study organisation, SD. This chapter incorporates a description of the industry in which SD operates, the firm's products, structure, and decision-making processes before describing the marketing and accounting information within the General Management function of SD. Chapters 7, 8 and 9 report on the Production, Accounting and Sales functions, respectively.

Chapter 10 concludes the research by presenting an analysis and discussion of the customer, competitor and interfunctional coordination components of a market orientation across the four functional areas described in previous chapters. In so doing, themes and patterns which develop cross-functionally are discussed and key ideas that emerge from the case study analysis are discussed and the implications for future research are identified.

Subsequent to the formal undertaking of the SD case study, the researcher had several opportunities over the next 3 years to gain further insights into SD's business operations and developments within industry. These insights are reported in a postscript to the thesis which follows Chapter 10.

## **Chapter 2**

### **Literature review - market orientation**

In this chapter the fundamental concepts of marketing and the operationalisation of these concepts, commonly referred to in the literature as market orientation, are reviewed. A major focus of this review centres on the type and use of accounting information in a market orientation.

This chapter contains four sections: in the first section, the marketing concept is briefly reviewed followed in section two by a review of market orientation and its component parts. In section three, market orientation, its antecedents, relationship to business performance and moderating variables are discussed. Section four examines the points at which accounting information is required as an input measure in the customer, competitor and interfunctional components of a market orientation. Limitations/weaknesses surrounding the market orientation - accounting interface are discussed. The chapter summary in section five provides a base from which the accounting literature is examined in Ch 3.

#### **2.1 Marketing - the concept**

Marketing, its nature, scope and definition, has been the subject of continued discussion within the literature (Baker, 1989, 1999; Houston 1986; Hunt 1976). As a concept, marketing has been viewed as being not only synonymous with customer focus but at the very heart of the business itself. Drucker (1954), in espousing marketing as a management philosophy, maintains that “there is only one valid

definition of business purpose: to create a satisfied customer” and that marketing “is the whole business seen from the point of view of its final result, that is, from the customer’s point of view” (p.37). Similarly, McGee and Spiro (1988) view the marketing concept as a sub-set of a wider philosophy of marketing, a philosophy which “is a normative prescription for business managers” (p.40) or a broad umbrella that governs the business life (Borch 1964). The marketing concept is, in effect, viewed as the operational implication of the marketing philosophy and embodies the so called “marketing mix” of the product, the product price, place (of distribution) and promotion.

The marketing concept as described by numerous authors (Felton 1959; McCarthy and Perreault 1984; Kotler 1984) is characterised by an organisation-wide, functionally integrated, focus on meeting and satisfying customer needs, at a profit. However, several writers suggest that there may be certain conditions or factors which influence the extent to which an organisation adopts the marketing concept. For example, Hirschman (1983) argues that the normative framework of the marketing concept does not hold true for two classes of producers, namely, artists and ideologists, due to the personal values and social norms that characterise their operations. Houston (1986) suggests that some firms may be predisposed to a sales or production orientation and, to the extent to which substantial investment has been made in plant, equipment and technology, significant change to customer product needs are precluded. Similarly, Fritz (1996) highlights the importance of a range of orientations - production, cost and employee - in corporate management, while Kaldor (1971) questions the extent to which customers can accurately determine and

communicate their needs, particularly in a rapidly changing, often highly competitive, environment.

This said, these authors do not deny that the marketing concept provides direction for achieving long-term business objectives. Recent attention to the marketing concept has seen debate and research moving from the philosophical to the operational issue (Lafferty and Hult 2001).

## **2.2 Market orientation**

In moving from philosophical discussion about the marketing concept to discussion about its operationalisation, a subtle change in terminology is noted in the literature. For example, Kohli and Jaworski (1990) refer to the implementation of the marketing concept as “market orientation” (rather than *marketing*) and cite tradition and McCarthy and Perreault (1984) as the reason for this. Competitors and the nature of the industry structure would, for example, fall within the ambit of “market orientation”, more so than marketing, with the latter having a marketing department or functional orientation (Shapiro 1988). A market orientation (MO) may then be characterised as one in which customer focus is viewed in a wider “market” context, embracing market factors such as competition, technology and regulation (Lusch and Laczinak 1987).

Despite the increased research attention to the operationalisation of the marketing concept (Kohli and Jaworski 1990, Narver and Slater 1990; Ruekert 1992; Jaworski and Kohli 1993; Slater and Narver 1994; Diamantopoulos and Hart 1993; Deng and



Dart 1994; Greenley 1995; Fritz 1996; Van Egeren and O'Connor 1998; Pulendran et al. 2000; Narver and Slater 2000), a definition and measure of market orientation remains problematic. As Uncles (2000) notes

*It is not uncommon in management research to be faced with concepts and ideas that appear to rest on commonsense and intuition, and yet at an operational level defy easy definition and use. Market orientation is a case in point (p.i).*

In this respect, relatively little has changed in the decade since Kohli and Jaworski (1990) noted that

*... a close examination of the literature reveals a lack of clear definition, little careful attention to measurement issues, and virtually no empirically based theory.. (p.1.)*

Much of the market orientation research literature (see, for example, Morgan and Strong 1998; Gray et al. 1998; Harris 2000) has developed from the early work of Kohli and Jaworski (1990) and Narver and Slater (1990).

Kohli and Jaworski (1990) attempt to identify the operational components of the marketing concept. With an emphasis on activities, they define a market orientation as :

*the organization wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization wide responsiveness to it. (p.6).*

Narver and Slater (1990) concluded that market orientation is composed

*of three behavioral components - customer orientation, competitor orientation, and interfunctional coordination - and two decision criteria - long term focus and profitability (p.21).*

Behavioural components are given equal weighting in terms of importance.

Parallels may be drawn between Kohli and Jaworski's (1990) study and elements of Narver and Slater's (1990) work. Both emphasise that a market orientation requires market information about customer needs over the long term, information which may be determined from a variety of sources (other than the customer). Both studies note the need for organisation-wide integration of information and activities to meet customer needs. While both studies acknowledge "profitability" as a component of a market orientation, Kohli and Jaworski's (1990) field research indicates that profit can be viewed as a consequence of adopting a market orientation rather than an objective per se. The Narver and Slater operationalisation of market orientation has tended to be the most preferred research measure (Gray and Hooley 2002; Morgan and Strong 1998; Gray et al. 1998), however, the extent of conceptual overlap between the two approaches has lead some researchers to

advocate against the disassociation of the two (Cadogan and Diamantopoulos 1995; Avlonitis and Gounaris 1997).

While similarities, reliability and validity between the two views of the market orientation construct are subject to continued debate (Farrell and Oczkowski 1997; Oczkowski and Farrell 1998a; Oczkowski and Farrell 1998b; Harris 2000; Helfert et al. 2002; Estaban et al. 2002),

*their value is that they define MO in terms of the specific activities that organisations should undertake (Pulendran et al., 2000, p.123)*

In reviewing the behavioural components identified by Narver and Slater (1990) in detail (see section 2.3 for discussion of the decision criteria), the literature reveals that both a customer and competitor orientation require detailed information about customers' and competitors' value-chains (Day and Wensley 1988; Day 1990), information which provides a foundation for establishing sustainable competitive advantage (Porter 1985).

Porter (1985) describes a value-chain as the composition of a firm's primary and secondary activities. Primary activities comprise:

<i>inbound logistics</i>	managing the flow of product inputs
<i>operations</i>	conversion of inputs into final product
<i>outbound logistics</i>	collecting, storage and distribution
<i>marketing and sales</i>	informing buyers about products and services
<i>after sales service</i>	customer care and service.

Secondary activities comprise procurement, technology development, human resource development and firm infrastructure (general management, finance and other functions) that allow the primary activities to occur. Value-chain activities are in essence the ‘building blocks’ of a firm’s product or service. The ‘mapping’ or detailing by a seller of both its customers’ and competitors’ value-chain activities may then provide a base of intelligence upon which sources and positions of advantage may be obtained. For example, by possessing a detailed knowledge of customers’ production operations, the seller may be able to enhance the value of its product in the customers’ eyes by delivering products at the most convenient times for the customer. In this way the seller aims to link its value-chain activity of distribution with that of the customers’ activity of production and in such a way that reduces the buyers’ (inventory and production) costs in using the product - “costs-in-use” (Forbis and Mehta 1981; Porter 1985, pp. 135-137) - and create value for the customer. (Customer product “costs-in-use” are further examined in S 2.4.1).

To be able to do this competitively will necessitate the seller obtaining details about its main competitors’ value-chain activities in order to assess whether it has an advantage in this respect. In this example, advantage may be derived by differentiating the firms’ product by delivering on a just-in-time basis where its competitors cannot, or by delivering the product on a just-in-time basis at a lower cost to the customer than its competitors.

Porter (1985), in particular, advocates that by developing an understanding of the costs of each activity performed, value-chain analysis allows a firm to compare its position with those of its competitors. When combined with a knowledge of the

customer's value-chain, the seller may then determine positions of competitive advantage in terms of low cost and/or by differentiating its product.

Both the value-chain and market-orientation approaches reflect the notion that customer needs extend beyond the physical product offered to encompass other attributes or benefits, for example, timely delivery, finance/credit terms, responsive after sales service, efficient and low cost ordering facilities and cooperative advertising. Furthermore, Narver and Slater (1990), maintain that the satisfaction of customer needs requires an understanding of the cost and revenue dynamics of customers (see also Young and Ennew 2000; Goebel et al. 1998). This understanding becomes even more complex where an extended distribution chain exists, as a knowledge of the end users' cost dynamics (as well as the other channel members) impacts upon the seller's determination and provision of product attributes.

The accurate identification of product attributes is noted here for two related purposes: first, product attributes (benefits, characteristics, features) reflect the elements which are designed to satisfy customer needs (Zeithaml et al. 2001), the essence of the marketing concept; and, second, the composition of attributes will affect the cost of the product. Given that the marketing concept requires that "an organisation aims all its efforts at satisfying its customers at a profit" (McCarthy and Perreault, p.35) this relationship between attribute configuration and costs warrants closer examination and is discussed further in section 2.4.1. Clearly, however, establishing a customer orientation as one of three behavioural components of a market orientation may be quite complex and requires not only an understanding of

the product needs of a range of customers within a distribution channel, but a knowledge of the cost and revenue dynamics associated with these customers.

Similarly, to provide *superior* value to customers requires a knowledge of competitor capabilities - capabilities which, as noted above, may also be determined through an analysis of value-chain activities and costs (Porter 1985; Day and Wensley 1988; Aaker 1995). Hence the competitor orientation, as the second of three behavioural components of a market orientation, may require extensive analysis by the organisation to establish a sufficient understanding of competitor resources and capabilities. The extent of “how much” information and understanding is sufficient to allow informed decision-making about competitive product planning is not considered in detail in the literature (Gray et al. 1998; Morgan and Strong 1998). Some evidence is provided in accounting literature (Shank and Govindarajan, 1989) when seeking to explicate the role of cost (accounting) in developing strategic advantage and is examined further in Ch 3.

The third behavioural component - interfunctional coordination - is linked closely to both the customer and competitor components of a market orientation described above and involves the coordinated utilisation of organisational resources in creating superior value for buyers (Narver and Slater 1990). In conceptualising and synthesising market orientation and its components, Lafferty and Hult (2001) view interfunctional coordination as a “unifying principle” in which information about customers and competitors is accessed and disseminated throughout the organisation through the concerted efforts of all functions. The central role of interfunctional

coordination in terms of establishing market orientation is highlighted by Kumar et al. (1998);

*An organization's degree of market orientation, therefore, would depend on the extent to which it successfully gathers information about competitors and customers, disseminates this information to relevant organizational units, and responds and acts on the information gathered and disseminated (p.203).*

The information derived through value-chain analysis is equally as relevant to the third component as it is to the previous two. By examining and making explicit the relationships or linkages between activity areas (organisational units), value-chain analysis facilitates “the creation of interfunctional dependency so that each area perceives its own advantage in co-operating closely with others” (Narver and Slater 1990, p.22).

Briefly, it has been established that the contemporary view of a market orientation is one which embraces information about customers, competitors, and the way in which an organisation integrates and coordinates its activities in view of this information. A market orientation incorporates industry factors (technology, competitive forces, regulations) and informed decisions about meeting customer needs must be taken in the light of these factors. To be market-orientated, a firm must integrate information and action across functional and activity areas on and about customers' needs and comparative competitor capabilities with respect to meeting customer needs. Market-orientated firms adopt a long-term view with profit as an objective and/or consequence of such adoption. Several points at which

accounting information is required for a market orientation are noted: information of the customer's costs in using the seller's product; the seller's costs to meet the range of customer attribute needs and; competitors' costs to provide comparable product attributes.

### **2.3 Market orientation, antecedents, business performance and moderating variables**

The general position in the literature is that a market orientation leads to improved business performance/profitability (Webster 1988; Levitt 1960), yet it is only predominantly over the last decade that researchers have attempted to develop valid measures of a market orientation, identify antecedent and moderating variables and investigate its influence on business profitability. With a few notable exceptions (see, for example, Greenley 1995; Fritz 1996; and Dawes 2000; Pulendran et al. 2000), most studies have been undertaken in the US and focus predominantly on large strategic business units.

Jaworski and Kohli (1993), researched 220 US companies to examine the effect of market orientation on business performance and the effect of the environmental context on business performance. A market orientation is described as comprising three activity sets - the generation, dissemination and response to market intelligence - in which organisational action or activity evidences the effective adoption of a market orientation. Three sets of antecedents (top management, interdepartmental dynamics, organisational systems) are hypothesised to relate to a market orientation and a market orientation is in turn hypothesised to be related



(amongst other outcomes) to business performance. The following filter antecedents are identified by Jaworski and Kohli as being of most significance in the attainment of a market orientation:

- Top management emphasis on market orientation is high and is communicated to employees
- Top management are prepared to assume risks when responding to market developments
- Low levels of interdepartmental conflict
- High levels of department connectedness
- Rewards linked to customer satisfaction factors
- Reasonable degree of decentralised decision making.

Studies by Van Egeren et al. (1999) and Avlonitis and Gounaris (1999) provide further support for the positive impact of management attitudes and behaviour in developing market orientation. A later replication of the Jaworski and Kohli study in Australia (Pulendran et al. 2000) finds a convergence in the results between the two countries which was “strongly indicative of the consistency of the market orientation-antecedent relationship across the two settings” (p.134).

Perhaps in response to Jaworski and Kohli’s call for further research into “the role of additional factors in influencing the market orientation of an organization” (p.65), Harris (1998a, 1998b, 2000) adopts an organisational culture perspective in identifying and researching “barriers” to market orientation. Harris (2000) focuses on the “tangible results of management actions” in researching three main

organisational barriers: structural, influencing the connectivity (or distancing) of functional areas; strategic, influencing the focus of functions on, for example, cost or differentiation; and systems, for example, interfunctional coordination systems to facilitate the flow of information between functions. Harris' findings suggest that eight organisational variables (within the three main organisational barriers) explain over 77 % of the level of market orientation displayed with an organisation (p.616). Of these variables "integration devices exert the greatest impact on the extent of market orientation" (p.615). Maltz and Kohli (2000) also find integration devices (for example, multifunctional training and the use of cross-functional teams) to play a major role in interfunctional coordination. The findings of Harris and of Maltz and Kohli are of particular relevance to this thesis which will focus, in particular, on the interfunctionality of accounting and marketing.

Whilst these studies of antecedents suggest that both management behaviour/actions/attitudes (intangible) and organisational systems (tangible) influence the extent of market orientation, it is not clear which antecedents (or bundle of antecedents) and what degree/level of adoption (high or low) of each antecedent is sufficient to engender a market orientation, and, in turn, the impact this has on organisational performance.

Dawes (2000) presents a summary of 36 studies examining the market orientation and organisational performance relationship. While many (30 of the 36 studies identified) find a positive relationship between market orientation and performance, some queries remain about the performance measurement construct. For example, in one of the studies, Jaworski and Kohli (1993) find that a market orientation has a

significant positive relationship with business performance when measured judgementally, but with the contrary finding when performance is measured using the objective measure of market share. Market share was defined as “the dollar share of the served market” (p.60) but the time period over which this was reviewed is unstated.

Recurring points of contention about the reliability of accounting information in measuring performance are noted in the literature. In the main, these points can be categorised as those that relate to the period of analysis - “short-term versus long-term view” (Narver and Slater 1990; Ruekert 1992; Jaworski and Kohli 1993; Ambler and Kokkinaki 1997; Dawes 2000) and those that relate to the accuracy and subjectivity of the measures (Narver and Slater 1990; Jaworski and Kohli 1993; Deng and Dart 1994; Balakrishnan 1996; Slater and Narver 1994; Dawes 1999).

The assessment of the relationship between a market orientation and business performance has generally been measured at a point in time, yet it is well noted that a market orientation comprises a continuum (Narver and Slater 1990; Jaworski and Kohli 1993) and that there may be a lag in the effect of a market orientation on performance (Greenley 1995). Furthermore, broad-based performance measures may not be reflective of the firm’s particular strategy. For example, in the case where a firm has adopted a ‘focus’ strategy (Porter 1980), market share as a measure of performance may not be an accurate indicator of its overall performance (Ruekert and Walker 1987).

The difficulty in establishing reliable accounting performance measures is also affected by the consistency (or lack thereof) in the definition and measurement of accounting profits and investment bases. Variations in the accounting treatment by firms may, for example, give rise to different rates of depreciation of assets affecting both profit and asset determinations. There is also the question as to whether the asset or resource base generally used in the accounting measurement of return on investment (ROI) accurately reflects the resource base of the firm. Jacobson (1990) refers to “invisible assets”, or firm specific unobservable factors (culture, management skill, access to scarce resources, accumulated customer information), that may determine business performance and which are not typically found in conventional profit (ROI) calculations.

A further problem, given limited attention in the market-orientation literature, is that business unit level performance measures may provide misleading signals where the business produces multiple products. This may result from a ‘cross-subsidisation effect’ wherein the profit success of one or several products may compensate for the poor performance of other products, with the overall or aggregated effect being one of a net increase in business profit. This aggregation effect, together with the other noted difficulties experienced in measuring *business level* performance, highlights the need for research of the market orientation-performance relationship at the *product level*. Wind and Robertson (1983) allude to this issue in developing a model of a marketing-orientated approach to strategy formulation and development.

They maintain that

*the major unit of analysis for all decisions is product positioning by market segment.... The model thus avoids the pitfall of the standardized models that focus on total product or business performance (which frequently has little to do with marketplace strategies) (p. 21).*

A similar line of reasoning is also advocated by Smith et al. (1992, p.34).

However, problems in measuring business performance persist (Deshpande 1999; Young and Ennew 2000; Uncles 2000) leading McNaughton et al. (2002) to conclude that “understanding of how a market orientation influences performance is still nascent and requires development” (p.993).

The role of moderating variables adds a further dimension in the understanding of the influence of market orientation on firm performance. Slater and Narver (1994) focussed upon the extent to which the competitive environment affects (strength moderator) the market orientation - performance relationship, and whether the environment could affect the emphasis (emphasis moderator) within a market orientation of customer versus competitor focus. Based upon the work of Kohli and Jaworski (1990), Slater and Narver (1994) hypothesise that there will be a positive impact (stronger relationship) between a market orientation and market performance where a firm anticipates (experiences) product demand from a changing customer base with changing product preferences, technology change is “slow”, competition is intense and market growth rates are low. This tends to emphasise one particular phase of the product life-cycle concept, however, and firms may experience varying customer demand and preferences, competition and growth rates depending upon

the life-cycle stage. Contrary impacts on, or relationships with, market performance may then be expected.

Further, Slater and Narver, drawing upon the work of Day and Wensley (1988), hypothesise about the impact of four elements of the competitive environment upon the emphasis of a customer or competitor orientation, with these orientations being the sub-sets of a broader market orientation. Low market-growth rates give rise to a competitor emphasis while it was hypothesised that high rates of growth give rise to an emphasis on customers and, in turn, a positive impact on performance. Similar hypotheses are established for buyer power, competitor concentration and competitor hostility. A customer emphasis, for example, is anticipated to have a positive impact on performance where buyer power is low, competitor concentration is low and competitor hostility is high.

Although some moderating variables are acknowledged as affecting a strategic orientation (McKee, Varadarajan, and Pride 1989), Slater and Narver's findings are consistent with those of Jaworski and Kohli (1993) in that little support was found for competitive environment having an effect on the nature and strength of the market orientation-performance relationship (p.53). Very little discussion surrounds the effect of the environmental moderators of market growth, buyer power, competitor concentration and hostility, on the relationship between relative emphasis (competitor analysis versus customer analysis). Within the findings, none of the multiplicative interactive terms was found to be significant, while some support was found in the partial correlation coefficients for a customer emphasis having more importance in high buyer-power markets.

By way of contrast, Greenley's 1995 study of large (5000 employees or more) UK companies found that the influence on performance of a market orientation is moderated by market turbulence. Using Slater and Narver's survey instrument, data analysis indicated that in times of high market turbulence, market orientation is negatively associated with company return on investment (ROI). Kumar et al. (1998), in a context-specific study of the health care industry in the United States of America, also found that the competitive environment (market turbulence, competitive hostility and supplier power) moderates the market orientation-performance relationship.

From an organisational strategy perspective, Ruekert (1992) examined the relationship between the extent of market orientation and organisational processes, individual attitudes and long-run financial performance of a business unit. The conceptual definitions of market orientation used in the study were very similar to other studies in this area (Kohli and Jaworski 1990; Narver and Slater 1990; Shapiro 1988). For example, while maintaining a focus on strategic business unit planning, Ruekert's definition of market orientation incorporated the acquisition and use of customer information, the development of strategy to meet customer needs, and responsiveness to customer needs through strategy implementation.

Amongst other findings, Ruekert found that higher performing business units had a higher level of market orientation and market-orientated organisational processes than lower performing business units and, that "there is a positive relationship between the degree of market orientation and long-run financial performance" (p.243). This finding is consistent with the market orientation - financial

performance relationship reported by Narver and Slater (1990), Jaworski and Kohli (1993) and Slater and Narver (2000). The implementation of business unit strategy, which is consistent with the “responsiveness” component of a market orientation as defined by Kohli and Jaworski (1990), was found to provide the strongest discriminating factor between high and low performing businesses, followed by organisational support processes of recruiting customer-orientated personnel and the reward policies used to motivate employees.

Using subjective scales (based upon Dess and Robinson 1984), Balakrishnan (1996) empirically investigated the influence of a customer and competitor orientation on business performance in the context of the machine tool industry. Four “latent dimensions” underlying customer and competitor orientations were discovered: basic market orientation; competitive benchmarking; customization and internal orientation. Basic market orientation was found to be positive and statistically significant in each of the four measures of business performance, while “surprisingly” there was found to be a “relatively weak influence” of the other three dimensions on business profitability (p.265). Balakrishnan suggests that such a finding implies that managers should pay close attention to the basic aspects of market orientation before focussing on other dimensions.

To summarise, the discussion thus far has provided an insight into the contextual factors surrounding market orientation. Antecedents that relate to a market orientation, such as management attitudes and rewards linked to customer satisfaction, have been, and continue to be, identified. Varying support has been found for the competitive and technological environment as moderators of either the



market orientation - performance relationship, or for the emphasis of the organisation on a customer or competitor orientation. Of particular relevance to this thesis has been the role of accounting information in measuring the impact of market orientation on business performance. A positive relationship has been found between market orientation and business performance when measured judgements/subjectively. However, objective measurements of performance over time have been somewhat problematic, with difficulties in the definition, accuracy and consistency of (accounting) measures used. Furthermore, while long-term profitability is an acknowledged component of a market orientation, the operationalisation of the cost and revenue components of profitability as a “decision criterion” has largely been ignored in the literature. More particularly, the role and application of cost and revenue data in the process of (or as an input in) establishing sources of advantage in the customer and competitor components of a market orientation has generally been overlooked.

The aim of the present study is, therefore, to research the role of accounting information as an *input* into a market orientation at a *product-level*. In so doing, this study aims to reduce the knowledge gap within the marketing literature while overcoming the theoretical and practical problems of definition, accuracy, consistency, and aggregation of accounting information when used as an output measure of business performance.

## **2.4 Market orientation and the accounting interface**

In reviewing the market orientation literature, four main points of interface between accounting and the components of a market orientation have been identified.

1. Information about the cost and revenue dynamics of customers in terms of their costs in acquiring and using products (Forbis and Mehta 1981; Porter 1985; Narver and Slater 1990; Zeithaml et al. 2001)
2. Information about the seller's product-attribute costs (Porter 1985)
3. Relative competitor product cost positions (Porter 1985; Day and Wensley 1988)
4. Relative competitor business profitability (Porter 1985; Aaker 1995)

Points one and two interface with the customer-orientation component of a market orientation while points three and four interface with the competitor-orientation component. The determination of cost information for both customer and competitor orientations necessitates the analysis and integration of activity-related costs across multiple functions within the organisation and, to this extent, can be associated with the interfunctional coordination component of a market orientation (Narver and Slater 1990).

In this section, these four points are examined in detail using the three behavioural components - customer, competitor and interfunctional coordination - of a market orientation as a basis to consider:

- what should be measured?
- why it should be measured?
- how should it be measured?

In doing so, while previous studies have tended to focus at a “macro” or business unit level, a detailed or “micro” analysis on the role of accounting information in the market-orientation process will be considered in order to develop a more complete understanding of its operation and contribution. Recent marketing research has noted the need for such a shift in research *from* business-unit outcome measures of performance *to* understanding the resourcing costs and benefits of investing in a market orientation (Matear et al. 2002), adopting accounting techniques such as activity-based costing (Goebel et al. 1998) for analysing financial outcomes of specific marketing activities (McNaughton et al. 2002) and developing a more complete understanding of customer profitability (Nielsen et al. 2000; Zeithaml 2001).

#### **2.4.1 Accounting dimensions of a customer orientation**

Firms may attain competitive advantage through the design of product attributes which create value for customers through better satisfying their needs and/or reducing the customers’ acquisition and product-in-use costs (Porter 1985; Aaker 1995; Goebel et al. 1998; Zeithaml et al. 2001). This suggests, indeed requires, an intimate knowledge of existing and potential customers’ plans and activities. One platform for acquiring such knowledge is the identification of customer value-chains

- primary and secondary organisational activities and the linkages between these

activities - and is consistent with customer-orientated organisations (Day and Wensley 1988).

Depending upon the size and complexity of the customer's organisation, the determination of such information may require significant time and resource commitment. Further, as Narver and Slater (1990) note,

*A seller must understand not only the cost and revenue dynamics of its immediate target buyer firms, but also the cost and revenue dynamics facing the buyers' buyers, from whose demand the demand in the immediate market is derived (p. 21).*

Thus, the cost benefit of developing and maintaining such information is an issue which management must entertain and one which may be influenced, for example, by the size (and productive capacity) of the producer and the length of the distribution channel. Notwithstanding the complexity of the buying chain, in a market-orientated organisation, cost information is required to be integrated with marketing information regarding customer (product) needs. Hence, the active maintenance of such integrated cost 'intelligence' may represent an additional indicator of a market (customer) orientation within an organisation.

Forbis and Mehta (1981) maintain that the development of cost information about customer product benefits is a source of sustainable competitive advantage. Their EVC (economic value to the customer) concept examines the value of the total product attributes to the customer by taking into account the life-cycle costs to the

customer of the product including, for example, the acquisition costs (purchase price, freight, insurance, installation), start-up costs (technical training, down time, floor space), and post-purchase costs (repairs and maintenance, inventory associated costs, power, continuing training). Value in this case is derived by considering the product in wider terms encompassing attributes such as delivery reliability, brand name, financing, technical assistance and service response. Economic value to the customer is determined by comparing the life-cycle costs of the seller's product with that of a reference or competitor's product.

Forbis and Mehta (1981) argue that economic value may vary for each customer group depending upon the application of the product by the customer. The different ways in which the product is used, and value is derived, by the customer is proposed as a means by which the market can be segmented. For example, different operating conditions of the customer may give rise to variations in their post-purchase costs. Different EVC's need to be calculated by the seller and may be influenced by customer characteristics such as intensity of product usage, rate of growth and nature of the product's application. Competitive advantage may be acquired by the seller through

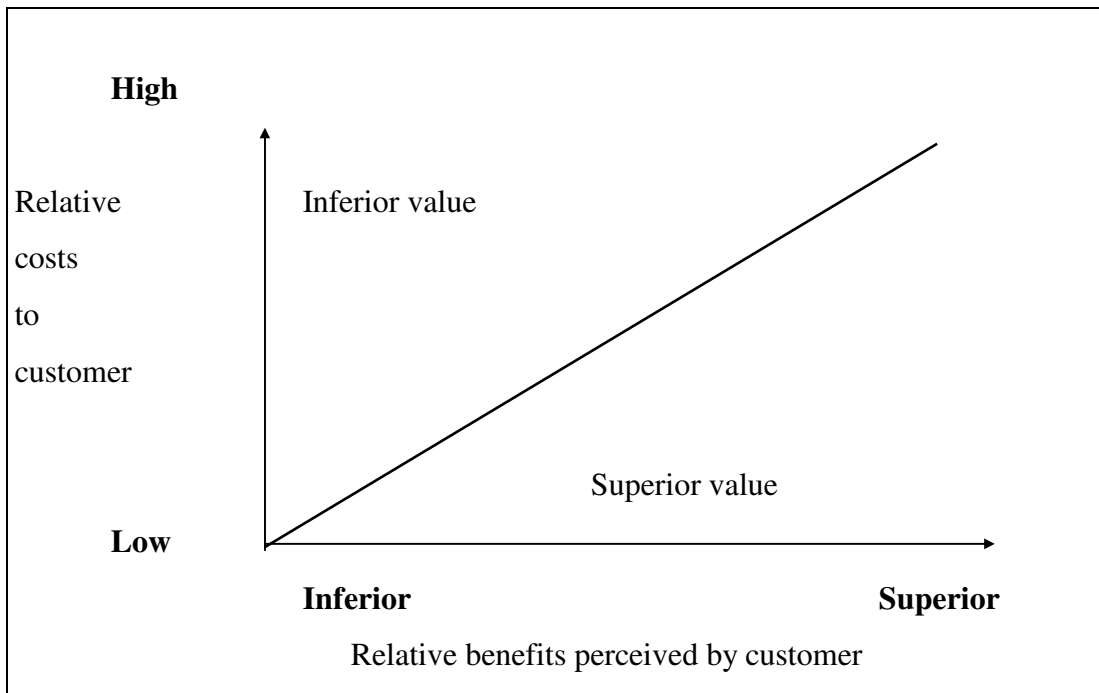
*redesigning the product to reduce the life-cycle cost or to alter the ratio of the customer's front-end costs to his post-purchase costs (p.38).*

For example, some customers who are constrained by cash flow may favour a product with lower acquisition costs. The EVC approach requires moving the thinking of the firm from a focus on product costs to one of thinking about the

economic value of the product attributes/benefits to customers. As value is derived by customers from various activities across the functional areas of the selling firm, the need for interfunctional coordination within the selling organisation would appear necessary for the successful adoption of the EVC approach, an issue which is discussed further in section 2.4.3.

Day (1990) and Smith, Andrews and Blevin (1992) maintain similar positions to Forbis and Mehta in terms of the seller establishing customer value by reference to the customer's perceived elements of value in the product or service benefits offered. Product benefits are noted as extending "beyond the functional features of a product and include intangible qualities such as warranties, packaging, availability, brand image..." (p. 25). Day refers to these benefits as the "augmented product" the value of which is derived from the value-chain support "activities and systems for delivery and service" (p.140).

Smith, Andrews and Blevin maintain that a firm can establish a measure of competitive advantage by considering the customer's judgement about the product benefits received for the price paid versus comparable competitor offerings. From a customer's perspective the product of "best value has the largest spread between perceived benefits and perceived costs" (Day 1990, p.132). This can be depicted as follows:



**Figure 2.1 Product value - costs and perceived benefits** (adapted from Day 1990, p.133.)

As noted, in order for a firm to determine the extent of its product value to customers its position relative to competitors has to be known. This competitor comparison further evidences the need for selling organisations, firstly, to have a detailed knowledge of product attributes (benefits, characteristics, features) required by customers and, secondly, to have an understanding of product-attribute costs for the purpose of establishing product profitability and/or setting selling price.

This second point is important in so far as meeting customer's needs at a financial loss is not consistent with either organisational objectives or the consequences of adopting a market orientation. By way of example, Kohli and Jaworski (1990) cite one organisation which, in endeavouring to better meet customer needs, reduced production batch size with a consequential decrease in financial performance.

Detailed product cost information over time, and across the range of the seller's

organisational activities, would therefore seem essential if long-term profit is a demonstrated objective or desired outcome of the firm.

The issue of activity-cost determination is one which has been the subject of substantial discussion in the strategy literature (see, for example, Porter 1985; Stabell and Fjeldstad 1998). While much of the discussion has centred around the cost of the business unit activities and the linkages to customer and supplier value-chain positions, knowledge at the product or unit level is equally appropriate and necessary (see, for example, Aaker 1995, pp. 140-141).

The extant marketing literature suggests, however, that at the product level, costing/profitability analysis is not well developed, and, that marketers lack an understanding of the financial impact of their decisions (Webster 1981). This said, a study by Lambert and Sterling (1987) about the type and quality of financial information used by marketing executives and top management found that marketing managers were concerned about product profitability and contribution margins and that reports of this nature were being used extensively. “However, the breadth, frequency, and composition of these reports varied considerably across firms” (p. 298). While product-line and product-profit reports were prepared by 66% of respondents, there was “considerable variability” in the costs included in reports.

The variation in reports perhaps reflects the unresolved academic issue that surrounds the appropriate items for inclusion in product profit-reports and the way in which costs are classified and allocated. For example, Sevin (1965), advocates



the collection of costs into functional or marketing activity groups, including storage and shipping, and order processing. Costs are determined by the level of activities in each area. This activity-based costing (ABC) approach has received some recent support within the marketing literature. For instance, Goebel et al. (1998) maintain that

*To engage in market- and customer-oriented activities without a full understanding of the financial implications of such activities is bad business (p.506).*

This said, Goebel et al. further note that

*Despite the apparent usefulness of ABC information in enhancing marketing performance, no definitive studies exist that specifically address the impact of ABC information on marketing decision making (p.506).*

A study by Nielson et al. (2000) indicates the movement of Danish financial service companies (banks, insurance companies and mortgage credit institutes) towards improved accounting for customers. Planned changes, or accounting systems currently in use, include the adoption of ABC, “attachment of costs to specific activities” and “to specific customers” (p.276). Several barriers to overcome in implementing customer-orientated accounting systems are noted and include the need for cross-functional sharing of responsibility and involvement in customer accounting activities and the support of top management. Perception of the need for, and the resources involved in, more “sophisticated” accounting information

systems were also noted as factors likely to affect change, particularly in smaller companies. These barriers and factors parallel those noted in previous studies (see, for example, Harris 2000) on developing market orientation and reviewed in section 2.3.

Goodman (1970), suggests an emphasis on relevant costs with product profit reports clearly separating 'traditional' line item expenses into variable and fixed components. Direct product profits are then determined prior to the deduction of fixed operating and non-operating costs of the division or business unit (the costs of which are argued to be irrelevant to short-term decision making). See Table 2.1.

<b>Proceeds from sales</b>		100
<b>Variable cost of goods sold</b>		
Raw Materials	10	
Packing	10	
Direct labour	5	
<b>Variable gross profit</b>		75
(manufacturing contribution margin)		
<b>Other variable expenses</b>		
Freight	3	
Warehousing	2	
Spoilage	1	
Commissions	5	
Discounts	3	
<b>Variable profit</b>		61
(distribution contribution margin)		
<b>Direct product costs</b>		
Advertising	9	
Promotion	3	
<b>Direct product profits</b>		49
<b>Direct division costs</b>		
Sales management	12	
Product management	3	
Sales force	2	
Sales incentives	1	
Market research	1	
<b>Division profit contribution</b>		30
(net contribution margin)		
<b>Allocated period expense</b>		
Factory overhead	21	
Supervision	4	
Other overhead	19	
Corporate administration	5	
<b>Net division profit before tax</b>		(19)

**Table 2.1 Specimen of Goodman’s adaptation of the Income statement for Marketing Profitability Analysis** (Goodman 1970 (p.38) cited in Bonoma and Clark (1988))

Much debate centres around the determination and methods of allocation of variable and fixed product costs. Whereas Sevin (1965) advocates “full product costing”

(incorporating an allocation of fixed production costs) based on activities, Goodman (1970) suggests the separation of variable and fixed costs. In the Lambert and Sterling (1987) study, many allocations of variable and fixed costs such as selling (advertising and promotion) costs, transportation charges, and corporate overhead and administration were based upon sales or cost of sales. Twenty-five years before, Schiff and Mellman (1962), in undertaking research into the analysis and allocation of marketing costs, reported that 22 out of 36 companies preparing product-profit reports used a single basis of allocating total functional costs, while the literature suggested the use of multiple bases depending on activities. Many argue that this (single sales or sales-related) basis of allocation is not an accurate reflection of the way in which costs are incurred and may lead to a distortion of product profitability (Sevin 1965; Mossman et al 1974; Dudick 1987; Cooper and Kaplan 1988; Goebel et al. 1998).

The degree of variation in the way in which product costs are calculated and reported may be explained by the multiple purposes for which the information is used (Beik and Buzby 1973). For example, the separation of relevant or fixed and variable costs associated with products facilitates short-run break-even and product-mix decisions (Powers 1987; South and Oliver 1992; Kortge 1984). Direct product-profit reports of the type in Table 2.1 may be used to judge the product manager's performance, while full manufacturing product costs (fixed and variable) are required to meet financial accounting standards. Hence while "the jury is still out" on the decision as to which method of determining product profitability is correct, it may well be that the answer will depend in many cases upon the purpose for which the accounting information is required. Furthermore, the accounting discipline has

been criticised by many for not providing information of relevance to product-decision making and lacking user orientation, for example, with reports not developed for marketers (Johnson and Kaplan 1987; Lambert and Sterling 1987; Porter 1985; Mossman et al. 1974). The relatively recent development of, and support for, activity-based approaches to customer and product costing has seen a response to this criticism by the accounting discipline. However, the lack of comparable product accounting information across firms may be one reason why competitive-profit analysis is undertaken at a business unit level where the aggregation of information removes the issues surrounding cost allocation and product-cost determination.

However, within the present context of market orientation, “the costs of satisfying customer needs” may be a better description and object for reporting than product cost/profitability. Clearly, product-profitability reports of the type discussed above which emphasise, in the main, the costs associated with the physical product (and its distribution and selling costs in some cases) do not report the array of product-attribute costs associated with meeting customer needs. Customer-needs satisfaction gives rise to resource costs across the firm, costs which are driven by both the characteristics of the physical (tangible) product and by characteristics of the customer (intangible) needs. Hence, it is suggested here that the reporting and analysis of a more robust definition of ‘product cost’ should be adopted, one which incorporates the costs of both tangible and intangible product needs of the customer. This suggestion is one which will be developed further in this thesis and has received some attention within the accounting literature (Ch 3).

However, the marketing literature generally has tended to distinguish between product cost/profit information (Table 2.1), and customer cost/profit information, i.e., customer profit analysis is undertaken separately (Zeithaml et al. 2001). This may be because of an increase in interest in relationship marketing (see, for example, Helfert et al. 2002; Van Raaij et al. 2003) and/or the different cost driver characteristics as noted above. For example, changes in the number (more) and size (less items) of deliveries and the provision of credit terms to meet the needs of a particular customer, will affect the seller's cost position and the resultant profitability of that customer. However, in this instance, there is no change in the physical or tangible product. The greater the diversity in needs of customers, or customer groups, the greater the likelihood that the seller's activity-related resource costs will vary. Profitability will vary and be driven by different sets of customers. This discussion leads us back to the proposition by Forbis and Mehta (1981) about the need for segmentation of markets based upon the different ways in which the product is used, and value is derived, by the customer (see also Beik and Buzby 1973).

To summarise, the points of interface between accounting and the customer orientation component of a market orientation reveal three interrelated areas in which accounting information is required:

- (i) measuring the cost and revenue dynamics of the customer in terms of acquisition and product-in-use costs;
- (ii) measuring the costs of the seller in meeting the customer-specified product attributes; and

(iii) measuring profitability of the seller's customers (derived from (i) and (ii) above)

All three areas require the identification and specification of the customer's product-attribute needs, some of which relate to the physical or tangible product, and some to the intangible benefits or characteristics of the customer's needs.

To meet customer needs profitably, including the reduction of customer acquisition and product-in-use costs, the seller needs to articulate the cost of organisational resources required and establish a selling price, which, while yielding a profit, is perceived to represent value in the eyes of the customer. Product-profit reports, as noted in the marketing literature, are insufficient for these purposes as they do not incorporate the cost of activities incurred across the firm's value-chain, costs which are driven by both the tangible and intangible product needs of the customer. Some criticism for this situation has been levelled at poor accounting system design and limited accounting knowledge of marketers. The need for more customer-orientated accounting information has been noted within the relationship marketing and market orientation literature.

Having made explicit the accounting requirements of a customer orientation, the aims of this study are to investigate the extent to which the accounting literature reports techniques/methods which meet these requirements (Sections 3.3 - 3.4) and to examine the way in which customer and accounting information are integrated in practice (Ch 6 -10).

#### **2.4.2 Accounting dimensions of a competitor orientation**

For an organisation to establish the profitability of its competitive product position, information is required about its competitors' capabilities of satisfying the same customer product needs. That is, the seller must have substantial "intelligence" about current and potential competitors' costs of supplying comparable product attributes (Brock 1984; Forbis and Mehta 1981; Bennett and Cooper 1981; Day and Wensley 1988; Day 1990).

The process by which this competitor cost analysis is undertaken at a product level is not well documented in the marketing literature (Brock 1984). Furthermore, the literature is devoid of empirical studies. Forbis and Mehta (1981) stress the importance of maintaining cost data about competitors at a product level, particularly as it relates to customers' product-in-use costs. Smith, Andrews and Blevins (1992) suggest that in determining competitive position a firm should consider the customer's perspective, i.e., how the customer views the benefits received for the price paid for a given product from different sellers. Both of these views see competitor product-level analysis as integrated with a customer orientation and are consistent with the discussion above that accounting information regarding 'product cost' should incorporate all value-chain activity costs that the seller incurs in the process of meeting customer needs. In any competitor product-cost analysis, the product attributes required by the customer must first be identified before cost determination and competitor comparison can be undertaken. While the literature is replete with information concerning the nature and characteristics of product attributes (Myers and Shocker 1981; Jaccard et al. 1986), costing, in



particular, information about competitor cost comparisons, of product attributes, is limited.

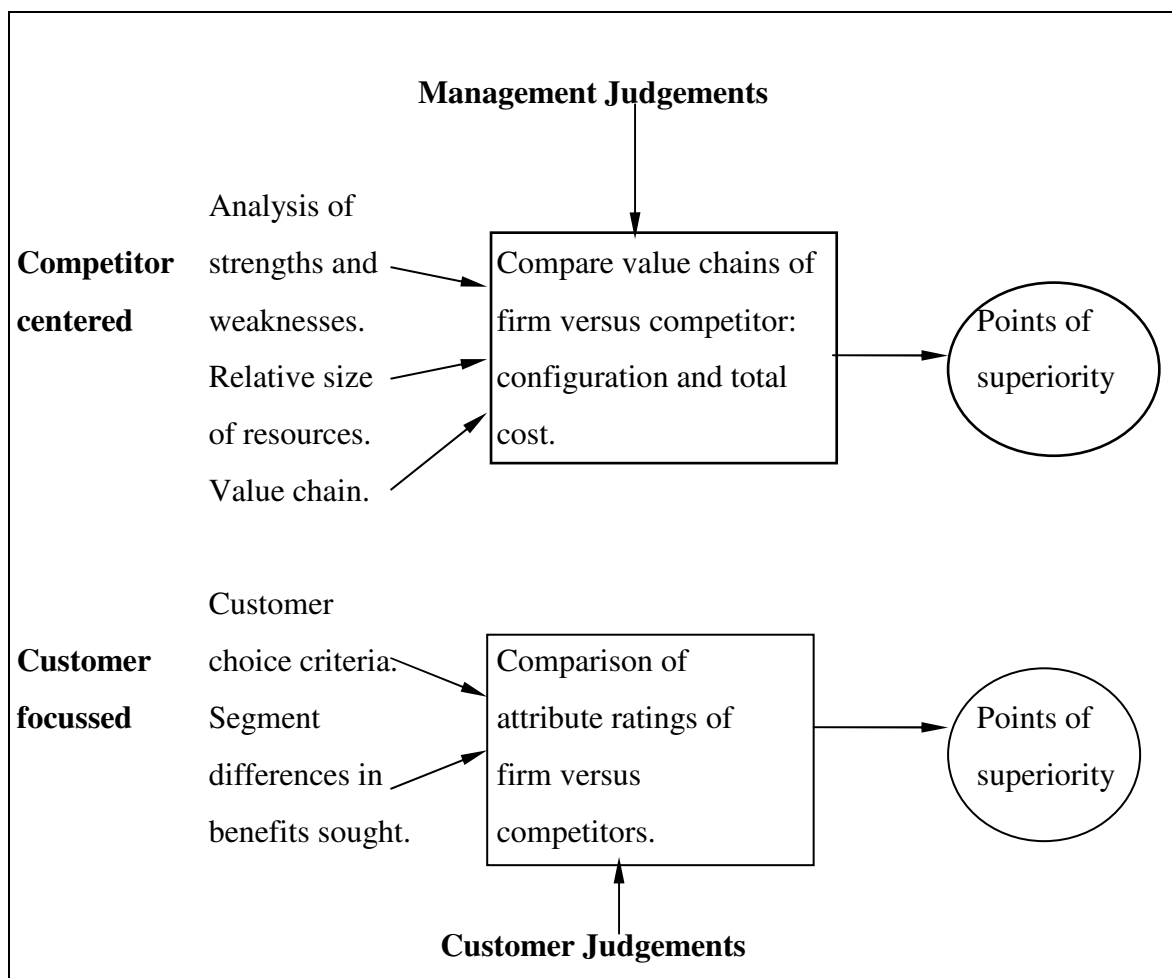
Smith, Andrews and Blevins (1992) suggest that “the degree of competitive advantage of a product/service can be measured in the “benefit spreads” and the “price spreads” between that product (*the sellers*) and competing products” (p.26). Implicit in these “spreads” are the costs of the seller in providing the benefits, however, these costs remain unspecified, with the benefits being ranked and weighted by customer opinion. Hence, the cost of the “bundle of benefits” that is presumably reflected in the product selling price is not known, making competitor-cost comparison far from precise.

Brock (1984), while acknowledging the importance of value delivered to customers in terms of perceived benefits, divorces cost analysis from value analysis as “value analysis is well established as a strategic tool” and in mature commodity-type industrial-product markets, there are limited variations in products offered (p.226). In looking at approaches to competitor-cost analysis Brock focuses on company break-even analysis, which locates the discussion of costs very much back at a business level while the much noted importance of product value and “benefit costs” remains unaddressed.

A comprehensive discussion of customer attribute competitor comparisons is detailed by Day (1990), and is noted as “the critical step” (p.143) in assessing competitive advantage. Day advocates the use of customer judgements in determining the value of the product attributes offered by the sellers. In this

process, product attributes are ranked by customers in terms of importance and “diagnostic insights come from attribute-by-attribute comparisons with competitor ratings” (p.143).

A logical conclusion to the competitor comparison of product attributes as suggested by Day, is a competitor cost comparison by product attribute. However, rather than discuss attribute costs, Day (1990) shifts the discussion from a product attribute level to a business level, choosing to focus on competitors’ relative value-chain (business-unit) cost positions and the weighting between customer and competitor emphasis (Fig 2.2).



**Figure 2.2 Comparing competitors** (Day 1990, p. 158)

In a “customer-focussed” approach, product-attribute information is analysed and competitive advantage, or points of product superiority, are identified. In a “competitor-centered” approach, comparative cost information at a value-chain level is used to determine advantage. Day suggests that a balance of both approaches is necessary to avoid risks inherent in focussing on one. For example, in a customer-orientated approach

*it is seldom apparent how attributes that are important to customers are influenced by activities in the value chain (p.159).*

while a competitor focus on costs and resources may result in deflecting attention away from changes in customer requirements which may, in turn, result in changes in the importance of product attributes and/or the introduction of new attributes.

If we integrate or balance both “competitor-centered” and “customer-focussed” information as Day suggests, and which studies have shown is consistent with a market orientation (Kohli and Jaworski 1990; Slater and Narver 1994), the *cost* of the product attributes identified and rated by customers (Fig 2.2) is subsumed within the “competitor-centered” comparison of value-chain configuration and *total cost*. In other words, there is no competitor cost comparison at an attribute level. The present writer contends that this situation brings with it a major limitation.

While each business is composed of its own assets, costs and revenues, it may produce more than one product. Therefore, to undertake competitor product attribute cost analysis in a multi-product setting will require: (i) the identification

and extraction of detailed cost data about product attributes from the business unit's accounting system, i.e., a disaggregation of cost data; and (ii) comparable product attribute cost data of competitors. Such data may not be available, or in the format required, if the firm relies predominantly on aggregated cost information at a business unit level for competitive intelligence. Many have acknowledged the failure of accounting systems to provide relevant information of the type described here (Porter 1985; Day 1990; Johnson and Kaplan 1987; Hergert and Morris 1989) and this may go some way to explaining why competitor analysis has been situated at a business unit level and why discussion of competitor product-attribute cost analysis has received limited attention in the literature. As noted in section 2.3., the value of business level or total product performance information (of which cost/revenue/profit forms a substantial element) has been questioned when developing a market-orientated approach to strategy.

In sum, the marketing literature is clear on the importance of identifying product attributes and undertaking competitor comparisons to determine positions and sources of advantage, however, this discussion is centred at a business-unit level. What is not well explicated in the theory is the way in which competitor-cost analysis of product attributes is operationalised. While value-chain analysis provides a framework in which costs may be attached to activities which may then be compared to estimated activity costs of competitors, the assignment of activity costs to product attributes has not been satisfactorily resolved. At a practical level, this may be due to difficulties in obtaining relevant information from the accounting system unless the system has been designed specifically to capture costs about product attributes. This seems unlikely given the discussion in section 2.4.1 of

studies that have shown inconsistencies in the type and format of product information reported to managers, the tendency toward the arbitrary allocation of (production operating) overhead to products and the treatment of support activity costs as period costs rather than product costs.

Consequently, a further aim of the current study is to examine both the extant accounting literature (S 3.5) and organisational practice (Ch 6-10) to identify the extent to which methods/techniques have been developed for competitor-cost analysis at the product attribute level.

#### **2.4.3 Accounting dimensions of interfunctional coordination**

Interfunctional coordination is the third behavioural component of a market orientation in which points of interface with accounting can be identified. That the need for functional integration within a market-orientated firm is paramount is well acknowledged in the literature (Narver and Slater 1990; Wind and Robertson 1983; Webster 1988; Ruekert and Walker 1987; Porter 1985; Shapiro 1988; Deng and Dart 1994; Gray et al. 1998). Within the market-orientation context, integration of the firm's functional areas and activities is necessary to ensure the optimal utilisation of organisational resources to satisfy customer needs competitively and is therefore intricately interlinked with both the customer and competitor components as discussed above. As Webster (1988) suggests, the focus of the entire business should be on creating superior value for buyers.

Similarly, Deng and Dart (1994) identify that interfunctional coordination requires *all* areas of the organisation to take *responsibility* for sharing market information and coordinating efforts to service the market (p. 727).

It follows that, as a function within the structure of an organisation, accounting should be integrated with other functions and be as equally focussed on creating superior value as are other functional areas within the organisation. However, the integration between accounting and marketing has received relatively little attention in the literature, with marketing being “isolated” from accounting and the financial consequences of decisions (Wind and Robertson 1983; Webster 1981). This said, there are recent indications within the marketing literature, perhaps spawned by the market orientation research, that the marketing - accounting “interface” warrants greater attention (Srivastava et al. 1998; Maltz and Kohli 2000; Roslender and Hart 2002, 2003).

Accounting’s interface with the interfunctional component of a market orientation essentially involves an amalgam of the customer and competitor orientations as discussed in sections 2.4.1. and 2.4.2. In this role, accounting information is required in order to determine the cost of the seller’s resources used to meet customer needs and for a comparison of competitors’ costs. This information is collected from a range of activities and functions of the firm and to this extent accounting integrates information from a range of functions.

However, accounting information is also used to evaluate different alternative cost positions of meeting customer needs that may, for example, be derived from

different configurations of, or ways of coordinating, activities of the firm. Hence, an additional, but not mutually exclusive, point of interface between accounting and interfunctional coordination relates to the measurement of the cost of alternate uses of resources (Goebel et al. 1998) brought about by the way in which functional areas integrate and coordinate their activities.

For example, satisfying customer needs involves the identification and delivery by the seller of a range of product attributes (benefits, characteristics, features). By identifying attributes and detailing the operational processes and activities involved in their production and delivery, the cost of the various activities may be determined while also providing a template for examining the efficiency of the process involved.

This information may then be used (cross-functionally) to examine alternative ways in which superior value may be created for the customer by lowering the cost of product attributes and/or enhancing buyer performance (Porter, 1985). For instance, by improving coordination between purchasing and production activities, inventory costs of raw material may be reduced, cost reductions which may, in turn, be passed on to customers. Through improving coordination and linkages of the design, marketing and production functions, the performance characteristics of the product (e.g., reduced weight - allowing quicker and easier handling) may be improved thus facilitating improved performance of the product in the customers' hands.

Improved product performance may reduce the buyer product-in-use costs while differentiating the seller's product from others in the eyes of the customer.

Clearly, the cost benefit to the firm of the alternative ways of delivering product attributes cannot be fully determined without an understanding of, and reference to, the customer and competitor components of a market orientation. This recognises the dynamic nature of business change wherein the improved coordination of a firm's functional activities may also be matched by competitors and/or the outcome of the improved coordination may vary in terms of perceived value by the customer.

However, how the accounting and marketing (and other business) functions coordinate their customer- and competitor-related activities is not well reported within the literature.

## **2.5 Summary**

In this chapter, the philosophical and implementation issues of the marketing concept, with particular emphasis on the interaction between marketing and accounting, have been considered. There is a general consensus in the marketing literature that a market orientation requires a detailed knowledge of: customers' existing and potential wants and needs; a detailed knowledge of competitors' (and potential competitors') relative ability to meet customer needs and; integrated coordination of the firm's activities. There is also general agreement within the marketing literature that the satisfaction of customer needs should be at a profit to the selling firm. Accounting plays an integral role in implementing a market orientation by providing cost information about the product attributes required by the customer, the relative position of the firm with respect to its main competitors, and the changes in product cost likely to be experienced by changes/improvements



in the configuration and coordination of the activities of the firm. Accounting also participates in a market orientation by providing an outcome measure of business performance with many studies finding a positive relationship between a market orientation and performance.

At a product level, “cost” is broadly construed to incorporate the cost of attributes (benefits, features, characteristics) from across a range of primary and secondary value-chain activities, reflecting that value is derived by customers from more than just the core or physical product.

Information derived by the firm through a value-chain analysis of its activities as well as that of its customers and competitors provides the necessary ‘intelligence’ with which the selling firm may identify positions of advantage. Competitive advantage may be derived by establishing a low-cost position for comparable competitor product attributes and/or from differentiated (superior) product attributes.

However, given the potential advantage to be gained by the firm through integrating accounting and marketing information, the marketing literature provides little detail on the way in which accounting information is, in fact, utilised, with the notable exception being the literature related to the market orientation - business performance relationship (which, as discussed, has problems of its own) and the recent work of Roslender and Hart (2002, 2003). While the determination of product attributes that yield superior customer value is arguably the source of greatest potential advantage to the firm, the operationalisation of cost information at

a product level has been identified as inadequate. The extant marketing literature reveals, and more recently acknowledges the need for redressing, inconsistent methods of reporting product costs across organisations, distorted product costs resulting from ‘traditional’ (sales-based) cost allocation of overheads, and the failure to incorporate the costs associated with product attributes derived from a range of activities (primary and secondary) within the firm.

Three key questions identified in section 2.4 regarding accounting information for a market orientation have been answered:

**What** should be measured ?

The cost of the resources used to produce the product attributes required by the customer. To ensure profitable success, the firm should also measure the competitors’ cost position on delivering comparable product attributes.

**Why** should product-attribute costs be measured?

Accepting the marketing concept’s dictum that the purpose of the organisation is the creation of a satisfied customer at a profit, then detailed knowledge of customer needs and the costs to meet those needs is paramount. Aggregated cost and revenue information at a business-unit level is insufficient in that it fails to highlight product attribute and market segment information and is too far removed from the customer-orientated information required for a market orientation.

**How** should this information be determined?

Customer product needs are satisfied by a combination of product attributes (benefits, characteristics, features) derived from a range of activities within the organisation's value chain. By documenting the process by which the attributes are derived and configured, the costs of the activities associated with each attribute (or significant attributes) may then be accumulated and a product-attribute cost determined. Information about the processes and activity costs associated with product attributes also provides a basis for evaluating ways to lower cost and is consistent with a market-orientated approach of generating, disseminating and responding to 'intelligence'.

The answers to the three questions indicate that accounting information is an important element of a market orientation. With this in mind, the aim in the following chapter is to examine the extant literature on accounting to determine to what extent its methods and techniques address the requirements of a market orientation. The focus of discussion will be confined to those points of interface between accounting and the three behavioural components of a market orientation - customer, competitor and interfunctional coordination - in which accounting's role is one of an input measure at a product level rather than an output measure of performance at a business unit level. Central to the product level issue is the way in which, if at all, accounting provides for the costing of product attributes, information which is of importance to, and involves, all three components of a market orientation.

## Chapter 3

### Literature review - management accounting

*It was and is rare that the accounting executive has seen fit to explore and expand his role as a marketing-oriented financial man. Yet it is almost inconceivable that the true management accountant would find himself isolated from this dynamic world which makes business spin.*

Goodman (1967, p.28)

In the previous chapter, marketing literature was examined and the points of interface between marketing, more particularly, a market orientation, and accounting were identified. A market orientation was described as incorporating three major components - customer, competitor and interfunctional coordination - in which accounting information is utilised as an input measure in decision-making processes and as an output measure of business performance.

While some detail about the use of accounting as an output measure is found within the marketing literature, little evidence of the use of accounting information as an input measure exists and with some concerns noted regarding the relevance of the existing accounting information for market-orientated decision-making. In short, the discipline of marketing had not well integrated information from accounting. In this chapter the reciprocal position is considered i.e., to what extent has management accounting integrated information from marketing.

This chapter is presented as follows: first, management accounting is defined and discussed within the context of developments that have taken place in the discipline over the last decade in response to purported “failings and obsolescence of cost and performance measurement systems” (Kaplan 1994, p.247). Second, the component parts of a market orientation, as discussed in Ch 2, are briefly reviewed together with those points at which accounting information is implicated. Each point will form the basis of a detailed examination of the extent to which the accounting literature contributes to the accounting needs and limitations of a market orientation. In the final section the points at which management accounting contributes to the market orientation debate are summarised and the limitations and benefits of the existing literatures contribution are identified.

### **3.1 Management accounting**

Accounting literature has generally distinguished two types of accounting: financial and management. Financial accounting is principally concerned with the provision of accounting information about an organisation’s past performance, has an external financial reporting orientation (shareholders, investors, finance providers) and is bound in its style, content and format by professional accounting standards and reporting requirements in addition to legislative and stock exchange requirements. Its perspective is historical with an emphasis on what has taken place in the past, and, to this extent, financial accounting can be viewed as a score-keeping function.

Given the nature of financial accounting, its information value in terms of managerial decision making has been described as less than ideal (Bromwich 1988; Johnson and Kaplan 1987). The discussion in this thesis will centre on management

accounting, in which information content, perspective and format are not generally bound by professional or legislative regulation and is focussed on the information needs of those within the organisation.

Management accounting has been described by the International Federation of Accountants (IFAC 1989) as the process of identification, measurement, accumulation, analysis, preparation, interpretation and communication of information (both financial and non-financial), which is used by management for planning and control, and decision making. A casual review of mainstream management accounting texts (see, for example, Horngren, Foster and Datar 1994; Drury 1992) also finds a consensus that management accounting relates to the provision of information for people within the organisation to assist in decision-making. Management accounting has evolved from the more narrowly defined “cost accounting”, which emphasised the calculation of (manufactured) product costs for the purpose of inventory valuation in external financial reporting (Drury 1992; Wilson and Chua 1993). This said, some references continue to use the terms management accounting and cost accounting synonymously. Further reference in this thesis to accounting should be taken as a reference to management accounting and its provision of information for management activities such as planning, control and decision making and one which incorporates cost accounting information.

While the definition, the role and scope of management accounting are substantially broad enough to pervade all the information requirements of organisational management (Drucker 1974), the discipline has faced criticism for providing information which is out-dated and somewhat simplistic in terms of its product

costing techniques (Johnson and Kaplan 1987; Kaplan 1984; Cooper and Kaplan 1987), too focussed on internal historical cost information (Howell and Soucy 1987) and lacking in strategic direction (Shank and Govindarajan 1988). This criticism may stem from the emphasis of accounting on particular aspects of “management” to the detriment of other, arguably equally important, aspects, or what Wilson and Chua (1993) refer to as “aspects of managerial accounting which are unexplored by existing definitions” (p.12).

For instance, with few notable exceptions (for example, Simmonds 1981, 1982, 1986), it is only relatively recently that the literature has substantially entertained the notion of accounting for *strategic* management issues (see, for example, Shank and Govindarajan 1988; 1989; 1992a; Ward 1992; Ryan 1995; Bromwich 1990; Roslender 1995; Bhimani and Keshtvarz 1999; Brouthers and Roozen 1999; Guilding et al. 2000; Roslender and Hart 2002). As Lord (1996) notes, most of the papers published in the UK journal, *Management Accounting*, on the topic of strategic management accounting now “emphasise the extension of traditional management accounting’s internal focus to include external information about competitors” (p.348). Despite this extension of emphasis, Guilding (1999) notes the lack of competitor-orientated research within the management accounting literature.

A more external or outward looking approach is also reflected in the management accounting literature by an increased recognition of “customers” wherein customer satisfaction is viewed as a (dominant) contemporary management theme which may require a re-evaluation of the existing management accounting information (see, for example, Horngren, Foster and Datar 1994; Bromwich 1988, 1990; Howell and

Soucy 1990; Guilding and McManus 2002). Research by Roslender and Hart (2002) signals this need for a re-evaluation by highlighting the importance of management accounting information for brands - "brand management accounting" (p.271) - and the need for an accounting focus on "customer value".

These more recent shifts in emphasis may go some way to addressing the unexplored aspects of managerial accounting definitions although not necessarily those alluded to by Wilson and Chua (1993). In a critique of professional definitions, Wilson and Chua maintain that definitions of management accounting fail to include reference to non-financial information which may be of relevance to management (although this has been addressed in the IFAC definition cited above); adopt an overly rational economic perspective of decision-making within organisations; and do not adequately address the organisational and social context of management accounting systems (p.12-15). While it is not the purpose of this thesis to examine in detail the issues that surround the definition/s and role of management accounting, this aspect is raised to indicate the 'state of play' within the discipline and to provide a setting within which recent developments in management accounting can be examined.

In brief, it may be said that as a consequence of some recent criticisms within the discipline, management accounting has (finally) been forced to re-examine its role and scope in terms of the provision of relevant (customer- and competitor-orientated) information to management. Some developments have been instituted over the past decade which go some way to addressing these criticisms. In the following sections of this chapter, the extent to which these developments address



the accounting needs of a market orientation are explored and provide an insight into the extent of (implied) integration between accounting and marketing information.

### **3.2 Market orientation and accounting information**

A market orientation involves the determination of information or “intelligence” about customers, competitors and the integrated coordination of the organisation’s activities. Accounting information, in particular, cost information, is a component of market intelligence and contributes to the establishment of levels of profit and positions of competitive advantage. In Ch 2, points at which accounting information was of most relevance to the three components of a market orientation were identified as follows.

#### **Customer orientation**

- (i) cost and revenue details regarding the customer’s acquisition and product-in-use costs;
- (ii) costs of the seller incurred in providing the customer-specified product attributes; and
- (iii) revenue generated from customers, which when combined with (ii) above allows customer profitability to be ascertained.

Points (ii) and (iii) are clearly interlinked and could be seen as two parts of the same point. These points were, however, addressed separately in Ch 2 as it was found that the literature on product costing included costs mainly associated with the physical (manufactured) product rather than the costs of product attributes

(characteristics, features, benefits) - a weakness or limitation of the accounting information - and that the related matching of revenues was inappropriate as it did not match customer sales with the complete costs of providing the customer with the product, i.e., all product attributes.

### **Competitor orientation**

competitors' (existing and potential) costs of providing comparable customer-specified product attributes.

A competitor orientation clearly requires the use of accounting information developed as part of a customer orientation thus enabling a competitor-cost comparison to be undertaken at the same (product) level. It was noted as a limitation within the marketing literature that the process and/or application of a competitor product-cost analysis is not well developed and that most discussion of competitor analysis centred on business-unit cost comparison.

### **Interfunctional integration**

cost information about the ways in which various configurations of the value-chain activities and processes affect the firm's cost position relative to competitors in respect to providing product attributes.

This component of a market orientation incorporates both the customer- and competitor-orientations, while drawing together information from across a range of activity areas within the organisation. All activity/functional areas that affect the provision of the attributes of importance to customer needs are implicated in so far

as their action and interaction generates resource costs and positions (or lack thereof) of advantage. Value-chain analysis (Porter 1985) is proffered as a means of determining the information required from within the organisation and about competitors' activities and cost positions.

For accounting information to be relevant, accurate product attribute (marketing) information is essential, while for the determination of product market advantage and profitability, accurate cost and revenue (accounting) information is equally so (Day 1990). The need for the integration of marketing and accounting information is evident within the marketing literature, yet the discussion of relevant accounting information is marginal at best, failing to articulate the accounting techniques appropriate within a market orientation, in particular, recent developments reported within the management accounting literature. From a strategic management accounting perspective, Roslender and Hart (2002) synthesise many of these techniques as a part of a "generic approach to strategic positioning" and one which incorporates "a greater marketing content" (p.269).

Taking a market orientation as the point of departure, techniques and recent developments in management accounting are discussed in detail below by reference to the five main points of interface between accounting information and a market orientation; customer acquisition and product-in-use costs, the seller's product-attribute costs, competitor product-attribute costs, competitor business-unit cost positions and profitability of customers to the seller.

### 3.3 Customer acquisition and product-in-use costs

An understanding of the cost and revenue dynamics of the customer and the “customer’s customer” (where an extended distribution channel is in operation) is a key element of a customer orientation (Narver and Slater 1990). This element is founded upon the notion that customers’ needs are best satisfied by providing products which offer the greatest (economic) value in use relative to alternative products (Forbis and Mehta 1981).

Porter (1985) sees value as resulting from the linking of the value-chain activities of the seller with the value-chain activities of the customer and is consistent with the argument in this thesis that customer needs are satisfied by the seller from a range of product attributes involving multiple functions and activities of the firm. As Porter notes:

*Anything a firm can do that lowers the buyer’s total cost of using a product or other buyer costs represents a potential basis for differentiation. ....There are frequently many ways to lower buyer cost if a firm has a sophisticated understanding of how buyers use its product and how its various marketing, delivery, and other activities affect buyer costs (p.135).*

In bringing together notions of customers, value, cost, interfunctional coordination of activities and competitors, the value-chain approach focuses on the same fundamental components as a market orientation. In terms of a customer orientation, the need for accounting information about customer costs is evident as is the need for the integration of marketing information about customer product

requirements to facilitate the calculation of suitable (product) cost information. A review of the extant management accounting literature reveals several relevant techniques, often overlapping in approach, which provide cost information about the product needs of customers.

### **3.3.1 Value analysis**

The origin of value analysis (VA) has been attributed to the staff and management of the General Electric Company and is described as a process for improving the value of *existing* products (Shillito and De Marle 1992). By using interdisciplinary teams, the function of components within a product are (creatively) examined with a view to ascertaining new ways in which functions may be performed whilst reducing cost and maintaining or improving performance. Value analysis has been defined as “an organised creative approach which has for its purpose the efficient identification of unnecessary cost; i.e., cost which provides neither quality, nor use, nor life, nor appearance nor customer features” (Miles 1961, p.1).

Shillito and De Marle (1992) provide an insightful description of the history and evolution of VA (see, in particular, p.252-256). They maintain that VA was the foundation for value engineering (VE) in which a design team trained in value analysis use the technique (but more so the philosophy) to design *new* products. Market research data about the product characteristics required to satisfy customers’ needs provides the means for examining different functional component combinations of the product and the related costs. Cost data determination in the VA and VE approaches can be compared and contrasted.

According to Shillito and De Marle, cost information in VA studies is obtained from the firm's existing cost records ("hard data"), with an emphasis on labour and material costs. Production overheads are allocated (using labour rates as the allocation base) to each part (functional component) in the product based upon time and motion studies or observation of processes. VE studies use so called "soft data" or estimates of cost which can be derived from translating the costs of organisational units (operating departments) into "functional costs that depict the cost of the functions that the organization performs" (p.261). Function cost analysis (FCA) is central to VA/VE and has been the recent focus of literature in management accounting (see, for example, Yoshikawa, Innes and Mitchell 1994, 1995) and is discussed further in the following section.

Shillito and De Marle maintain that the development of VA and VE has lead, particularly within Japan, to the institution of what is described as 'value planning' wherein the development and marketing of products is planned over a 5-20 year period. Within this planning process, function cost information is established and forms the basis for 'target costs' (see S 3.3.3). VA and related techniques draw heavily upon interdisciplinary teams and information, with marketing and accounting (amongst others) playing an integral role in terms of identifying and detailing customer product needs and the firm's costs of product functions designed to meet these needs.

Some issues, however, remain unexplored. First, given the emphasis in this section on the product-in-use costs of the customer, value analysis tends to focus more on the cost of the seller to provide a product, i.e., it is a rigorous examination of the

different ways in which the functions of a product could be designed to minimise cost while maintaining/improving product performance. Although reduced cost, where reflected in reduced selling price, is clearly advantageous to the customer through reduced acquisition costs, the 'in-use' costs of the product to the customer - start-up and on-going costs (Forbis and Mehta 1981) - are not the focus of VA. Reduced start-up and on-going costs may be implied by virtue of improved performance where performance is in fact improved, but is not made explicit within the value analysis literature examined. Second, the discussion of cost information is predominantly about the cost of manufacturing suggesting that the customer needs are tied to the physical product, a suggestion that is at odds with the marketing literature which emphasises the satisfaction of needs from a range of organisational activities other than manufacturing (Forbis and Mehta 1981; Day 1990).

Shillito and De Marle (1992) do, however, suggest that VA has been expanded in its application and that 'products' are being defined in the broadest sense. As to whether these applications and broadened definitions extend to accounting information is unclear.

### **3.3.2 Function cost analysis**

Function analysis is a technique in which a product and its components are converted into functions and analysed in terms of performance and usefulness. A function is viewed as a generic statement of what needs to be accomplished without specifying the means (Shillito and De Marle 1992, p.149). For example, the primary function of propelling a ballpoint pen may be described as "make mark" which requires related, or secondary, functions such as "put colour" and "hold pen"

(Yoshikawa, Innes and Mitchell 1989). These various functions, expressed as a verb and a noun to facilitate clarity of description, are normally depicted in diagrammatic form allowing function interrelationships to be identified and examined.

Function *cost* analysis (FCA) addresses the question as to what each product function costs by costing the various items, parts and activities involved. FCA, as described by Yoshikawa, Innes and Mitchell (1995), is a derivative of VA/VE, techniques which reside predominantly within the engineering disciplines in the West, and which feature little in management accounting practice, training and literature. FCA is, however, a core management accounting technique in Japan with the management accountant playing an integral role in a multidisciplinary FCA team. While much of the accounting literature about FCA is written in Japanese, Yoshikawa, Innes and Mitchell (1989, 1990, 1994, 1995), in particular, provide some detail about its application, advantages and problems while highlighting the need for a market orientation.

In FCA, product functions become the focus of costing activity and provide an abstract view of what the product offers the customer and “which facilitates the cost-effective design of the product in a way which ensures that it still reflects customer needs” (Yoshikawa, Innes and Mitchell 1995, p.416). By classifying functions as primary and secondary, redundant or unnecessary functions may be identified in addition to highlighting disproportionate spending on secondary functions relative to primary (Shillito and De Marle 1992; Yoshikawa, Innes and Mitchell 1995). The determination of whether functions are redundant or are too



costly is made by reference to market intelligence about the monetary value to customers of each product function. As Yoshikawa, Innes and Mitchell (1995) note, in the development of a FCA ethos,

*Market considerations have become central to FCA. The business of the customer (internal and external) and, in particular, the value each customer derives from each function became the key focus of FCA (p.421).*

This customer approach is indicated in a case study of a large Japanese producer of industrial machines (Yoshikawa, Innes and Mitchell 1995) wherein customers were asked to rank, in percentage terms, the value of certain functions such as delivery on time and quality assurance. Action was then taken to reduce the cost of each function relative to its value to the customer. While information from customers was considered to be of vital importance in undertaking FCA, this aspect was found to be somewhat problematic. For example, difficulties were experienced in ascertaining from customers their relative evaluation of product functions, and that some functions of products required by law may not be valued by customers. It was also noted that the emphasis of FCA was heavily upon cost reduction to the detriment of innovation and creativity with few users of FCA initiating extra cost to enhance product functions and profit (p.428).

As to whether FCA provides information about the cost and revenue dynamics of customer's product acquisition and in-use costs is unclear and is addressed more by implication than by detail. While the process of undertaking FCA clearly involves eliciting customer views on the value of product functions, no mention is made as to

whether such information involved the customer and/or the seller in examining product-in-use costs. It could be concluded from the objective of FCA that product cost reduction is the resultant outcome of the FCA process with the selling price to the customer reduced as a consequence, thus resulting in lower customer acquisition cost. Product-in-use costs of the customer may not necessarily be affected, however, and remain an aspect which is not considered within the literature. To the contrary, the concern noted by Yoshikawa, Innes and Mitchell (1995) that the cost reduction emphasis of FCA had drawn attention away from initiatives of product function enhancement may suggest that ways in which product functions could reduce product-in-use costs of customers have been neglected.

This suggestion is further supported by a predominant emphasis in FCA on the costs of the physical/manufacturing product functions which is in contrast to the range of product attributes required by customers which do not comprise part of the physical product and which may affect the product-in-use costs of customers. To this extent, product functions can be viewed only as a very narrow definition, or an element, of product attributes (benefits, characteristics, features).

In sum, FCA provides linkages between accounting and the customer component of a market orientation by incorporating customers' opinions on the value of product functions. By reducing costs associated with various product functions, customer acquisition costs may be reduced where cost reductions are reflected in selling prices. FCA as reported in the management accounting literature does not, however, consider the issue of customer product-in-use costs and the way in which activities, other than those associated with the physical product, affect costs.

FCA does, however, provide a detailed product (function) cost which, although based upon a technical assessment of resources required, may be used as a target cost when considering future product market strategies (Yoshikawa, Innes and Mitchell 1989, 1995; Tanaka 1989).

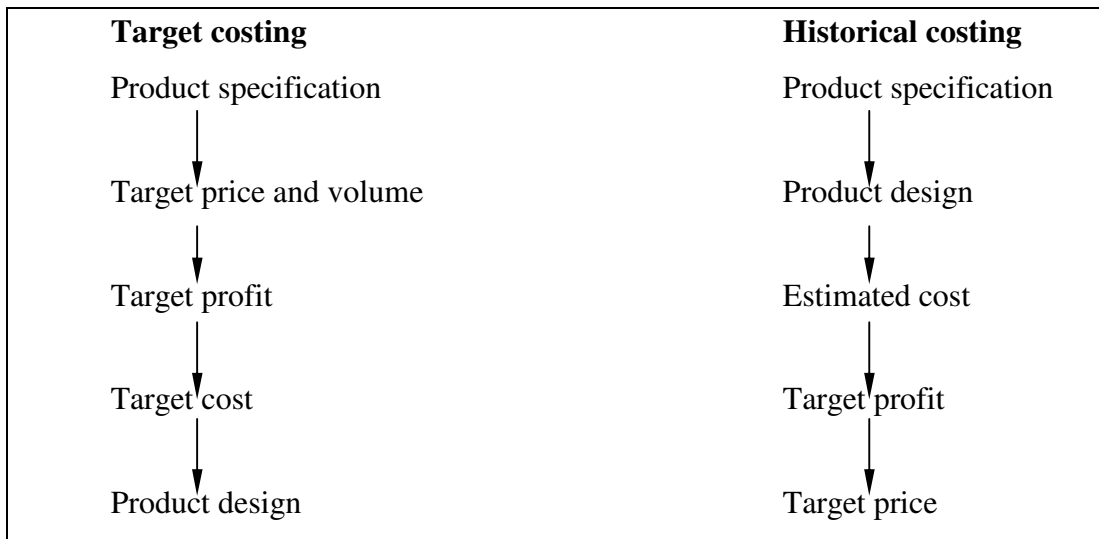
### **3.3.3 Target costing**

Within the management accounting literature it is often difficult to distinguish between target costing (TC) and the FCA and VA/VE techniques described above. Notwithstanding, TC will, at this stage, be distinguished from the aforementioned techniques and is consistent with the work of Shillito and De Marle (1992) who see TC as part of “value planning”. Value planning is described as a discipline in which target costs, developed on a functional basis, are established for future products and form part of the firm’s competitive strategy (p.253). This is also consistent with the view of Cooper and Chew (1996) who see TC as emphasising “tomorrow’s market place” and the determination of potential product market segments. Tani et al. (1994) view TC in a wider management context and use the term target cost management to reflect the simultaneous use of target costs with product planning, design and development together with other techniques such as VE.

Kato (1993) adopts a similar description wherein TC is described as not being:

*...a costing system as such but rather as an activity which is aimed at reducing the life-cycle costs of new products, while ensuring quality, reliability, and other customer requirements, by examining all ideas for cost reduction at the product planning, research and development process (p.33).*

The process or method of target costing is considered a more customer-driven approach to calculating product costs (Cooper and Chew 1996) and stands in contrast to the “historical costing” approach as described by Fisher (1995) and depicted in Figure 3.1.



**Figure 3.1 Target costing versus historical costing** (Fisher 1995, p.52)

Market research is used to estimate the price customers are prepared to pay for a specified product from which a desired profit margin, based generally upon a required return on sales (ROS) (Sakurai 1989), is subtracted leaving a target cost which the firm must reach in order to satisfy its profit objectives.

This method is referred to as the “subtraction method” (Tanaka 1989) and allows the linking of costs to strategic or longer-term business plans (Kato 1993) an aspect which is borne out in a study by Tani et al. (1994) in which 69.4 % of companies responding to a questionnaire about TC linked TC to long-range planning.

Having determined the overall target cost which must not be exceeded, costs are then allocated across the organisation's various product functions, and, in this manner, reflects the FCA process as discussed in the preceding section.

Tanaka (1989) notes that large Japanese companies tend to allocate target costs based upon the degree of importance of functions (or functional areas) as determined through customer questionnaires, regardless of the historical cost information that may be available regarding particular functions. In this respect, customer perception of value drives the costing of product functions and ultimately the product cost.

Although purportedly more customer- and market-driven in its approach to costing (Fisher 1995; Cooper and Chow 1996), the existing target costing literature offers little more than the customer product-in-use cost information that was reported in the FCA literature. This perhaps reflects the substantial role played by FCA in the TC process. While costs are placed in a more strategic and wider management context, evidence about how customers determine the value of the product functions - information that is central to the seller's TC process - is not discussed within the TC literature. It may be that customers do, in fact, consider product-in-use costs in determining value, but to what extent and in how much detail remains unknown, as does the extent to which the seller acquires and maintains such information and uses it in the process of product cost management.

One possible explanation for the lack of information on this aspect may well be the limited literature on the topic of TC overall. As Kato (1993) notes, although TC has a 30 year history in Japan, very few articles have been written in the "West" until

recently, and the same is true of Japan where 90 of approximately 100 articles have been published in the last five years (p.36) with very few written in English.

Another possible explanation may be the engineering emphasis (for example, VA/VE) of TC on the manufacturing cost of product functions as distinct from a marketing emphasis on product attributes which are drawn from a range of organisational activity areas other than production.

In sum, TC, although experiencing a growing interest within the literature, does not provide explicit information about the way in which the seller determines customer product acquisition and costs “in-use”. Other than a broadening in scope to encompass a wider management context, the operationalisation of TC is inherently linked to VA/VE and FCA. Given this, in the sections that follow, TC will be treated as a reference to, and incorporating, the FCA and VA/VE techniques.

### **3.4 Sellers’ product-attribute costs**

Product attributes (as described in this thesis) include features, benefits and characteristics of a product which satisfy customer needs and wants. Both the customer- and competitor-orientation components of a market orientation require knowledge of the cost of product attributes for the purposes of determining the profitability of the product, in considering the acquisition and product-in-use costs of the customer and for comparison with competitors to determine positions of advantage. Traditionally, product cost has been determined by reference to line item expenses associated with the manufacture of a product - material, labour and manufacturing overhead - without reference to the attributes of the product. More contemporary approaches of product costing have, however, focussed attention on

the relationships between customer product requirements and the activities and resources required to meet these (Cooper and Chew 1996; Yoshikawa, Innes and Mitchell 1989, 1994).

Marketing information is central to the determination of customer product needs and precedes the accounting process of formulating costs. Accurate and complete data about the product attributes provides a basis from which detailed cost information may be derived. In this section, contemporary accounting techniques are examined with a view to establishing which technique/s (if any) is/are most relevant to establishing product-attribute costs. In short, evidence of an accounting technique which details the way in which product attributes are costed is sought. Several techniques, purportedly more market driven than traditional accounting techniques, are considered below.

#### **3.4.1 Target costing**

The target-costing technique as described in section 3.3.3 also provides an alternative approach for determining product-attribute costs. The TC approach involves the assignment and measurement of cost at a product *function* level whereas the traditional approach has been to measure cost at a product level only. In this respect, product function costing provides a more detailed or micro view of cost activity, although some questions and problems with this function cost approach are noted within the literature.

These queries and problems have application to both product costing in general and to product-attribute costing in particular. First, while TC is advocated for all

activities of a new product's life-cycle (Tanaka 1989) its focus in the literature is clearly on production costs and the reduction of product-function costs (see, for example, Fisher 1995; Tanaka 1989; Kato, Boer and Chow 1995; Cooper and Chow 1996). The cost of product attributes derived from value-chain activities, other than production, are not explored within the literature which limits the value of the TC approach in costing product attributes.

However, to the extent that the attributes of greatest value to the customer relate to physical product functions, TC may be seen as an appropriate surrogate for determining product-attribute costs. This may be the case, for instance, in assembly industries, in particular, machinery, electrical, electronics and transportation equipment, which Tani et al. (1994) report have a higher adoption rate of TC. Conversely, the greater the value placed by customers on attributes other than physical product functions, the less useful the TC becomes.

Second, while TC techniques emphasise the assignment of target costs to product component functions, in practice this approach has been somewhat problematic and not necessarily always adopted. Fisher (1995), for example, notes that Matsushita and Toyota have difficulties in establishing customer requirements that feed directly into product specifications and in allocating target costs to individual product components. Both firms are reported as allocating costs to what Tanaka (1989) refers to as "component blocks" or categories (body, motor, mechanisms) which creates a materials orientation rather than a function orientation (p.53). This would seem to be changing the emphasis of the TC approach away from the customer value of product functions to one of cost reduction of existing product material



costs. It may also indicate that TC approaches vary across products (see, for example, Kato, Boer and Chow 1995, p.51), industries and organisations. Sakurai (1989), for example, notes that the purpose of TC varies from company to company (p. 41) and is influenced, among other factors, by the extent of labour intensity of the industry (with greater labour intensity related to the adoption of TC) and the extent of 'high technology' within the industry (with TC believed to be most effective in the product design stage in high technology industries) (p.47). In terms of this thesis, difficulties and variations in the application of TC suggest that the use of this approach to determine the cost of product attributes, while conceptually appropriate, is fairly much embryonic and would necessitate further development to be of practical value.

Third, and in further support of the need to develop TC for product-attribute costing, the way in which (manufacturing) overhead costs are assigned to product functions has received limited attention in the literature. As noted in section 3.3.3, customer perceptions of value, in effect, establish the allowable or target costs of product functions. However, details of the estimated or forecast cost of resources are required in order to determine the level of cost reduction required to bring estimates in line with target levels. Yoshikawa, Innes and Mitchell (1990) report that in Japan, 'cost tables' - extensive databases of historical and estimated *direct* product costs developed over several decades - supplement conventional costing systems to facilitate the timely provision of cost information. However, Yoshikawa, Innes and Mitchell (1989, 1990) suggest that for *indirect* costs, traditional overhead costing techniques (in which overheads are assigned on a single - labour - production activity) are used, a technique which they describe as inappropriate for the analysis

of costs by product function. In turn, they advocate the use of an activity-based cost system in which the cost drivers for each function are identified.

In summary, the limited literature available on TC suggests that its emphasis on customer value through improving product function cost has some application to the determination of product-attribute costs. However, its focus on production costs restricts its use to those situations in which physical product functions represent the principal attributes valued by the customer. Furthermore, some queries exist in terms of its practical application to all products in all industries and in the degree of accuracy in establishing product-function overhead costs.

### **3.4.2 Whole-life costing**

Shields and Young (1991) describe product whole-life costs as the costs incurred by the producer as well as those costs incurred by the customer in the acquisition and ownership of a product. Ownership costs include items such as the installation, operation, maintenance, revitalization and disposal costs (p.39). Hence *whole-of-life-costs* can be distinguished from a product's *life-cycle costs* with the latter focusing solely on the costs of the producer over the product's life.

The body of recent accounting literature in this area (of whole-life costing) is limited (see, for example, Shields and Young 1991; Artto 1994), with much of it focussed solely on the producer's life-cycle cost (see, for example, Booth 1994; Susman 1989; Adamany and Gonsalves 1994). Some prior reference to the (customer) life-cycle approach can be found in management accounting literature

surrounding the so called 'terotechnology approach' to asset management in the 1970's (Harvey 1976). Terotechnology, which was defined as

*a combination of management, engineering, financial and other practices applied to physical assets in pursuit of economic life-cycle costs (Department of Industry 1975),*

has wide application within industries such as aircraft, shipping, heavy industrial equipment and building construction and is reflected in a substantial body of literature in these fields (see, for example, ADOHC, Bibliography No.5 - Life Cycle Costing - Terotechnology for Building design, construction, operation and maintenance 1981). Dhillon (1989) notes that in many states of the USA, legislation has been passed making life-cycle cost analysis compulsory in the design and construction of state buildings (p.1).

While Harvey (1976) proposed the whole-life technique as one which

*could provide a major decision-making and profit-improving 'system' for most manufacturing and, indeed, non-manufacturing industries (p.343),*

its adoption within mainstream management accounting is yet to eventuate in any substantial way. This seems surprising as the concept is consistent with the contemporary view of determining product-attribute costs by reference to the product-in-use costs of the customer. Shields and Young (1991) suggest that an emphasis on whole-life costs rather than just those of the producer is essential as the

costs incurred by customers after product purchase are becoming a larger part of whole-life costs and are an important part of customer purchase decisions (p.49). A similar view is noted by Artto (1994) in describing customer product life-cycle costs as an aid to target costing and the cost control of products. Three dimensions are identified as having most impact upon the customer's ownership costs - product quality (performance), time factors (delivery and support services, length of product life) and purchase price (p.28). For example;

*In the case of expensive and long-lasting products, the quality and time-related characteristics of a product are of particular importance because they have a significant effect on the total life-cycle costs that a customer incurs (p.29).*

This point is supported both by the literature, in general, and in practice (see, for example, Dhillon (1989) for a description of life-cycle costing in the aircraft, computing and vehicle industries).

While numerous detailed descriptions of the elements and steps associated with (customer) life-cycle cost analysis can be found within the engineering literature (see Dhillon 1989 for extensive references), the opposite could be said to be true of the accounting literature. As to why this is the case is not for detailed discussion in this section, however, several possible explanations seem likely. As noted above, one explanation may stem from the application of the whole-life technique to specific high value, long-life "assets" such as military equipment, buildings and ships rather than to "products" of relatively lower value and/or shorter life-cycles.

A perception of the technique as having only a narrow or limited application may see the technique overlooked within the accounting literature in favour of other approaches with wider application. Alternatively, a lag may exist between the transfer of the technique, with its origins within the engineering discipline, to the discipline of accounting. Dhillon (1989) notes that in order to perform life-cycle costing studies, the analyst must possess skills in several disciplines, one of which is “finance and accounting”. However, Dhillon goes on to state that it is rare that an analyst has skills in all disciplines and input from other professionals, i.e., engineers, is required (p.35).

That accounting plays little part in whole-life costing is reflected in a study by Shields and Young (1991). In a review of data gathered from site visits to nine high technology firms, they generalise that existing systems for product life-cycle cost management (PLCCM) are “new, fragmented, and not yet well analyzed” and that “existing cost accounting systems are not effective for PLCCM” (p.44). In particular;

*Existing cost accounting systems tend to be oriented too much toward reporting departmental or functional area costs rather than product whole life costs by activity. Product manufacturing costs are also emphasized at the expense of pre-manufacturing and post-manufacturing product activities* (p.44).

Clearly, a need exists for further research into the adoption and operation of whole-life costing across a range of industries and products before generalising any further.

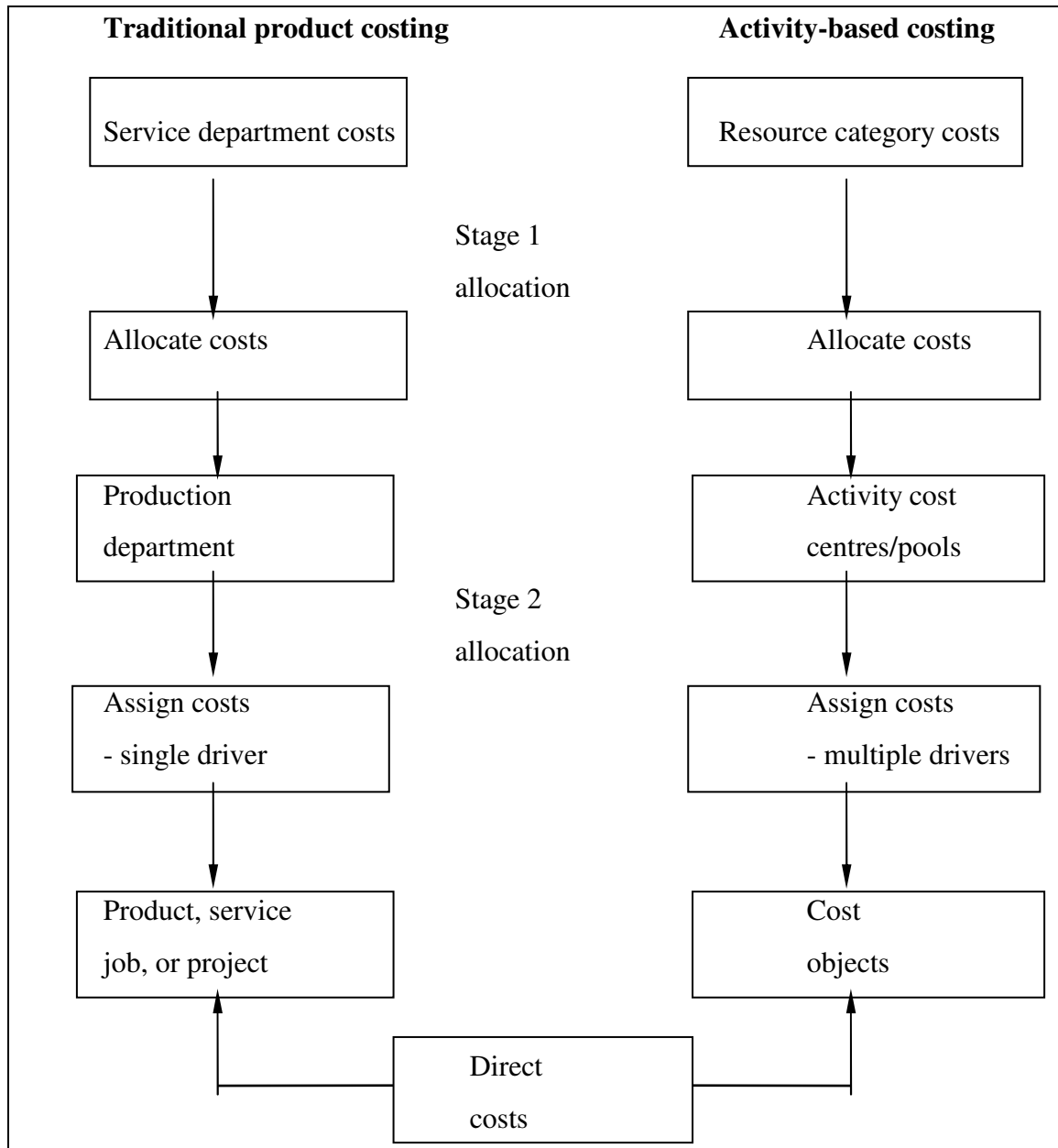
However, the technique of whole-life costing is consistent with a market-orientated approach of providing product needs with reference to the customer's cost of acquisition, use and disposal, while also providing the producer with cost information about meeting customer needs and a basis for determining product profitability.

### **3.4.3 Activity-based costing**

Traditional or conventional product costing systems have been the subject of much criticism over the past decade (Miller and Vollman 1985; Cooper 1987; Cooper and Kaplan 1988; Johnson and Kaplan 1987). The central point of contention relates to the accounting for product overhead costs. In the traditional approach, production overhead costs are aggregated and then assigned to products by use of a simple, often single, volume-based measure - typically labour hours and/or machine hours (see, for example, Blayney, Joye and Kelly 1990). Such an approach assumes that products consume *all* resources in proportion to production volume and has been criticised for creating "hidden factories" (Miller and Vollman 1985) by failing to consider the causes or drivers of overhead costs; distorting product costs where diversity exists in the range and volume and complexity of products (Cooper 1988; Johnson and Kaplan 1987); and in providing inadequate information for managerial decision-making particularly as it relates to strategic decision making (Johnson and Kaplan 1987; Berliner and Brimson 1989).

In response to these deficiencies, activity-based costing (ABC) is advocated as a method of costing which more accurately traces overheads to products (Cooper 1990), better accounts for the cost of speciality products (Srinidhi 1992) and for

changes in manufacturing complexity (Jones 1991), and supports process improvement and cost-effective product design (Turney 1991). Whereas the traditional product costing approach was simplistic in its use of a single allocation (cost driver) base and the aggregation of costs into a single “cost pool”, ABC disaggregates overhead costs into multiple activity cost pools, the costs of which are, in turn, allocated to products based upon multiple bases - cost drivers. Central to the activity-based approach is the assumption that it is the organisational activities that cause costs and that products create the demand for activities, an assumption that requires organisations to focus more closely upon their operational and support activities and processes. Figure 3.2 presents a comparison of the traditional and ABC methods of product costing.



**Figure 3.2 Traditional versus activity-based costing** (Adapted from Burch 1994, p.446)

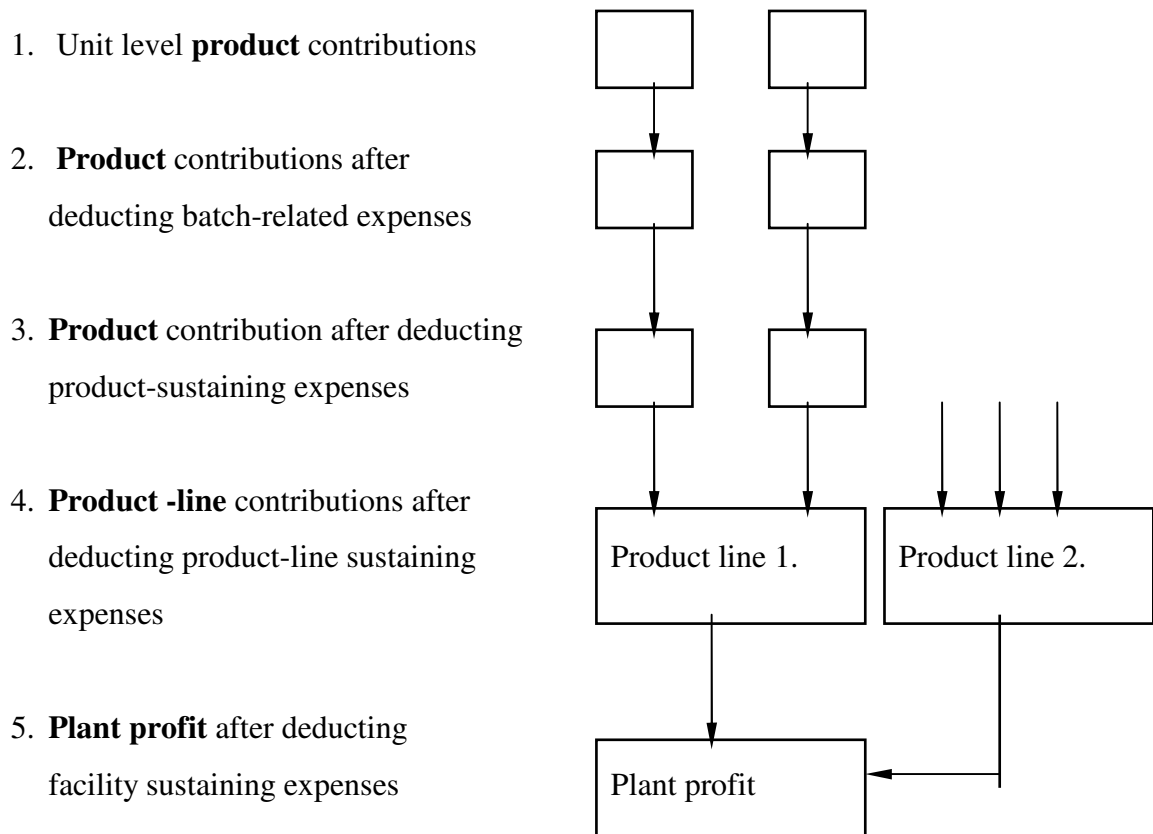
The activity-based approach moves away from the traditional departmental (service and production) classifications of costs to one in which organisational resources and the activities that they support are the focus. In stage 1 of the allocation process, the main activities that cause or drive the use of resources are identified and serve as a basis for the allocation of costs to activity centres or cost pools. The second stage



involves the allocation of costs to the designated cost objects, for example, a product, customer, distribution channel, projects and/or jobs, using multiple cost drivers that reflect cause and effect relationships between the activity and the cost object. The range of cost objects in the ABC approach is broader in scope than the traditional method and reflects the management decision-making emphasis of ABC information rather than the inventory valuation emphasis of the traditional approach (Johnson and Kaplan 1987).

Moreover, in allocating costs, Cooper and Kaplan (1991) suggest the use of a hierarchical, four level, structure of activities which better reflects the way in which costs behave/vary (Fig. 3.3). This structure also provides a different perspective in terms of profitability analysis and can be contrasted to the more traditional approaches of profit reporting as described in Ch 2.

Profit contributions can be determined at various hierarchical levels by deducting, initially, the individual product's (unit level) costs from related revenues, followed by successive deductions of costs at the batch and product sustaining levels. An additional level, product line contribution, has been included and reflects the incurrence of costs that are common to a product line, for example, advertising expenses. By summing the contribution of each product line and deducting facility sustaining costs, an overall contribution for the facility (manufacturing plant) can be determined.



**Figure 3.3 Activity-based profit analysis** (Adapted from Drury 1992, p.281)

Kaplan (1990) suggests that this method of analysing profit performance provides improved cost information for management and “allows managers to better understand which products are making money and which products are not making money” (p.7). Furthermore, this approach (referred to as activity-based cost management) provides an alternative way of viewing product cost other than the traditional volume-related approach of “unitising” all costs (by dividing all costs by product volume) - an approach which implied that all costs vary directly with volume.

In some respects, the traditional department-focussed, single cost driver approach can be viewed as a simplified application of ABC, or as Noreen (1991) describes

“perhaps poorly designed, special cases of activity-based costing” (p.160). This is not to say, however, that the ABC approach is without its limitations. Among these are the difficulties that exist in selecting a “manageable” number of activity measures/drivers that are highly correlated with activities, the assumption that all costs are strictly variable with the level of activity, and the difficulty when joint consumption/production costs are experienced (Noreen 1991). This said, these limitations are not just peculiar to ABC and have equal application to traditional costing approaches.

Derived from an extensive literature review on ABC, Innes and Mitchell (1995) have identified several superior features and uses of the approach to management accounting practice. These extend to more complete and relevant information for cost-based pricing decisions, longer-term decisions regarding product range and output, performance measurement, cost modelling, cost reductions, new product design and the determination of customer profitability (Section 3.6). These features and uses stem from the development of ABC from an approach initially centred on improved product costing to one in which the costs of activities and processes other than production are detailed and examined thus providing information for a range of strategic and operational purposes and decisions - activity-based management (Troxel and Weber 1990; Mecimore and Bell 1995). Mitchell (1994) notes, however, that ABC’s applications to date suggest that its most appropriate role will frequently be that of attention directing more than providing definitive answers (p.274).

In sum, the ABC approach provides a more rigorous means of examining the cost of resources used in the production of products while also providing a broader base (than traditional approaches) of information of relevance to management planning and decision-making.

#### **3.4.4 Attribute costing**

Bromwich (1990, 1991, 1992) has been the outstanding proponent of an attribute-based product costing approach. His work comprises the majority of the accounting literature in the area with additional articles by Partridge and Perren (1994), Walker (1991, 1992) and Bromwich and Bhimani (1994) drawing upon his initial propositions.

Taking an economic perspective, Bromwich (1990) views the attributes yielded by products as those which are valued in the market place and, in turn,

*allows these attributes to become central in the formulation of enterprise strategies concerning matters such as market fit and product diversification (p.28).*

Further, Bromwich advocates an accounting role in the costing of product attributes over time, the information from which may be crucial to the firm's sustainability of product strategies. Sustainability in this context revolves around whether the product, in the form of a "bundle of attributes", offered by the firm at a given price, is viewed more favourably by customers than competitors' products. As Bromwich (1992) notes,

*product characteristics and product cost (and therefore price) are deeply intertwined and cannot be considered in isolation (p.142).*

To this end, Bromwich (1991) (see, also, Bromwich and Bhimani 1994) outlines a model for the matching of product attributes (or “benefits” as they are more often described) with organisational costs. Partridge and Perren (1994) have used this model to illustrate attribute costs for a car supplier with an integrated distributor network. This model has been adapted and reproduced in Figure 3.4 to illustrate the attribute cost approach.

<b><u>Product-attribute cost analysis</u></b>					
	<b>Product volume related costs</b>	<b>Activity related costs</b>	<b>Capacity related costs</b>	<b>Decision related costs</b>	<b>Total costs</b>
<b>Product attributes</b>					
Fuel economy					
Performance					
Recyclability					
Reliability					
Styling					
Safety, braking					
<b>Outlet benefits</b>					
Customer care					
Location					
Service					
Warranty					
<b>Other benefits</b>					
Image					
Brand awareness					
<b>Total cost of product attributes</b>					
Other costs					
<b>Total costs</b>					

**Figure 3.4 Product-attribute cost analysis** (Adapted from Partridge and Perren, 1994)

Customer-defined product attributes in this model are categorised in terms of physical product attributes, attributes that are derived from the point of sale (outlet), and other attributes. Costs categories are then established and costs assigned to attributes within each category. Bromwich and Bhimani (1994) suggest that the

categories may be a variant of the organisation's usual cost classifications as "this will encompass the matters seen as of concern to that firm and thus reflect its economic environment" (p.144). In the model depicted above, costs are classified as:

- Product volume related - materials, labour and variable overheads. These costs reflect the "normal" direct costs of production and as the name suggests are those costs that vary in direct proportion to the volume of product output.
- Activity related - material handling, quality control, maintenance. Costs which may not vary with output volume of any one product but are of relevance to sustaining the product attributes, in particular, quality control and monitoring.
- Capacity related - occupancy, machinery and equipment costs. Costs where possible are traced to particular products (rather than aggregated and allocated across all products on an arbitrary basis) although difficulties may be experienced where there is a common use of resources by products (see below).
- Decision related. This last category relates to costs incurred as a result of what Bromwich (1992) refers to as "policy choices" and includes an extensive range of costs including research, engineering, advertising and promotional activities which are not generally affected by the level of operational activity (p.144, 147). The distinction between these costs and those of the aforementioned capacity costs can be seen as somewhat blurred. Partridge and Perren's (1994) description of decision-related costs as "discretionary spending undertaken to enhance

product attributes, e.g. promotion” (p.23) provides perhaps a clearer view of the nature of these types of cost.

Semantics aside, the purpose of an attribute cost analysis as described above is to gain insight into the relationship between attributes and costs. Organisations’ classifications of costs and methods of cost assignment may be expected to differ depending, for example, upon the needs of management and the existing costing systems. The following points are noted from Bromwich (1992) and Bromwich and Bhimani (1994).

- When looking to use attribute cost information for competitive advantage purposes, detailed accuracy of cost information is not crucial. This point reflects the need for the firm to establish a “feel for” its competitive position where competition is based upon product attributes and their costs. This is not to say that more detailed analysis is not needed or is not useful. On the contrary, initial attribute cost estimates may serve as a basis, or stimulate the need, for more sophisticated analysis of product-attribute costs. Interestingly, Partridge and Perren (1994) see the lack of precision in cost information as perhaps a difficulty for accountants, but not so for strategists and marketers (p.26).
- Attribute cost information need not be undertaken for every product. This point reflects the view that a firm’s products may be similar in nature, but also the pragmatic view that products share common activities and, hence, costs. By costing product-attribute groups (bundles) the issue of arbitrarily allocating common resource costs across product attributes may be resolved.



- Not all product attributes (or attribute groups) need to be costed. This point links the need for cost information to the firm's strategy wherein, if the firm provides customer value based upon a few key attributes, it is only these attributes that will, in turn, be costed. However, what this costing approach does not reveal is the possibility of the other attributes being the resource hungry, high cost elements of the product, information of which is of importance in determining cost advantage (or lack thereof). The present writer suggests that in order to overcome this situation, costs be determined for all attributes (or bundles), if only, initially, using relatively simple approximations of attribute costs. This suggestion is tempered by the need to consider the cost benefit in the undertaking.

- Life -cycle costs may be required. This point reflects the nature and amount of costs that may be incurred over a product's life. Decision-related costs as described above may change significantly with the stage of the product's life-cycle - for instance, advertising and promotion.

Clearly, many variations and developments of the initial attribute-cost model advanced by Bromwich (1991) are possible. For instance, Partridge and Perren (1994) suggest that to make it less difficult for practitioners to operationalise the attribute model, attributes should be categorised and costed as either *core* and *enhancing*. The former are seen as placing the product in a saleable state while the latter serve to differentiate products in the market place. Measuring volume increases and/or the price customers are prepared to pay for different combinations of core and enhancing attributes would allow various profit scenarios to be determined (p.23).

The way in which costs are traced and assigned to product attributes is not discussed in detail by Bromwich (1991, 1992). His description of volume, activity, capacity and decision-related costs has some similarities to the activity-based costing (ABC) approach although, as noted above, Bromwich (1992) advocates a variant of the firm's usual cost classification and the use of existing databases (p.145).

Walker (1991, 1992), a proponent of the attribute-costing approach, takes up the issue of using ABC as an approach to assigning overhead costs to product attributes. He proposes such an approach using conjoint analysis to determine customer preferences for, or utility of, particular attributes which are then matched to the relevant operating activities. The process by which the costs of each activity are, in turn, determined and applied to each attribute are not described but rather it is suggested that the "normal ABC approach to cost product attributes, that is, cost drivers and cost rates" (p.44) would apply. The present writer suggests that it is exactly this process that requires explication in order to gain some insight into the practicality of an activity-based "attribute" approach. For instance, the hierarchical approach of allocating activity costs to products is a central component of ABC. As to how effectively and efficiently this hierarchical approach of cost allocation would operate when the cost object is a "bundle" of product attributes is unknown. It would appear that a further level of sophistication or detail is added to the ABC approach when product attributes are costed, i.e., multiple-product attributes as against a single product.

A form of attribute costing implied in the literature appears in the guise of value-added analysis (Brimson 1991) wherein an analysis of the activities developed as

part of the ABC process is undertaken with a view to identifying non-value-added activities. Determination of non-value-added (NVA) is made by reference to whether the activity (cost) results in a customer benefit thus, presumably, entailing reference to the product attributes. In practice, it would seem that the determination of many NVA activities does not necessarily require reference to a customer perspective, e.g., rework due to assembly errors, additional material deliveries due to errors in stock records (see Johnson, in Kaplan 1990). However, as to whether, and/or how, the costs of NVA activities are traced to product attributes is not revealed within the ABC literature.

In sum, the attribute-cost approach as described by Bromwich (1991, 1992) provides the type of information identified as necessary in a market orientation (Ch 2). By starting with the needs of the customer as defined by product attributes, customers can be viewed as not only providing the principal revenue generation of the firm but also as the drivers of organisational resource costs, i.e., resources should be employed for the purposes of ultimately generating revenue through meeting customer needs. The Bromwich (1991) model seeks to provide a basic framework for further development and application, which, with the exception of those few articles noted above, has not been forthcoming. In looking for an approach in which marketing and accounting information are integrated to provide more complete and relevant information for a market orientation, the attribute-costing model presents as a valuable option.

### **3.5 Competitor costing**

Both the marketing and accounting literature are consistent in the view that in order to establish the profitability of its competitive position, an organisation must have substantial intelligence about current and potential competitors' costs of supplying comparable product attributes (Brock 1984; Forbis and Mehta 1981; Day 1990; Bromwich 1990, 1991, 1992; Walker 1991; Kato, Boer and Chow 1995; Porter 1985; Day and Wensley 1988; Partridge and Perren 1994). In this section, the accounting literature is reviewed with the aim of identifying suggested approaches/techniques that detail the way in which competitor-cost positions are determined. While the emphasis of discussion will centre upon the competitor *product attribute level* cost position, competitor costing at the *business unit level* is also reviewed. This said, the accounting literature about competitor-cost analysis is far from extensive and is usually couched in a strategic context - variously referred to as strategic management accounting (Bromwich 1990, 1992; Simmonds 1981; Rickwood, Coates and Stacey 1990; Lord 1996; Tomkins and Carr 1996a; Guilding et al 2000), strategic cost management (Shank and Govindarajan 1992a, 1992b; Wilson 1997), competitor-focussed accounting (Guilding 1999) and accounting for strategic positioning (Roslender 1995).

#### **3.5.1 Competitor cost analysis - product attribute level**

The notion of providing accounting information about competitors' product cost positions has been associated with Simmonds (1981), who maintained that it was a firm's relative cost position that should be used to gauge performance rather than accounting measures of absolute sales, profit and return on investment. These latter measures, whilst of some value in assessing a firm's performance relative to

previous periods and/or budgets, were considered to provide little insight into the competitive position. For instance, sales and profit increases were possible in growing product markets but with a possible concomitant decrease in competitive position where competitors had gained sales increases at greater rates. Simmonds therefore advocated the incorporation of market-based data within a firm's accounting system with an emphasis on competitors' product costs, sales and volumes. Such information allowed relative cost positions and pricing strategies to be monitored, cost-volume-profit analysis of competitors to be undertaken as well as consideration of likely competitor reactions to changes in price moves (Simmonds 1982, 1986). Some evidence of the adoption of Simmond's approach can be found within the accounting literature. Jones (1988), describes the competitor cost analysis undertaken at Caterpillar with extensive competitor information on product manufacturing costs and volumes being collected from a wide array of secondary data sources.

Lord (1996), in discussing the case findings of a bicycle manufacturing company - *Cyclemakers* - notes the detailed collection and use of competitor information - sales, prices, product costs and market share - although she points out that this information was not gathered by the management accountant or used in a formal cost comparison of competitors. Interestingly, competitor information was used more by management in a marketing role by making decisions about the introduction of new products and/or product attributes (p.357). Rickwood, Coates and Stacey (1990) in the *Stapylton* case describe how a firm manufacturing products in the hygiene and cleaning materials industry, identified and collected competitor

cost information seen as of key importance in determining competitive position. As noted at page 43,

*With estimates of prime costs and other variable costs, their rival's contribution to fixed costs could be established at different forecast selling prices. The volume of sales required at each contribution level in order first to meet the forecasts published by brokers, second to make capital costs of the policy change worthwhile and finally to justify the total capital investment proposal were mapped out and assessed for feasibility.*

Although the concept and application of the Simmonds approach is centred upon product costs rather than the costs of their constituent parts, there is evidence in the reported cases that consideration was given to product attributes, albeit to varying degrees. For example, in analysing volume and price information, *Stapylton's* management considered that two significant product attributes contributed to its competitive position in terms of price premium- product performance (ease of use) and packaging (package size, shape and colour). Product specific advertising was also competitively examined, both in nature and cost. Although *Stapylton's* particular product performance attributes and packaging attributes were not costed specifically and compared to competitors, they were clearly of importance in management decision-making.

Other than a casual reference to attribute costs as noted above, the present writer is unable to find case research evidence about the use and application of competitor cost analysis undertaken specifically at the product attribute level and in the way

described by Bromwich (1991, 1992). That this is the case is, perhaps, not surprising given only the relative recency of the development of the product attribute model. Indeed, if firms do not yet undertake product-attribute cost analysis of their own operations it is highly unlikely that they will undertake a competitor cost analysis of the same type.

One body of literature which indicates the use of a form of competitor attribute costing is the target costing (TC) literature (Sections 3.3.3, 3.4) when considering the role of TC in establishing customer product-in-use costs and product costs respectively. Research into TC practices undertaken by Tani et al. (1994) found that the most important of five key factors identified in setting target costs was that of competitors' costs (p.74.) and was the case irrespective of the firm's basis for seeking competitive advantage - cost or differentiation. As to whether competitors' costs were in fact *attribute* costs is, however, unstated.

Fisher (1995), Cooper and Chew (1996) and Kato, Boer and Chow (1995) also note the importance of competitor cost information in TC without being specific as to the particular cost information required. Fisher locates the need for such information at the attribute level through advocating the use of quality function deployment (QFD) - an approach for identifying customer-prioritised product characteristics - in analysing competitors to determine "best in class" (p.54). In undertaking such analysis he suggests the use of product reverse engineering - the "tear down" of a product to analyse design and production processes - and is a procedure which is generally accepted as facilitating the establishment of competitor product costs (Fisher 1995; Kato, Boer and Chow 1995; Aalbrege 1993).

While most TC literature gives testimony to the importance of competitor cost information, rarely does it provide detail on its operationalisation. One exception is the paper by Aalbrege (1993) in which he describes the process for comparison of competitors' products and estimates of competitors' cost structures.

*A manufacturer should therefore develop estimates of competitors' cost structures by analysing the internal costs of existing products, categorizing them by cost driver, and developing ratios by cost driver to translate internal costs into estimated competitor costs (p.386).*

The cost driver categories suggested by Aalbrege are quite different to those described in the ABC literature (section 3.4.3) and encompass four main areas: organisation costs - labour and on-costs; sourcing costs - raw material, development and transportation costs; manufacturing process costs - supplies, depreciation, process scrap and utilities costs; and product design costs. It is argued that this categorisation provides a greater insight into cost levels, exposes hidden cost opportunities (through reducing non-value-added activities) and allows easier competitor cost comparisons (although why this is the case is not stated or contrasted with other competitor cost approaches) (p.387). An illustrative example of this approach applied to a bicycle manufacturer indicates a more detailed or sophisticated examination of line item expenses of the product. For instance, direct labour costs are segmented into value-added, inspection, material handling, set-up, rework and down-time. Similarly, manufacturing overhead is itemised in some detail. Using information from secondary data sources (published material) and



competitor product “tear downs”, competitor cost analysis is then undertaken and positions of advantage identified.

This approach, while providing substantial cost information, differs in two main ways from the product-attribute cost model described in this thesis and that proposed by Bromwich. First, product attributes are not the cost objects, rather it is the expense categories of the physical product that are examined in detail. For example, in the same paper, Aalbrege (1993) describes typical product attributes of a bicycle as performance (acceleration, speed range, coasting ability and gearing and handling), yet these are not the focus or objects of the competitor costing analysis as would be expected in a competitor attribute cost analysis.

Second, costing is restricted to the physical product rather than costs across a range of organisational activities - for example, warranty, distribution and image (marketing) costs. Furthermore, while manufacturing overhead costs of the physical product are detailed for an extensive number of items, no mention is made of the way in which these have been assigned, raising the question as to whether these costs have been arbitrarily apportioned to the product and, if so, how then will reliable competitor costs be ascertained.

In sum, there is a lack of accounting literature, in particular, case material, on the use of accounting information for competitive analysis (Tomkins and Carr 1996a; Lord 1996; Guilding 1999). While general models have been developed for the determination of product-attribute costs (Bromwich 1991, 1992; Partridge and Perren 1994), no evidence has been found of their application in determining

competitor cost positions at the attribute level. Some indications of a movement towards an attribute level can be found within the target costing literature, however, emphasis rests upon the importance of competitor attribute comparison to the neglect of competitor attribute *cost* comparison. Indeed, of the limited discussion on competitor cost analysis, attribute costs often appear to be subsumed within comparisons of competitors' business unit cost structures and drivers.

### **3.5.2 Competitor cost analysis - business-unit level**

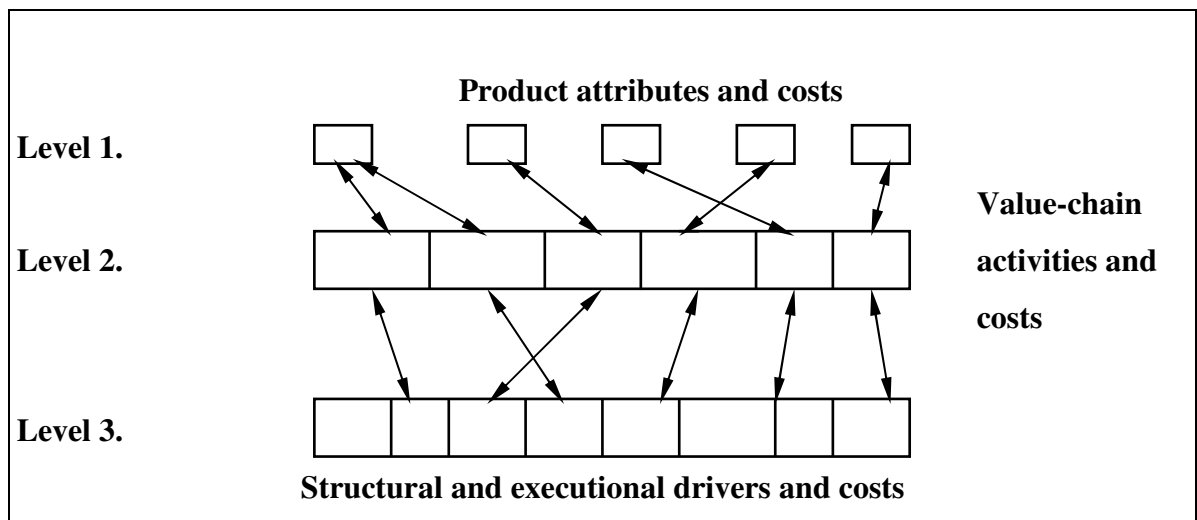
Day (1990), while advocating the importance of competitor *product attribute* comparison in determining competitive advantage, centres the discussion of related competitor *cost* comparison at a *business unit* level by way of value-chain analysis. This is consistent with the approach advocated by Porter (1985) and also with that adopted by Shank and Govindarajan (1992a, 1992b) in looking to incorporate accounting into the strategic arena.

By examining competitor cost analysis at the business unit level, product-attribute cost comparisons would seem to be subsumed within the analysis, i.e., aggregated within the total cost of each value-chain activity of the organisation. The emphasis on product-attribute costs is marginal at best, with discussion more focussed on what Shank and Govindarajan (1993) refer to as the "three themes" underlying strategic cost management - strategic positioning, value-chain and cost driver analysis (p.13). Similarly, Bromwich (1990) while detailing the importance of costing product attributes shifts discussion of competitors' cost positions to a business unit level - "each firm needs to determine the cost structure and technologies used by all firms in the industry" (p.36).

A consistent theme in the competitive cost literature of Porter (1985), Shank and Govindarajan (1993) and Bromwich (1990, 1992) is that of linking the costs of value-chain activities to the structural cost drivers of the firm. As Shank and Govindarajan (1992a) note, each value activity has a set of cost drivers that explain variations in costs while providing unique sources of competitive advantage (p.182).

Porter identifies ten structural cost drivers (economies of scale, learning, capacity utilisation, linkages, business unit interrelationships, vertical integration, timing, discretionary policies, location and institutional factors) which affect the cost behaviour of value activities, a diagnosis of which allows a firm to obtain an understanding of the sources of its relative cost position (p.70). Shank and Govindarajan (1993) draw upon the strategic management and industrial organisation literature in describing two categories of cost drivers; structural drivers, (scale, scope, experience, technology and complexity) which “drive product cost”; and executional drivers (work-force practices - TQM and continual improvement, capacity utilisation, plant layout efficiency, product configuration, linkages), which reflect a firm’s ability, and cost, to execute activities successfully (p.21).

By outlining the cost driver concept here, an insight into the way in which product attributes and their costs are embedded within business unit competitor cost comparisons can also be obtained. Figure 3.5 depicts the link/s between attribute costs, business unit (value-chain) cost and structural drivers.



**Figure 3.5 Cost linkages between product attributes, value-chain and structural drivers**

In this depiction, product-attribute costs are determined by identifying and costing those value-chain activities that are central to their delivery, for example, the costs of after-sales service, marketing and production activities. These activity costs are, in turn, influenced by the structural and executional drivers. Three levels have been designated and simply reflect points at which competitor cost analysis may be undertaken, i.e., at an attribute level, business unit level and structural level. An additional level - product level - could also be interposed between attribute and value-chain levels which would accommodate analysis along the lines suggested by Simmonds (1981). Clearly there are interrelationships among each of the three levels.

Other than the product level competitor analysis discussed in the previous section, the (very limited) accounting literature examines competitor cost analysis at the value-chain level. In ostensibly single product firms, Shank and Govindarajan (1992a, 1992b) describe how an insight into competitive position can be gained by

comparing the differences in the value-chain activity costs of rivals. For example, from publicly available information, Shank and Govindarajan (1992b) construct value-chain configurations for two competing airlines allowing cost comparisons to be made of each major activity (e.g. advertising and publicity, ticketing, aircraft operations, on-board service, baggage handling) as well as the activity “cost per seat mile”. Strategic differences are identified in both cost structures and the way in which the firms differentiate their product offerings. Similarly, in a case example of a firm (*Northam*) manufacturing two similar products in the paper board industry, Shank and Govindarajan (1992a) use value-chain analysis to highlight the difference in cost structures of those manufacturing differentiated packaging with those offering commodity packaging.

No attempt is made in either case to relate costs to the product attribute level, however, product attributes are broadly identified and would seem to play a more important role in the analysis than that indicated by the limited reference which they receive. For example, in terms of the airline industry, the authors acknowledge that customer value is provided, generally, at three stages; reservation and ticketing operations, operating aircraft between destination points and pre-, post- and in-flight passenger service (1992b). Competitor cost analysis is then centred around related activities. In the paper board industry, material strength, durability and printability are noted as important attributes in the market while “normal” quality and price were important in the commodity sector (1992a, p.185). These, albeit non-specific, descriptions of product attributes provide a linkage to the value-chain activities of most competitive importance and it is at this point that product-attribute costs are subsumed by the competitor cost analysis of these particular value-chain activities,

i.e., a level 2. analysis (Figure 3.5). In the case of *Northam*, its relative weaknesses in manufacturing activities - technologically out-dated equipment resulting in poor quality, limited extrusion capacity and absence of printing equipment - indicated competitive disadvantage, particularly in the differentiated product market, while also indicating a need better to understand and manage the structural and executional drivers in order to improve its competitive cost position (p.189, 195).

The description of competitor cost analysis above provides some insight into value-chain cost analysis and the way in which product-attribute cost is incorporated within such an analysis, but also raises some further questions and issues of relevance to this section. By examining competitive cost position at the value-chain level, initial cost dis/advantages may be identified which reduce the need for attribute level cost analysis, i.e., there is a significant cost dis/advantage in the activity/activities related to the main product attributes. These cost dis/advantages may, in turn, be linked back to the firm's comparative position in terms of its structural and executional cost drivers. Furthermore, cost comparison at a business unit level overcomes the problems (and costs) of accurately costing product attributes (e.g., assigning overhead costs), the need for which, it could be argued, is also not necessary if the firm is a single product producer.

This raises an interesting issue as to whether competitor value-chain cost analysis provides sufficient information where, for instance, multiple products of varying complexity are produced to meet the needs of customers, i.e., different market segments. In this case, it may be likely that there will be multiple combinations of

value activities that relate to the product attributes of each market segment and different structural and executional cost drivers for each segment.

Therefore, determining relative cost advantage at a business unit level would necessitate the averaging of value-chain activity costs over a range of products thereby generating an average cost for a given volume (see Bromwich 1990, p.39).

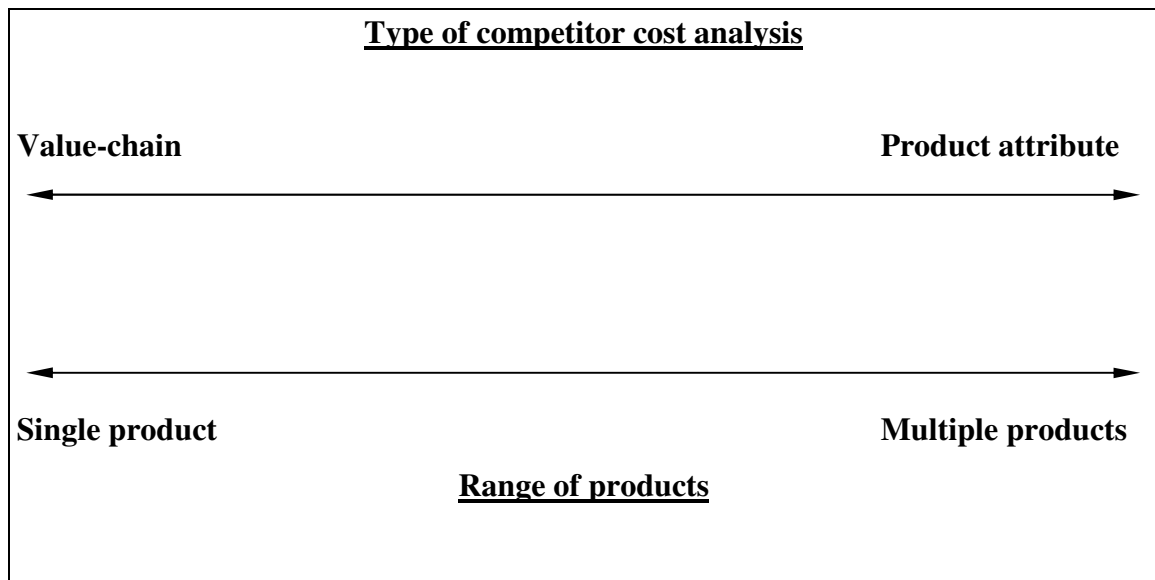
Porter (1985) notes that, in practice, a business unit would usually produce a number of different products for different customers and that:

*Unless the firm recognizes differences in cost behaviour among segments, there is a significant danger that incorrect or average-cost pricing will provide openings for competitors. Thus cost analysis at the segment level must often supplement analysis at the business unit level (p.93).*

In this situation, equating segments with various combinations or 'bundles' of product attributes requires competitor cost analysis to revert to the attribute level - Level 1. in Figure 3.5. With this comes the practical and "thorny" issue of assigning shared value-chain activity resources over product attributes (segments).

Hence, a dichotomy of competitor cost analysis approaches is apparent. Firms which manufacture a single product composed of homogeneous attributes derived from a single combination of value-chain activities may be best served by undertaking competitor analysis at the value-chain (business unit) level. This is in contrast to a firm producing multiple products, comprising dissimilar attributes

using resources from various combinations of value-chain activities. In this case, a competitor cost analysis at the product attribute level would provide more appropriate information. Figure 3.6 reflects the two competitor cost analysis positions.



**Figure 3.6 Competitor cost analysis alternatives**

The emphasis in the accounting literature on competitor cost comparison at a business unit or value-chain level is consistent with the general approach advocated within the marketing literature (see, for example, Day 1990; Day and Wensley 1988).

However, there is also a view within the marketing literature that in order to establish competitive advantage, competitor cost analysis should be undertaken at the product or product attribute level (Wind and Robertson 1983; Smith, Andrews and Blevin 1992; Forbis and Mehta 1981). Some evidence of research at the product level is reported within the accounting literature (Section 3.5.1) while there is no empirical research evidence of competitor cost analysis at a product attribute



level within the accounting literature. To the extent that the accounting needs of a market orientation require both business unit and product-attribute level competitor cost information, only the former, through the work, primarily, of Shank and Govindarajan (1992a, 1992b, 1993), has been considered in detail within the accounting literature. In this absence of any substantial “competitor-focused accounting” (CFA) research in the management accounting literature, Guilding (1999) developed a taxonomy of “CFA practices” and appraised the use and helpfulness of CFA in practice. While the study finds the monitoring of competitors’ sales and market share to be the most used and helpful, there was little evidence of the use of competitor costing and strategic costing approaches advocated by Simmonds (1981) and Shank and Govindarajan (1992a, 1992b, 1993). Guilding’s findings highlight not only the gulf between practice and the focus of (the limited) literature discussion on competitor costing, but the need to undertake “case study” research to develop an understanding of the “variety of forms that CFA can assume” (p. 592).

### **3.6 Customer profit analysis**

In discussing the customer-orientation component of a market orientation in section 2.4.1, it was noted that the accounting information used by marketers regarding customer cost and profit positions was insufficient in that it failed to incorporate the cost of a range of value-chain activities into product costs and also failed to provide cost data about product attributes. While there has been a more recent move toward customer-profit analysis within the marketing literature (Goebel et al. 1998; Zeithaml et al. 2001), in the main, product-profit information has emphasised the manufacturing costs of the product (Petty and Goodman 1996; Howell and Soucy

1990; Bellis-Jones 1989) and then with some questionable practices in terms of allocating manufacturing overhead costs. Non-manufacturing costs, for example, marketing and administration, were either not allocated to products or were arbitrarily allocated across products or market segments.

Attention to, and accounting for, the non-manufacturing resources and costs associated with meeting customer needs is a relatively recent phenomenon in management. That this is the case is highlighted by Guilding and McManus (2002) who, in what they describe as a “fledgling literature”, identify and describe five dimensions of “customer accounting” of which customer profitability analysis (CPA) “appears to be the most widely referred” (p.46). With the exception of the Guilding and McManus study, the accounting literature in this area is far from extensive (Foster and Young 1997; Sheilds 1997).

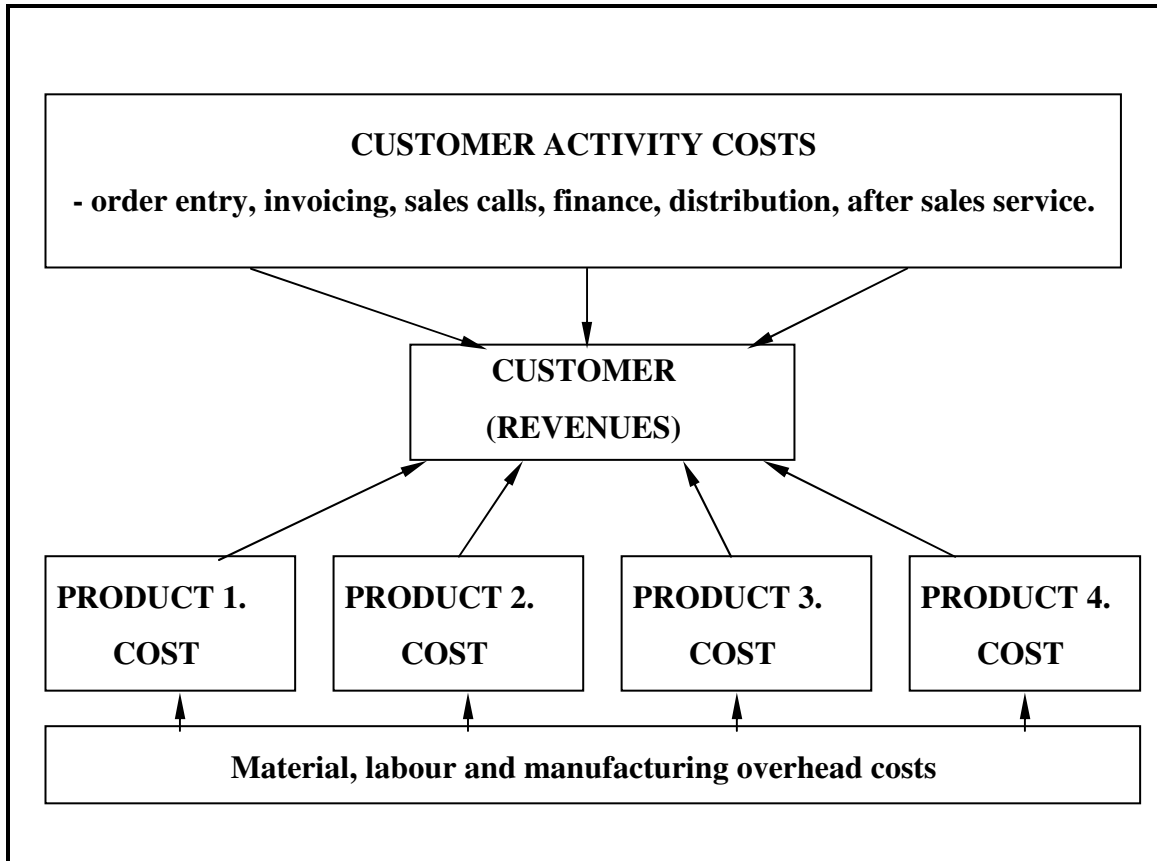
To this extent, management accounting as a discipline may be seen to be failing to provide the information needed for marketing and, indeed, management in general, to assist them to make more informed decisions. The lack of accounting information regarding the cost of customer-related activities (other than production) is viewed by many as something of a paradox (Connolly and Ashworth 1994; Foster, Gupta and Sjoblom 1996; O’Guin and Rebischke 1995) in so far as organisations which claim to be ‘customer focussed’ typically only examine customer cost and revenue information at the gross margin line (Howell and Soucy 1990; Bellis-Jones 1989; Smith 1993). Accounting in this way fails to consider a range of customer-related costs typically recorded below the gross margin line, for example, selling, general and administration (SGA), which may represent a

significant proportion of total cost (Howell and Soucy 1990; Bellis-Jones 1989; O'Guin and Rebeschke 1995).

There has been some recent recognition in the accounting literature that customers are the generators of profit, and the physical product is, in effect, just one element in meeting customer needs - hence, more emphasis should be placed upon *all* costs associated with meeting customer needs (Petty and Goodman 1996; Booth 1994).

The majority of the accounting literature on customer costing and profit analysis advocates the use of an activity-based approach in identifying and costing those non-physical product activities that relate to a particular customer or customer group (O'Guin and Rebeschke 1995; Petty and Goodman 1996; Smith and Dikolli 1995).

In this approach, the cost "object" is the customer, with the costing and tracing of the physical products undertaken separately from other customer-activity costs as depicted in Figure 3.7. Revenues received from the customer are matched with customer costs and product costs which allow the profitability of the customer to be calculated.



**Figure 3.7 Customer cost and profit analysis framework.**

For more detailed management information about customer costs, the literature suggests the use of a hierarchy of customer costs, not dissimilar to the concept advocated by Cooper and Kaplan (1991). Four main cost levels are proffered; order, customer, channel and market level costs (O’Guin and Rebeschke 1995; Petty and Goodman 1996). This hierarchy reflects the different cost behaviour of activities at each level. For example, order costs (order entry, order picking and invoicing) vary with the number of orders processed and delivered and are directly traceable to a customer. Customer costs relate to obtaining and maintaining customers including sales calls, after sales service, customer credit evaluation and will vary with, for example, the number of sales or service calls made. Channel costs are those related to the management and maintenance of the particular distribution channel - retail

outlets, distributors and direct sales. Direct sales may require, for example, a high level of resource (cost) support in terms of transport, labour, supervision and administration (Howell and Soucy 1990). Market-level costs relate to the servicing of particular market segments and may not be identifiable with any one customer.

Several benefits of adopting the CPA approach are noted within the literature. Using an ABC or a “Resource Costing” approach, as it is defined by Howell and Soucy (1990), allows the reporting of a marketing profit and loss statement - based upon an aggregation of each market/channel’s customer profitability - which reflects the structure of costs across the hierarchical levels while also allowing for the presentation of detailed customer profit reports (p.47). It is suggested that this type of information is of relevance to the determination of marketing and pricing strategies (Booth 1994) through directing the right resources to the right customers (Petty and Goodman 1996) and providing knowledge on sources of profitable business (Connolly and Ashworth 1994). Clearly, these suggestions show accounting information as an input to management decision-making, particularly as it relates to the role of accounting in providing cost information to facilitate market-orientated decisions. Foster, Gupta and Sjoblom (1996) see the accurate identification and matching of all customer costs and revenues over a long-term period as being the main challenge for management accounting in developing customer-profitability information. This challenge is re-affirmed in the study of “customer accounting” (CA) by Guilding and McManus (2002) who, while noting the continuing “short-termist” tendency of customer accounting techniques, highlight accountants’ and managers’ above average perceived merit of adopting CA practices including “customer profitability analysis” and “lifetime customer

profitability analysis” (p.56). Roslender and Hart (2002) in a field study of ten large firms (annual sales greater \$60 million) also note the interest shown by management accountants and marketing managers in customer profitability analysis. A similar interest was reported by Neilson et al. (2000) when discussing the planned changes in management accounting techniques in Danish financial service companies (see Section 2.4.1).

Of particular relevance to this thesis is Guilding and McManus’ finding that market orientation (the measurement of which was developed from Narver and Slater’s 1990 construct) is “significantly positively related to the use and perceived merit of three of the five CA practices, i.e. “customer accounting”, “lifetime customer profitability analysis” and “valuation of customers or customer groups as assets” (p.57). This finding, and the “paucity” of customer accounting research, leads Guilding and McManus to call for an increase in “accounting research concerned with dimensions of marketing management” (p.57), in particular, case study research on customer accounting.

In the context of this thesis, a further challenge can be identified, that is, matching customer activity costs to the product’s *attributes*. Referring to Figure 3.7, it is noted that the customer is the object to which costs are assigned. Customer costing and profit analysis techniques do not provide (or do they appear to have been designed to provide) information about the cost of product attributes.

As Foster, Gupta and Sjoblom (1996) note, customer profit analysis

*focuses on multiple products bought by a single customer rather than a single product bought by multiple customers and captures costs that are related to a customer but are not specific to a product, service, department, or geographic area” (p.10).*

In short, the analysis is based upon *aggregated* information about the costs of *all* (physical) products purchased by the customer in addition to *total* customer costs, the costs of which are not related (or traced) to any particular product. Where the customer’s product-attribute needs vary for the different products, the existing customer-costing techniques do not allow product-attribute costs to be calculated.

The present writer suggests that these techniques reflect an accounting way of thinking about marketing rather than a marketing way of thinking about accounting. For accounting information to be of greater value to marketing, it must be viewed from a marketing perspective. Within a market orientation, a product is viewed as comprising a “bundle” of customer-defined attributes, both tangible and intangible, derived from a range of activities within a firm’s value-chain. In accounting, however, a product is viewed principally as the physical or tangible product with other attributes (if recognised) seen as distinct or separate from the product. These “other attributes” are subsumed within the customer-cost object as described.

The (management) accounting way of thinking about a ‘product’ has seen separate techniques developed for the costing of what marketing views, singly, as product attributes.

Through closer integration between marketing (in terms of specifying customer product-attribute needs) and accounting, product and customer costing techniques may be further developed - combined and refined - to provide market-orientated information.

### **3.7 Summary**

The three main components of a market orientation - customer, competitor and interfunctional coordination - demonstrated the need for, and use of, accounting information. This information was identified in Ch 2 as relating, primarily, to cost information at five main points: customer acquisition and product-in-use costs; the seller's cost to meet customers' product-attribute needs; competitors' costs to meet customers' product-attribute needs; competitors' costs at a business unit level; and the profit to be derived from customers by the seller.

In this chapter contemporary accounting techniques/approaches have been reviewed in order to establish the extent to which the accounting needs of a market orientation are satisfied. Before discussing the extent to which the accounting techniques meet the needs of a market orientation, several general comments can be made.

First, the accounting techniques reviewed were selected because of their market orientation, i.e., they had a customer or competitor emphasis and, with the exception of value-chain analysis, which could provide accounting information (as input criteria) for decision-making at a product/product-attribute level.



Second, it has been found that several of the accounting techniques reviewed are more established in terms of their conception and operationalisation than others, although, in general, it is fair to say that the management accounting techniques reported within the literature are fairly much at an early stage of development (Shields and Young 1991; Lord 1996; Tomkins and Carr 1996b) and vary in terms of the amount of literature published. For instance, very limited literature is available about whole-life costing in contrast to the relatively substantial and rapidly increasing volume of literature on activity-based costing. Target-costing literature, while reportedly prevalent within the Japanese accounting literature, has only received attention within Western literature over the past decade. This is not to say that the volume and detail of published accounting literature is an indicator of the relevance or suitability of a technique to meet the accounting needs of a market orientation. Rather, it may be seen as *a* factor which affects the extent to which informed comment can be made.

Third, the techniques reviewed are not necessarily mutually exclusive. Activity-based costing, for example, may be seen very much as a way in which more sophisticated or detailed overhead cost information can be determined and may be better described as an approach to be used in conjunction with various techniques such as target costing, customer costing and attribute costing. In a similar vein, by combining and refining the target-costing (emphasising the physical product attributes) and customer-costing (emphasising the service or non-physical product attributes) approaches, more complete product-attribute cost information may be established.

Fourth, one technique may have application to several of the accounting needs of a market orientation. For instance, a whole-life costing approach may provide information not only of the seller's product-attribute costs but also the costs of the customer acquisition and product-in-use costs.

In Figure 3.8, the management accounting techniques reviewed are cross-referenced with the accounting needs of a market orientation identified in Ch 2.; this provides an indication of the relevance of each technique for each particular need.

<b>Accounting needs of a Market Orientation</b>	<b><u>Management accounting techniques</u></b>					
	<b><u>TC</u></b>	<b><u>ABC</u></b>	<b><u>CPA</u></b>	<b><u>AC</u></b>	<b><u>SCA</u></b>	<b><u>WLC</u></b>
• Product-in-use costs	√			√		√
• Product-attribute costs	√	√		√		√
• Competitor's product attribute costs	√	√		√		
• Competitor value chain costs					√	
• Customer profitability	√	√	√			
√ = indicates technique is of relevance to the market orientation need TC = Target costing (incorporates value and functional cost analysis) ABC = Activity-based costing CPA = Customer profit analysis AC = Attribute costing SCA = Strategic cost analysis (based upon value-chain analysis) WLC = Whole-life costing						

**Figure 3.8 Accounting techniques for market orientation needs.**

In looking more specifically at each accounting need of a market orientation, the following comments can be made regarding the management accounting techniques reviewed.

*Product-in-use costs.* No accounting technique/approach for the determination of customer product-in-use cost is evident within the accounting literature. Within the TC literature, reference is made to the need for, and importance of, reducing customer acquisition and product-in-use costs, however, the detail of how this is to be undertaken is absent. Whole-life costing (WLC) approaches, applications of which are prominent within the engineering literature, seek to provide the information required for this market-orientation need of product-in-use costs. Even so, to date, this approach has received minimal attention within the management accounting literature.

*Product-attribute costs.* This market-orientation need is perhaps the most important of the identified accounting needs given that it is also the core component of the competitor-cost comparison and has an impact upon the customer's acquisition and product-in-use costs while forming the cost component in determining customer profitability. The attribute costing (AC) approach advocated by Bromwich (1991, 1992), Walker (1991) and Partridge and Perren (1994) does provide the type of information to meet the product-attribute cost needs of a market orientation. Attribute-cost models are well described within the literature, however, details of attribute-costing application and use in practice are not yet present within the management accounting literature.

To the extent that the product attributes of the physical (or manufactured) product represent the most important attributes in meeting customer needs, the TC approach also meets the product-attribute cost needs of a market orientation. The accounting literature provides evidence of its use in practice, based mainly upon the experiences within large Japanese manufacturing organisations (see, for example, Tani 1994; Fisher 1995).

*Competitor product-attribute cost analysis.* While there is a strong view for the need to undertake a cost comparison of competitors at a product-attribute level (Day 1990; Bromwich 1990, 1991), the accounting literature is devoid of reference to its detail and practice. This is not unexpected given the lack of research about the product-attribute costing within firms (see above) - cost information which is a prerequisite to competitor-cost comparison. The limited accounting literature in the competitor-cost arena has tended to focus on product-cost comparison rather than product-attribute cost comparison.

While the TC literature emphasises the importance of competitor comparison, its emphasis has tended towards the comparison of the firm's product attributes more than the costs of those attributes. The costing of product attributes within the TC process does, however, present itself as a basis on which a competitor attribute-cost analysis may be undertaken.

*Competitor value-chain cost analysis.* Shank and Govindarajan's (1992a, 1992b) case-based research has attempted to incorporate cost analysis into a strategic setting by providing competitive cost information to allow positions of advantage to be

examined. Their strategic cost management approach, based upon Porter (1985), provides a way in which the market orientation need for competitor-cost information can be met. It is noted that the accounting literature in this area is confined to the work of Shank and Govindarajan (1989, 1992a, 1992b, 1993) and is yet to examine the application of value-chain analysis in firms with numerous, heterogeneous, products.

*Customer profitability analysis.* The CPA technique reported within the management accounting literature focuses attention on organisational costs associated with meeting customer needs other than those related to the physical product. However, in its present form, the CPA approach does not sufficiently meet the accounting needs of a market orientation. The approach does not provide for the matching of customer costs with product attributes, a situation which is compounded by the aggregation of customer costs which may relate to multiple (distinct) products. In short, while this approach may offer useful information for management, it does not provide the information in the way required for a market orientation.

In concluding this summary, perhaps the most important aspect of relevance to this thesis, thus far, is the omission from the management accounting literature of a market orientation as the point of departure. The accounting techniques, as described in this chapter, are not explicitly linked in any formal or structured way to a market orientation, although there is an overt linkage to strategy and the determination of competitive advantage. The lack of an explicit link goes some way to explaining the range of accounting techniques which, while having varying

degrees of relevance to the accounting needs of a market orientation, do not provide a coherent approach to meeting these needs specifically.

Why is this so? In a business climate that requires firms to be market orientated - functionally integrated and focussed upon customers and competitors - to ensure long-term profitability, accounting should provide information for, and be coordinated with, marketing. As noted at the commencement of this chapter, it is inconceivable that the management accountant would isolate him/herself from the marketing function - but, in many respects, the literature suggests that this is still the case. It would seem that in terms of market orientation, both the marketing and accounting disciplines are heading in the same direction but on parallel roads which do not intersect. Not surprisingly, there is an absence of empirical research in the literature about how marketing and accounting information are integrated when making product decisions.

## **Chapter 4.**

### **Research objectives and methodology**

A case study approach was adopted as the research strategy in this thesis. The selection of this approach and the place of case study in social scientific research are the focus of discussion in this chapter. The chapter commences with a review of the main research issues identified in Ch 2 and 3 and the subsequent formulation and specification of the research problem. Discussion of two broad philosophical approaches to undertaking research - positivist and phenomenological - is then presented and provides a framework for a more detailed examination of case study research. Central to the discussion are the benefits, and responses to criticisms, of the single case study approach. This is followed by details on the case study design including a discussion on issues of validity and reliability.

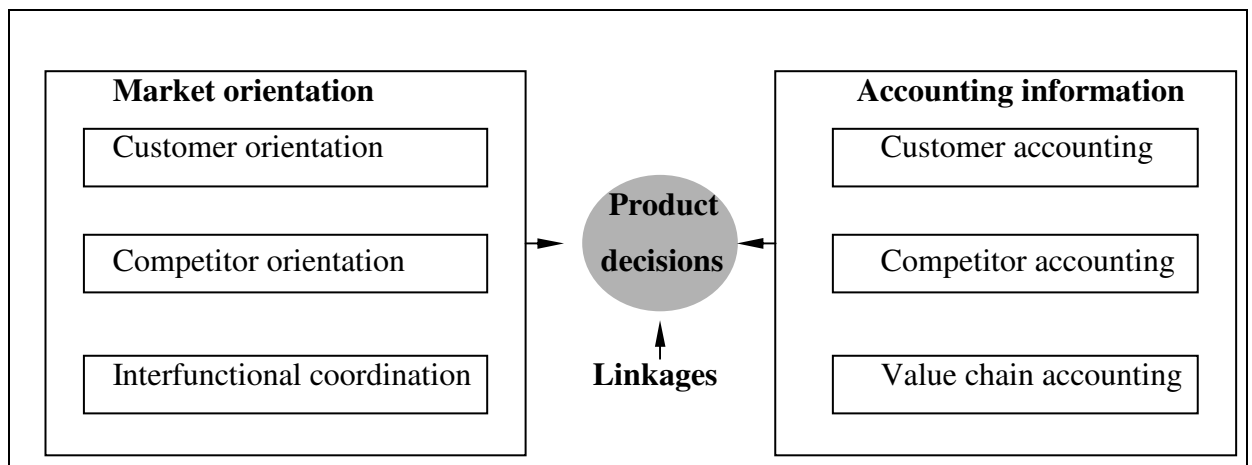
#### **4.1 Research issues and questions**

The findings from the literature reviews in Ch 2 and 3 indicate that a market orientation requires accounting information as an input measure for decision-making at a product (attribute) level and as an output measure of business performance. While the latter has received attention within the marketing literature, discussion of the former has not and thus represents a gap within the marketing literature.

With few notable exceptions (see, for example, Roslender and Hart 2002; Guilding and McManus 2002), management accounting, on the other hand, has not explicitly

or purposefully considered the notion of a market orientation in its techniques, representing a similar gap within its literature.

Figure 4.1 presents a model that reflects the theoretical links between accounting and market orientation.



**Figure 4.1 Framework for examining market orientation and accounting information linkages**

One outcome of this thesis was to be a contribution to the development of theory by identifying gaps within the literature and discussing the conceptual issues surrounding them (Ch 2 and 3). Clearly, however, there still remains a need for empirical research and the development of more robust theory. Accordingly, within the conceptual framework of a market orientation, the primary objective and research problem of this thesis is to:

**explore and describe the way in which marketing and accounting information is used in organisational strategic product decision-making.**



In investigating this problem, the research turns to questions of “what, how, who and why” and examines constituents of a market orientation and accounting information. The following questions are considered for each component - customer, competitor and interfunctional coordination - of a market orientation, ensuring a richer understanding of the phenomena under review.

- What constitutes a product and a “strategic” product decision?
- How are strategic product market decisions determined?
- Who is involved in product decision-making, why and to what extent?
- What is the type and detail of marketing information used in the decision-making process and why is this used?
- How (or in what ways) are firms integrating accounting information about product attributes into decision-making?
- What type of accounting information/techniques are used and why?

These questions are developed from the main research objective and focus the research at the product level, a level at which there is a noticeable absence of, and need for, detail within the market orientation and accounting literature (see S 2.4.1, 2.4.2, 2.4.3, 3.7).

## **4.2 Research methodology**

The satisfaction of the research objective outlined in the previous section required the selection of a methodology which facilitated the detailed description about market orientation and accounting within an organisational setting.

There are multiple research methods available to researchers - experimental, historical, survey - which are derived from two main research paradigms or philosophical positions: positivism and phenomenology (Hussey and Hussey 1997). These positions will now be used to outline the research issues considered in selecting the case study approach for this thesis.

### **Two paradigms - positivist and phenomenological**

According to Easterby-Smith, Thorpe and Lowe (1991, p.22), the key idea of the positivist approach is;

*.... that the social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition.*

Such an approach suggests that to develop understanding about phenomena in a management/business setting, investigation should be based upon observations from outside the organisation (looking from the outside in) and that such information should be objective and verifiable (Madut 1986; Morgan and Smirich 1980).

Implications that flow from this suggestion include the separation of the researcher from the phenomena being studied and the need to establish causal explanations by way of hypothesis testing and quantitative measurement, i.e., deductive theory.

By way of contrast, a phenomenological approach sees the world as one in which reality is socially constructed and given meaning by people (Husserl 1946), that is, to make explicit the implicit structure and meaning of human experience that is not

so easily revealed by ordinary observation (Sanders 1982). Such a view may be described as an ‘inside out approach’ to research in which the researcher works “inside” an organisation and predominantly with (but not restricted to) qualitative data. Theory is inductively derived. The key features of the positivist and phenomenological paradigms may be summarised as follows:

	<b>Positivist paradigm</b>	<b>Phenomenological paradigm</b>
<b>Philosophical level</b>	The world is external and objective Observer is independent Science is value-free	The world is socially constructed and subjective Observer is part of what is observed Science is driven by human interests
<b>Social level</b>	Focus on facts Look for causality and fundamental laws Reduce phenomena to simplest events Formulate hypotheses and test	Focus on meanings Try to understand what is happening Look at the totality of each situation Develop ideas through induction from the data
<b>Technical level</b>	Operationalise concepts so they can be measured Take large samples	Use multiple methods to establish different views of phenomena Small samples investigated in depth

**Table 4.1 Positivist and phenomenological paradigms**

Source: Adapted from Easterby-Smith, Thorpe and Lowe 1991, p.27.

Morgan (1979) distinguishes between the three levels in which these paradigms operate. The philosophical level reflects the researcher’s view of the world, the social level provides suggestions about the conduct of the research while the

technical level provides guidance on the research techniques and methods to be used. In this thesis, the researcher was particularly influenced by the social level of the phenomenologist paradigm given the absence within the literature of any previous research and the related and subsequent need for description and understanding of the phenomenon (Bonoma 1985). In selecting a research method, the technical features of a phenomenological approach were also noted by the researcher.

There are generally accepted strengths and weaknesses associated with the two philosophical approaches to research outlined above and these are briefly summarised in the following table:

	<b>Phenomenological (qualitative)</b>	<b>Positivistic (quantitative)</b>
<b>Strengths</b>	<p>Considers change processes over time.</p> <p>Understand people's meanings.</p> <p>Respond to ideas and issues as they emerge.</p>	<p>Provides broad coverage of situations.</p> <p>Fast and economical.</p> <p>Statistics lend support to analysis and verification - credibility enhanced.</p>
<b>Weaknesses</b>	<p>May be time consuming and resource hungry.</p> <p>Analysis and interpretation of data may be difficult.</p> <p>May be perceived as of low credibility.</p>	<p>Lacks effectiveness in understanding processes.</p> <p>Less helpful in theory generation.</p>

**Table 4.2 Strengths and weaknesses of philosophical research approaches**

Table 4.2 indicates an association between the phenomenological approach and qualitative methods and between a positivist approach and quantitative methods. However, these methods are not necessarily mutually exclusive within the research design (Yin 1994) with many studies combining qualitative and quantitative methods (Rossman and Wilson 1984; Miles and Huberman 1994; Easterby-Smith et al. 1991). Conceptually, the two philosophical paradigms and their related methods of data collection and analysis can be viewed as a continuum ranging from a purely inductive - phenomenological approach to a purely deductive - positivistic approach (Perry 1998).

Grounded theory, for example, is generally associated with a more purely inductive approach in which there “is no theory under consideration and no hypothesis to test” (Eisenhardt 1989, p.536), i.e., theory is generated from the data and not before the study. As an anthropology-based approach to research, ethnography also reflects a more purely inductive method in which theory is developed from data obtained through “participant observation”. Often taking place over long time periods, particular attention is given to the detailed accounts of peoples’ perspectives and perceptions of their world (Miles and Huberman 1994) i.e.,

*a key assumption has been that, by entering into firsthand interactions with people in their everyday lives, ethnographers can reach a better understanding of the beliefs, motivations, and behaviors of their subjects than they can by using any other method* (Tedlock, in Denzin and Lincoln, 2000, p.470)

However, from a practical point of view, it may be difficult for the researcher to ignore prior or common knowledge when contemplating research, i.e., “it is impossible to go theory-free into any study” (Richards 1993, p.40). This has seen a shift in both grounded theory and “narrative ethnography” away from the purely inductive margin of the continuum.

Located between the purely inductive and deductive extremes, case study research can be distinguished from grounded theory and ethnographic approaches in that, although “inductive theory building is more predominant” (Perry 1998), theory development prior to data collection “is essential” (Yin 1994) and plays a primary role in framing research questions and in identifying and analysing data. Research associated with the more purely deductive approaches can be characterised by large-scale “empirical” studies in which “data” are manipulated using quantitative techniques such as multivariate statistical analysis (Parkhe 1993). The majority of studies on market orientation, particularly in the services sector, have been quantitative, prompting many (for example, Harris 2000, 2002; Gray and Hooley 2002; Guilding and McManus 2002) to advocate the adoption of more inductive approaches to develop a deeper understanding of the processes and dynamics of market orientation (Harris 2002).

Central to many of the criticisms and debates of the two approaches is the issue of “data integrity” - characteristics of the research that affect error and bias in research results normally associated with the notions of “internal validity” and “reliability” (Bonoma 1985). The quantitative methods associated with the positivist approach tend towards a higher level of data integrity relative to the qualitative methods

adopted in phenomenological studies. The central issue of qualitative research methods is the concern with understanding rather than measuring (Davis 1976; Gordon and Langmaid 1988) and, as Miles and Huberman (1994, p.2) note, for those

*phenomenologically oriented..... there is no unambiguous social reality “out there” to be accounted for, so there is little need to evolve methodological canons to explicate its laws (see Dreitzel 1970).*

Perhaps, more to the point, is the discussion by Miles and Huberman (1994) which highlights that “the lines between epistemologies have become blurred ... and the paradigms for conducting social research seem to be shifting beneath our feet...” (p.5). Similarly, Parkhe (1993, p.256) maintains that the extremes of the two philosophical paradigms are “untenable” and that advancing theory requires “an interplay between the two”.

This present study, in adopting a case-study approach, reflects the melding of these two paradigms and responds to the call for more case study research into market orientation (Harris 2002).

### **Case study research**

The nature of the research problem in this investigation and the need to describe relatively complex phenomena which have not previously been examined in any detail within the literature leads most noticeably to “field” research.

“Fieldwork”, as it is referred to by Scapens (1990), involves the study of social practices in the “field of activity in which they take place” (p.264.) This area of research has gained much support in both the marketing and accounting disciplines specifically (Scapens 1990; Roberts and Scapens 1985; Kaplan 1983; Colwyn Jones et al. 1993; Kaplan 1986; Ferriera and Merchant 1992; Patell 1987; Tai 1990; Bonoma 1985; Carr et al. 1991; Berry et al. 1991; Keating 1995; Ahrens and Dent 1998; Harris 2002; Guilding and McManus 2002) and within business literature generally (Yin 1994; Eisenhardt 1989; Gummesson 1991) over the past one and half decades.

A review of the literature reveals common characteristics associated with “case” and “field” research, characteristics which locate the research within the broader phenomenological paradigm described above. This is evident in Table 4.3 which summarises those characteristics of case studies most regularly acknowledged within the extant literature.

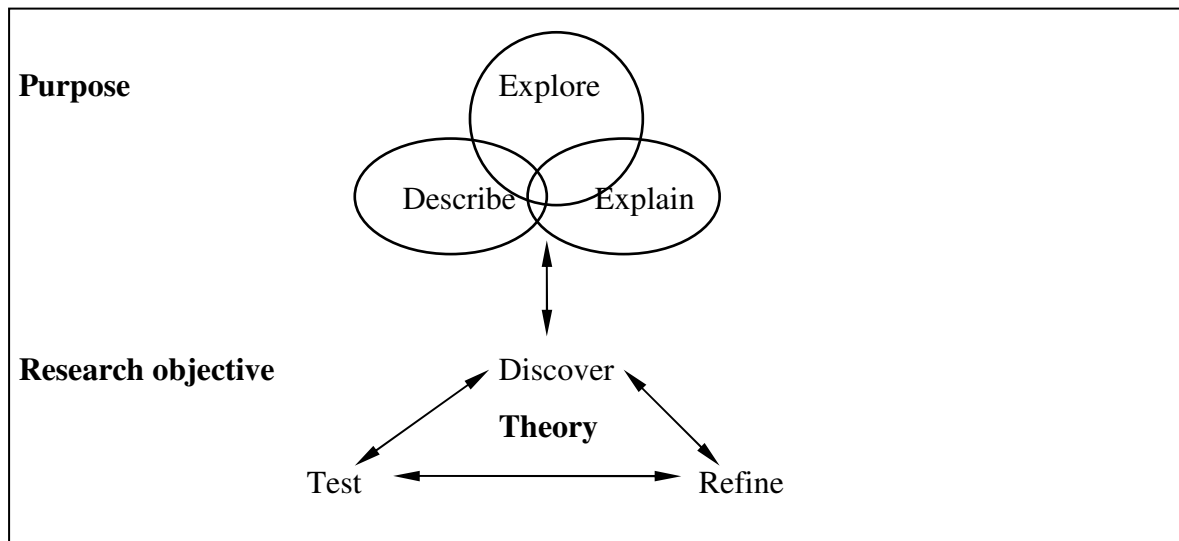


<b>Characteristic</b>	<b>Selected literature references</b>
Examination of phenomena in natural setting.	Benbasat et al. (1987), Yin (1994), Eisenhardt (1989), Bonoma (1985)
Provides “rich data” - answers questions of ‘why’ and ‘how’. Focus on understanding.	Yin (1994), Benbasat et al. (1987), Stake (1995), Ferriera and Merchant (1992), Scapens (1990), Perry (1998)
Multiple sources of evidence are used - triangulation of data - observation, interview, documentation.	Yin (1994), Stake (1995), Miles and Huberman (1994), Bonoma 1985, Perry (1998)
The researcher has contact with organisational participants.	Yin (1994), Stake (1995), Miles and Huberman (1994), Ferriera and Merchant (1992)

**Table 4.3 Case study characteristics**

The literature also reveals an emphasis on the classification of case studies in terms of their intended purpose and contribution to theory. Purpose is generally associated with exploration, description or explanation of a given phenomena (Yin 1994; Bonoma 1985; Scapens 1990) with the underlying research objective of contributing to the development of theory. Keating (1995) describes theory development in terms of a research cycle wherein the case study may be used to discover, test or refine theory. Figure 4.2 depicts the linkages between these case classifications and the underlying research objectives.

Case studies will often provide multiple outcomes in that they may explore, describe and explain phenomena to various degrees (Yin 1994) and, in turn, contribute to the different stages of the research cycle.



**Figure 4.2 Case study purpose and research objectives**

One reason for the emphasis in the literature on case characteristics and classifications may be attributed to the lack of consensus on the definition of “case study” and the problem of changes in the definition that may arise from different methods of inquiry and cases observed from different “world views” and in different situations (Stake, in Denzin and Lincoln, 1994). The following typify many of the reflections on the definition of case study.

*The concept of the case remains subject to debate, and the term study is ambiguous (Kemmis, 1980). A case study is both the process of learning about the case and the product of our learning (Stake, in Denzin and Lincoln, 1994).*

*There is no standard definition of a case study (Benbasat et al. 1987).*

*In short, the term “case” and the various terms linked to the idea of case analysis are not well defined in social science, despite their widespread usage and their centrality to social scientific discourse (Ragin C. in Ragin and Becker, 1992, p.1).*

The lack of definition and the various conceptions of case research also contribute to the criticisms levelled at case research which are discussed in detail in the following section.

### **Case study research - benefits and responses to criticisms**

A single case-study approach was adopted in this research because of its particular suitability to situations where little is known about a particular phenomenon and the existing literature (theory) is limited or inadequate (Eisenhardt 1989). While the literature reviewed in Ch. 2 and 3 has identified existing theory in market orientation and management accounting, little is known about the interface between the two at the product attribute level.

The value of the case study to develop theory and gain a greater understanding of a particular construct is echoed by many researchers (Yin 1994; Walton 1992; Stake 1995; Gummesson 1991; Bonoma 1985). For instance, Benbasat et al. (1987) maintain that:

*Case study research is particularly appropriate for certain types of problems: those in which research and theory are at their early, formative stages...*

*We believe that case study research strategy is well suited to capturing the knowledge of practitioners and developing theories from it (p.369 - 370).*

The case study approach is valuable when seeking to describe how particular phenomena operate and has a “unique strength in its ability to deal with a full variety of evidence - documents, artefacts, interviews, and observations ....” (Yin 1994, p. 8). Gummesson (1991) maintains that case research is useful for studying processes within companies and provides the important advantage of providing an “holistic view of a process” (p.76). Kjellen and Soderman (1980) as cited in Gummesson (1991) advocate the use of case studies as a way to generate theory and of initiating change, a process which requires a focus on processes which are “likely to lead to understanding - *Verstehen* - rather than a search for causal explanations” (p.75). Alloway (1977) maintains that case study research is advantageous for practitioners who are to implement recommendations based on research findings. In this situation the conceptual and case description allows for the assessment and application of the findings to (the particular practitioner’s) organisational circumstances. Stake (in Denzin and Lincoln 2000, p.446) emphasises the “potential for learning” from a case which is “the most accessible” and in which the researcher can spend the most time.

Despite the benefits to be gained from the “descriptive richness” of case data, case study research is not without criticism and question of its place in social scientific research. Both Hamel et al. (1993) and Platt (1993) trace the foundation of much of the criticism to the conflicting views in the 1930’s of two pre-eminent universities in the USA (The University of Chicago; strong advocates of case study - and

Columbia University; advocates for statistical survey). The main criticisms levelled at case research were the lack of representativeness especially when used as a point of observation for the social phenomenon and lack of rigour in the collection, construction and analysis of the empirical materials that give rise to the study.

Hamel et al. (1993) note that the:

*...criticisms of the case study concerning its presumed lack of representativeness and methodological rigour appear poorly founded... (p26). Such criticism was made in the heat of a methodological conflict in sociology fuelled more by issues dealing with the relative importance of university institutions than by the methods being disputed (p.27).*

*...the detail and depth of description rendered by the case study permit an understanding of the empirical foundations of the theory. The case study thereby attains a key importance in sociology and other social sciences in that it has proven to be a powerful descriptive study (p.33).*

Houle (1986) notes that;

*the known explanatory theories, much envied by the social sciences, were all preceded by descriptive theories on which they could base themselves. Thus, the case study considered as theory, as well as descriptive studies in general, can no longer be seen as a prehistorical stage of sociology (p.45).*

While the criticisms levelled at the place of case study in social scientific research have been addressed within the literature, the issues of validity and reliability of case study research, in particular, single-case research, remain in the current research literature.

Two broad strategies have been developed in response. Table 4.4, reproduced from Yin (1994), reflects the more “formal” case literature response to criticisms in terms of validity and reliability. The explicit adoption of a formal, systematic research process and a deliberate search for sources of bias and invalidity distinguishes social science research from “ordinary knowing” (Judd et al. 1991).

<b>Tests</b>	<b>Case study tactic</b>	<b>Phase of research</b>
Construct validity	<ul style="list-style-type: none"> <li>- use of multiple sources of evidence</li> <li>- establish chain of evidence</li> <li>- have key informants</li> <li>review draft case report</li> </ul>	<ul style="list-style-type: none"> <li>- data collection</li> <li>- data collection</li> <li>- composition</li> </ul>
Internal validity	<ul style="list-style-type: none"> <li>- do pattern-matching</li> <li>- do explanation-building</li> <li>- do time series-analysis</li> </ul>	<ul style="list-style-type: none"> <li>- data analysis</li> <li>- data analysis</li> <li>- data analysis</li> </ul>
External validity	<ul style="list-style-type: none"> <li>- use replication logic in multiple-case studies</li> </ul>	<ul style="list-style-type: none"> <li>- research design</li> </ul>
Reliability	<ul style="list-style-type: none"> <li>- use case study protocol</li> <li>- develop case study data base</li> </ul>	<ul style="list-style-type: none"> <li>- data collection</li> <li>- data collection</li> </ul>

**Table 4.4: Case study tactics (Source: Yin 1994, p.33)**

The four tests are described as “common to all social science methods” and relevant to case study research. Yin points out that the application and emphasis of each test is linked to the purpose of the case. Internal validity, for example, is less applicable in exploratory and descriptive studies which do not aim to address issues of causality. This is not to say that inferences drawn from the data should not be considered in the research design and tactics such as pattern-matching be adopted. The use of multiple sources of evidence (interview, observation, physical evidence and documentation) to establish construct validity is frequently emphasised within the literature (Yin 1994; Bonoma 1985; Hamel et al. 1993; Stake 1995). Reliability of the case rests upon making the conduct of the case as transparent as possible - providing an audit trail of procedures and processes undertaken which would allow the case to be replicated, if necessary.

The absence of documented procedures has been a major criticism of case study research (Yin 1994; Benbasat et al. 1987). This criticism has been recently addressed in the marketing literature by Perry (1998) in providing a “structured approach to using the case study methodology in postgraduate research”(p.785). Perry, in re-inforcing the general approach to case study research by Yin (1994), emphasises the importance of prior theory as a part of the inductive - deductive process of data analysis and reporting and “the careful documentation of procedures” to ensure “trustworthy knowledge” (p.799).

Perhaps the most enduring point of discussion of case study research relates to external validity and the generalisability of the case study findings. The following statement from Yin (1994) encapsulates the issue of “generalising”.

*Critics typically state that the single case offers a poor basis for generalizing. However, such critics are implicitly contrasting the situation to survey research, in which a “sample” (if selected correctly) readily generalizes to a larger universe. This example and universe is incorrect when dealing with case studies.*

*This is because survey research relies on statistical generalization whereas case studies (as with experiments) rely on analytical generalization. In analytical generalization the investigator is striving to generalize a particular set of results to some broader theory (p.36).*

A second, and less “formal” (in terms of explicit tactics), response to criticisms levelled at case research is also evident within the extant literature. While not discounting the issues of validity and reliability the response focus shifts to the “richness” and understanding of the case study. Stake (1994), for example, emphasises the importance of understanding the particular, or the uniqueness of a, case. He maintains that case study methodology has suffered somewhat because of those who emphasise the importance of obtaining generalisations that pertain to a population of cases. His strong views on the issue of generalisation are reflected in the following comments:

*Damage occurs when the commitment to generalise or create theory runs so strong that the researcher’s attention is drawn away from features important for understanding the case itself (p.238).*



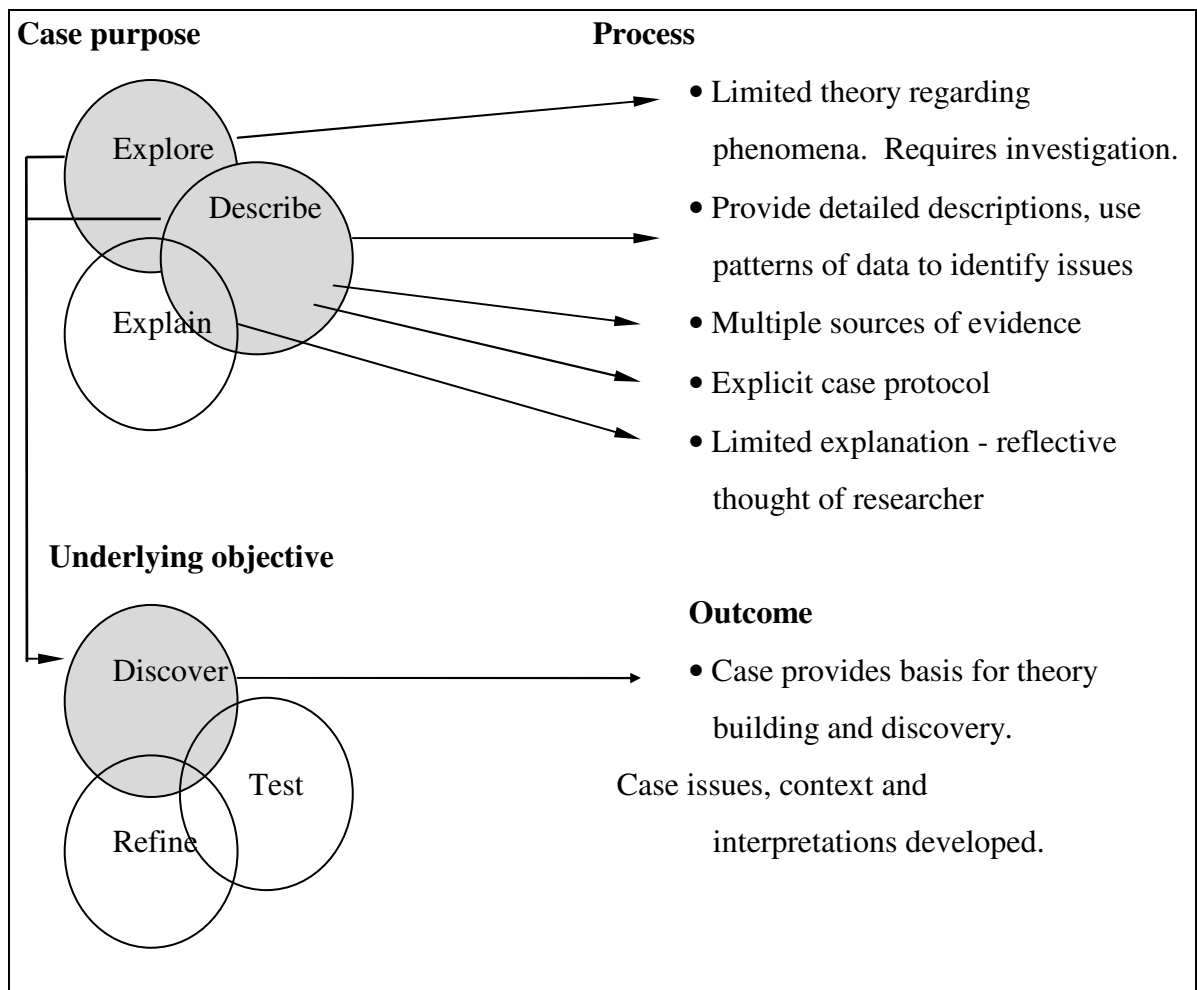
*Comparison is a powerful conceptual mechanism, fixing attention upon a few attributes being compared and obscuring other knowledge about the case.*

*Comparative description is the opposite of what Clifford Geertz (1973) calls “thick description” (p.242).*

*Generalisations from differences between two cases are much less to be trusted than generalisations from one. Illustration as to how the phenomenon occurs in the circumstances of the particular exemplar can be valued and trustworthy knowledge (p.242).*

Both Maxwell (1992) and Wolcott (1990) adopt the view “that *understanding* is a more fundamental concept for qualitative research than validity” (Wolcott 1990, p. 146). This view is reflected in a ‘realist conception’ of validity in which validity is seen as inherent in its relationship to those things that it is intended to be an account of, rather than the procedures used to produce the account (case) itself (Maxwell 1992; House 1991; Norris 1983).

The view taken in this thesis is that much of the criticism and questions levelled at case research may be allayed by making explicit, at the outset, the purpose of the case study, its contribution to the “theory cycle” and the procedures and process adopted by the researcher. Figure 4.3 presents a conceptual model for the single-case study approach in this thesis and draws upon both the “formal” (Yin 1994; Perry 1998) and less “formal” (Stake 1994; Wolcott 1990; Maxwell 1992) responses in the literature to the criticisms of case research.



**Figure 4.3 Framework for clarifying case study focus**

The shaded sections in the above diagram indicate the emphasis of this case research. Its purpose is to explore and describe phenomena about which little previous research has been undertaken. The underlying objective of the study is to discover and provide a basis for theory development rather than refine or test theory. A single-case approach was chosen for the depth and richness of data that it could provide.

This said, deploying the case study approach

*...is remarkably hard, even though case studies have been considered to be “soft” research. Paradoxically, the “softer” a research strategy, the harder it is to do (Yin 1994, p.16).*

Not all the answers to the research questions may necessarily be derived from the case. Indeed, it is not uncommon for such research to raise more questions than were initially asked in a particular study (Gergin 1982) and provide data about issues which may not have been initially considered in the theory development phase of the case design (Yin 1994).

Aspects of construct validity and reliability are predominant concerns in exploratory and descriptive cases. These are dealt with in this thesis by making explicit the case protocol, multiple sources of data collected as evidence and by key respondent review of transcripts. Planning for case protocol, data collection and analysis are the subject of detailed description in the following chapter.

## **Chapter 5**

### **Case study design**

The design and conduct of case study research as detailed in Yin (1994) and Perry (1998) has been adopted generally as a template for this thesis while data analysis is based heavily upon the work of Miles and Huberman (1994). Yin and Perry describe several stages in undertaking case studies: case study design; conducting case studies - preparing for data collection, collecting evidence; analysing case evidence; and composition of the research report. Planning for each of these stages is now outlined. An integral part of case study design, and one which the researcher found invaluable, is the case study protocol, which represents not only the case study instrument but “the procedures and general rules that should be followed in using the instrument” (Yin 1994, p.63). Making the protocol explicit also increases the reliability of the case research. Given its importance, case protocol is discussed in greater detail in section 5.3.

#### **5.1 The case study design**

The research design is defined by Yin (1994) as “the logical sequence that connects the empirical data to a study’s initial research questions and, ultimately, to its conclusions” (p.19). The design comprised five important components: the research question/s; research propositions (or purpose); the unit of analysis; the logic linking data to the propositions; and the criteria for interpreting findings.

The primary research problem (Ch 4.1) reflects the need to answer “how”, “what” and “why” questions of the way in which marketing and accounting information are

used in the strategic product decision-making process of an organisation. Perry (1998) refers to this as the “how do” - descriptive-type questions typical of theory building case study research (see Fig 4.3) rather than the “how should” prescriptive-type “cause and effect” studies (p.787). The unit of analysis in the study comprises the individuals (functional area) within the organisation who are involved in and/or responsible for (strategic) product decisions.

Data were to be collected from several sources - interviews, documents and through observation - with transcribed interviews to be reviewed by respondents (see Appendix summary and Appendix 1). Both multiple sources of data and respondent reviews of draft case interview data address issues of construct validity.

Interpretation of the case findings was then to be considered in light of the three behavioural components of a market orientation conceptualised by Narver and Slater (1990).

## **5.2 Preparing for data collection**

Preparing for case study data collection includes examining the skills of the researcher, preparation and training for the case study and development of the case study protocol. Yin (1994) maintains that success with these issues contributes to quality and efficiency in conducting case studies.

The researcher’s industry (8 years) and academic (10 years) experience and qualifications brought to this study certain skills generally perceived as necessary in undertaking case study research. These include the ability to ask searching questions, to listen attentively, to maintain a degree of flexibility and adaptability

without sacrificing “rigour” and to possess a sound understanding of the issues being researched.

By way of preparation and “training” for the case study, the researcher presented several seminars to academic colleagues outlining and discussing the purpose of the research, the theory underpinning the research, proposed research method and procedures. Seminar feedback from peers and experienced researchers together with a detailed literature review of research methods and techniques facilitated researcher preparation.

A further aspect of preparation was the development of the case study protocol. Yin (1994) equates this to the instrument with which the case will be undertaken and embodies: a project overview; objectives and substantive issues being researched; field procedures, including access and scheduling of data collection activities; research questions and their probable sources of evidence; and an outline for case study reporting. The details of such protocol are considered an important aspect of research in that they focus the researcher’s attention on to the purpose of the study, any potential problems that may arise in its conduct and to the type of report that will be required for the intended audience.

### **5.3 Case protocol**

The case protocol is intended to direct the researcher in undertaking the case study. This aspect was found to be very useful in invoking critical thinking about how the study should proceed and constantly prompted reflection on how the study procedures related to the primary research problem.

## **Project overview**

A key element of the project overview encompasses a statement about the study, its aims and the people involved. Based upon the literature reviews (Ch 2 and 3), a statement about the main research issues and method of researching these issues was formulated. This statement was encapsulated within a summary/introduction letter and noted recent findings of marketing research and identified the need for further research into the role of accounting and marketing (Appendix 2). Care was taken to ensure there was sufficient information to allow a recipient to gain an understanding of the study while ensuring that no reference was made to any specific type of accounting or marketing information which may have introduced bias into the research. Issues such as confidentiality were also addressed which subsequently proved to be an important factor in securing access.

## **Case study site selection and access**

Selecting a case site and the issue of access were very much intertwined, principally because the information sought was highly confidential. The researcher was seeking access to details about the firm's customer and competitor intelligence, accounting information, the process for product decision-making and the supporting documentation, for example, market research reports, competitor-analysis studies and costing information. While the case site (Ch 6.1) was "typical" of the small-medium enterprise predominant in Australian industry, its selection was not made with any preconceived ideas as to what was or was not an "appropriate" case. As Vaughan (1992) notes,

*breaking away from our preconceptions about appropriate cases can stimulate theoretical innovation (p.174).*

The opportunity to undertake the case study arose after an informal meeting between the researcher and the general manager (GM) of a design and digital graphics organisation. To formalise discussions, the general manager (GM) was forwarded an introduction letter which outlined the nature of the study (Appendix 3). A telephone follow-up was made with the GM who gave initial support to the project subject to a meeting with the researcher to discuss aspects of the study, particularly the issue of confidentiality. A meeting was subsequently held and “complete access” to the organisation was granted. “Complete access” included access to files and documentation, production facilities/operations, personal interview access to all personnel of the business-unit as was required with authority to audio-tape such interviews. Prior to undertaking the first case site visit, the researcher identified the general manager, sales/marketing manager, production manager and accountant as likely key respondents. It was anticipated, however, that additional respondents would be involved as the researcher became more familiar with the operations of the firm, the size and structure of the firm and how, and by whom, product decisions were made.

The fact that the research was undertaken within an Australian organisation but with the research findings to be reported and examined in thesis form in Scotland played a major part in securing access. In the circumstances the GM considered it unlikely that competitors would gain access to sensitive material published in the thesis. Furthermore, the GM viewed the research project as an independent and objective



examination of the organisation which would provide potentially useful information. The case organisation (SD) requested that, at the conclusion of the case study, an oral presentation be made to the management team of the firm and that any written discussion of the study be made available to them (see Appendix 1).

### **Interview topics/questions**

Prior theory plays a central role in the development of interview protocol by providing a link to initial concepts (Yin 1994; Perry 1998) and providing a degree of structure to the data collection process, an approach favoured by Miles and Huberman (1994). In this study, a topic guide incorporating broad questions about the marketing and accounting information used by firms was developed around the three components of a market orientation conceptualised by Narver and Slater (1990). This was preceded by what is termed here as “over-arching questions” (Appendix 4). The over-arching questions were designed for several reasons: (i) to assist the interviewer, at the outset, in developing a “picture” of the organisational structure, the process for making product decisions and the people involved in that process; (ii) to allow managers to lead the discussion with a view to establishing an environment where the manager felt relaxed and in which a genuine exchange of information could be established; and (iii) to provide an opportunity for the interviewee to “tell a story” or capture the perceptions of their experiences related to the research (Perry 1998).

For example, one over-arching question related to what the interviewee perceived to be his/her role and responsibilities within the organisation:

*Can you briefly describe the organisational structure (or your position in the organisation) and your responsibilities?*

A further question that was to be discussed in the initial stages was the interviewee's conception about the product/service provided by the firm.

*Would you please describe the product that you provide to customers?*

This question was of importance to the study in that the view of "product" may indicate a particular orientation, for instance, a view of product as constituting materials, labour and production overhead may indicate a (physical) product-centred orientation. A view of product as comprising elements such as delivery, service, customer responsiveness and warranty may indicate a more customer-centred orientation. Hence, the type and nature of the marketing and accounting information that is exchanged within an organisation may be influenced by a manager's view of "product".

Following on from the discussion of product description, managers were to be asked to discuss the operating process from the time of customer order to the time of completion and included a request for a "walk through" of the production processes. This would provide an opportunity for the researcher to gain further insight into the operations of the organisation, become familiar with the terminology used by the managers, particularly production related acronyms, and allow the managers to indicate their degree of knowledge about the processes involved. Notes of the important stages of the process that related to meeting the needs of the customer

were to be made (see Appendix 7). Such information may contribute to developing a view of the “product” orientation of managers as well as providing insight into the areas in which accounting information may be needed, for example, the cost of meeting particular customer needs such as levels of quality and rapid delivery. Furthermore, observational data would provide a further source of evidence to allow “triangulation” of case data and strengthen construct validity (Appendix 1 and 7).

One further over-arching question, to be directed to the general manager specifically, related to the process, people involved in the process and information used, in making strategic product/market decisions such as new customers/markets or when to introduce a new product.

*Would you please tell me about the process involved in making strategic product decisions? For example, in determining the product which you will ultimately sell to the customer, what process takes place, who is involved and what type of information is used/needed?*

In addition to contributing to the researcher’s knowledge of the firm and the context of the research, it was considered that such discussion may assist in identifying (and/or confirming) those people to be included in the interview process. It could also provide an indication of the source documents that may exist to support information needs, for example, customer profit reports, product cost estimations or competitor cost estimates.

Following the discussion on the “over-arching” questions and the identification of the personnel involved in the product decision-making process, topic guidelines (Appendix 4) centred on the three components of market orientation (customer, competitor and inter-functional coordination). Guidelines were developed with a view to examining the type of marketing and accounting data gathered and used around these components. For example, in looking at data that may be gathered about customers, the respondents were to be asked to discuss how they established the (changing) needs of customers and the types of data they collected/used. In examining the competitor orientation of the firm, respondents were to be asked, for example, to discuss their main competitors and describe the type of information they maintained about competitors. It was considered that such discussions would provide an insight into the type of documentation - marketing and/or accounting - that would be likely to support and/or serve as input into decisions, for example, competitor-cost-analysis worksheets.

It was possible that not all respondents would be in a position to discuss all issues about the three market orientation components. The limit to which respondents could make comment may be influenced by, among other factors, the extent to which they were included in the organisation decision-making process and their experience and knowledge within the firm and of their current position.

Consequently, the researcher would need to exercise his judgement as to which personnel were in a position to contribute substantive information and avoid raising questions and/or pursuing issues which the respondent was not in a position to answer. Care was to be exercised to ensure that respondents were not placed in a situation in which they felt they needed to attempt to provide certain information

with which they may not have been fully familiar. As a cross check or means of validation, the researcher planned to seek supporting documentation and observe organisational processes that may verify respondent's comments (see Appendix summary).

Before the first visit to the case site, the research topic guidelines were discussed with an experienced academic colleague with a view to obtaining an objective view of their appropriateness to the research question. This proved to be most valuable and led to the introduction of the aforementioned use of "over-arching questions". One anticipated consequence of using such questions was that respondents may provide coverage (to varying degrees of detail) of many aspects of interest to the study at an early stage. It was envisaged that multiple interviews may need to be undertaken with respondents where some topic areas/issues had not been fully examined in the first meeting.

#### **5.4 Data collection and analysis**

Data were to be collected from multiple sources to allow a description and examination of the marketing and accounting information being used for the customer, competitor and interfunctional components of a market orientation. Making explicit the sources of evidence and the process of data collection is an essential component of the case protocol and a formal method for addressing construct validity and reliability in case research.

## **Customer component**

The review of marketing literature suggested that market-orientated organisations have developed cross-functional activities, or set processes, which allow customer needs and competitor positions to be continuously assessed. In the customer orientation component of the case research, the aim was to identify, describe and examine the type of customer information maintained by the organisation and used when making decisions about products and markets. In particular, the aim was to examine the extent to which customer information and decisions based upon customer information would incorporate accounting data and/or whether customer information was maintained in a way that accounting information might be developed that would be of assistance in decision-making. For example, were customer attributes identified which allowed for attribute costing to be determined? Were market segments identified which allowed for the profitability of those segments to be examined?

The researcher considered that there were various possible degrees of detail on customer information and the use of accounting information, as a part of the customer information, which may be present within organisations. One possibility was where the firm maintained limited customer information in an unstructured, informal way and where accounting information about customers was not maintained or used, that is, where there was no integration or exchange of accounting and marketing information in product decision-making. Table 5.1 presents possible scenarios and provides a broad framework, linked to interview topic guidelines (protocol questions), for data analysis.

Aspect	Description - range	
	←————→	
Degree of detailed information of customer attributes	Limited	Extensive
Manner of collection	Informal	Formal
Management of information	Ad hoc	Systematic
Extent of accounting information usage	Limited	Extensive

**Table 5.1 Customer orientation and information for product decisions**

Interview topic guidelines were developed to focus the data collection on the ways in which the needs of customers were determined, by whom and the type of information gathered. Evidence was to be sought as to whether the managers at the case site had considered how the organisation’s products were used by, or incorporated into the value chain of, customers. The purpose of this investigation was to provide some indication of the extent to which the case study organisation was involved with customers and had attempted to develop a knowledge of customer operations. Developing an understanding, and acting upon that understanding, about the linkages between the value chain of the supplier and buyer is put forward by Porter (1985) as a means for creating advantage. Advantage may be gained through improving the linkages - communication and coordination - between the supplier, creating a cost advantage, and the buyer, providing improved value of product/service and/or reduced cost (Porter, 1985).

It was considered that this information, when combined with other case data, could be valuable in formulating a more detailed description of the customer-orientated activities and information maintained by the organisation. In further developing the description of customer-orientated information, evidence was to be sought regarding whether customer markets were segmented in any way. For instance, certain customers may have just-in-time (JIT) requirements for delivery which could provide a basis for establishing a separate, JIT customer/market segment. The aim here was to establish the extent to which the characteristics of customers, or variations in their product needs, were taken into account in the product decision-making process. Furthermore, any segmentation of customer markets may then provide a basis upon which accounting information could be calculated. For example, where customer markets or groups had been established, customer profit analysis would be possible. It was anticipated by the researcher that the degree of sophistication of the customer intelligence would provide both an indication of the orientation of the firm and the extent to which accounting data would, or could, be present.

Respondents were also to be asked to discuss (and provide evidence of) the type of customer information that was taken into consideration in the decision-making process. This topic was to be used to establish the customer needs seen as most important in the product decision-making process and also to raise the opportunity to establish the type of accounting information, if any, that was included in this process. This would also provide a cross reference to data obtained in previous discussions and allow for both verification of data and the opportunity to identify



any additional customer or accounting information that was used in the process of decision-making.

### **Competitor orientation**

A competitor orientation encompasses information about competitors' operations and extends to knowledge about product offerings, value-chain activities, costs and core competencies. The extent of how much, from which source, and to what use, information and understanding about competitors is sufficient to allow informed competitive product planning is not well addressed in the literature.

Research from the accounting discipline (Ch 3) offers some indications (Shank and Govindarajan 1989, 1992) of the form, content and application of the accounting information and draws heavily on the work of Porter (1985) in examining value-chain analysis and sustainable competitive advantage. Notwithstanding the lack of research detail in this area, competitor intelligence remains an important component of a market orientation, in particular, when examining business (profit) performance (Kohli and Jaworski 1990; Narver and Slater 1990; Balakrishnan 1996; Dawes 2000).

Accordingly, the case topic guidelines were developed with a view to focussing the data collection on SD's activities in obtaining and using competitor information as part of the product decision-making process, in particular, about the way in which competitor information involved, or incorporated, accounting information.

Evidence was to be sought as to whether (and if so, how) SD managers considered competitors' positions when making product decisions. Managers were to be asked

to discuss and provide documentary evidence of the type of competitor information considered by the organisation, for example, competitor competencies or cost positions, and how, and by whom, the information was obtained. In a similar way to describing customer orientation, the aim of this discussion was to provide the researcher with a further opportunity to identify and describe both the extent of competitor orientation, linkages to accounting information and those personnel who had input into the decision-making process.

Various degrees of competitor orientation were contemplated, for example; from little or no competitor information to extensive information maintenance; possible combinations of formality of information collection about competitors ranging from an ad hoc, “word of mouth”, manner by sales representatives to a formal and regular system of research. A table similar to Table 5.1 summarising a range of possible scenarios is presented in Appendix 5.

In sum, similar data collection aims exist for both the competitor and customer orientations, that is, to identify and collect data about the way in which marketing and accounting information are exchanged or integrated when making product-related decisions. In particular, marketing information was to be collected with a view to identifying the use and extent of accounting information and whether the marketing information was presented in a form that recognised, and would facilitate, particular accounting information being prepared, for example, value-chain cost comparisons, attribute costing, customer-profit analysis. The marketing orientation literature would suggest that the provision of accounting information for the needs of a market orientation would be more likely to be present if coordination of, and

communication between, the organisational functions or activity areas were well established.

### **Interfunctional coordination**

Interfunctional coordination is the third component of a market orientation and is closely linked to both the customer and competitor components discussed above. This component was not, however, to be examined to the same extent as the previous two components. In designing the case study topic guidelines, it was considered that much of the detail about interfunctional coordination would be collected in the process of discussing the “over-arching” questions and the customer and competitor orientations. Topics discussed in this area were to be confined to issues about the way in which information sessions/meetings were held between functional/activity areas, e.g., marketing, accounting, production, research and development, and the type of information exchange that took place. Observational and documentary evidence (meetings and minutes of meetings) were to be sought in order to provide multiple data sources. Various degrees of interfunctional coordination were considered possible, for example, from minimal coordination to extensive, informal meetings to highly structured meetings and limited use of accounting information to extensive use. A table similar to Table 5.1, summarising a range of possible scenarios is presented in Appendix 6.

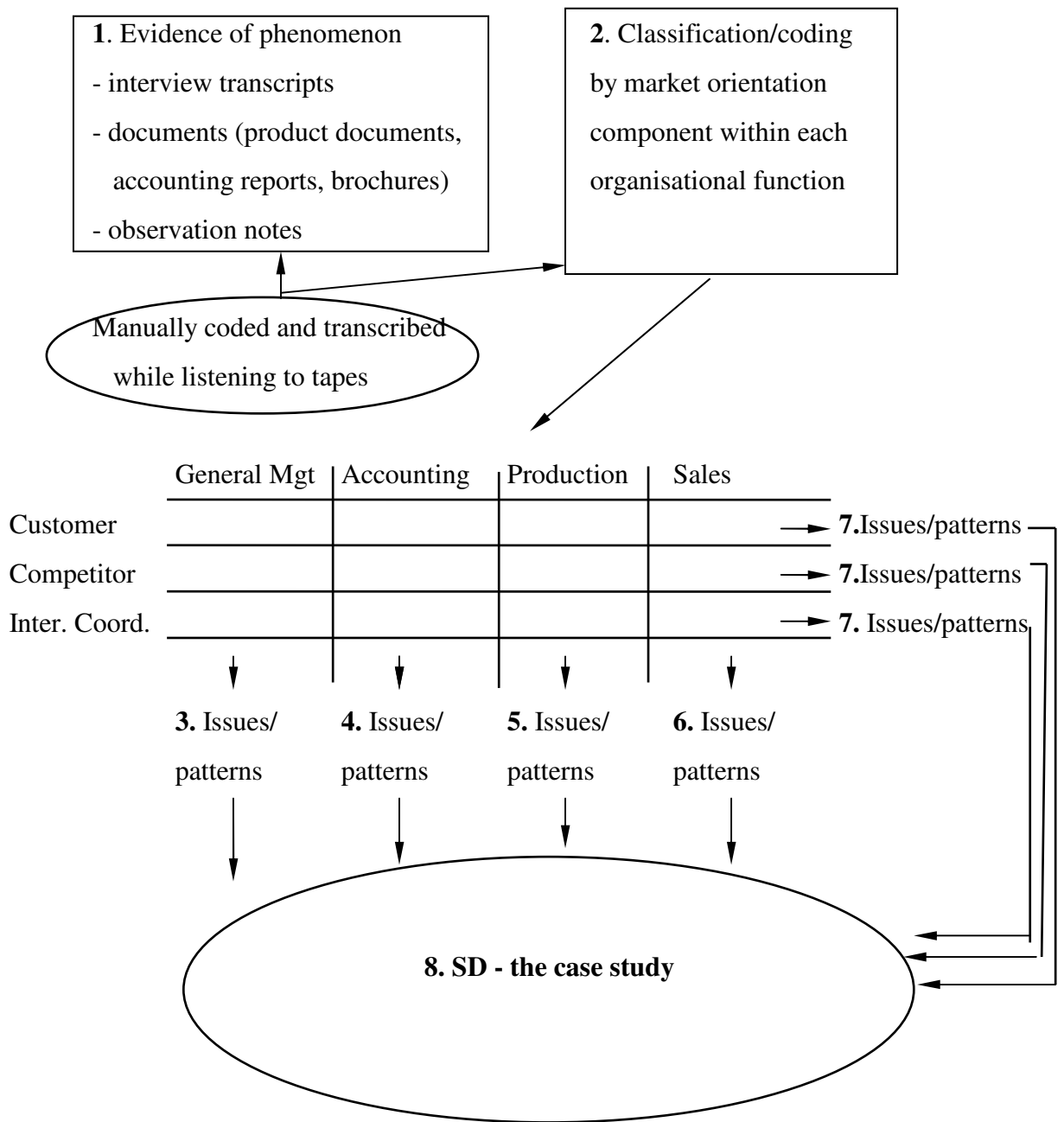
### **Coding**

As distinct from the more purely inductive approaches to data analysis and classification of concepts (for example, see Strauss and Corbin, 1990), broad categories for data analysis were based upon the three conceptual components of the

market orientation construct developed by Narver and Slater (1990). The marketing literature suggests, however, that the three components of a market orientation are very much interrelated and the researcher was cognisant about coding the data in a way that may detract from an holistic description of the case. It was felt that this could be dealt with, first, by recognising and making this aspect explicit within the data analysis, and, second, by incorporating an overall case description which would encompass the interrelated aspects of the market orientation components.

The use of conceptually ordered displays, such as conceptually clustered matrices (Miles and Huberman 1994, p127), as a part of the within-case analysis and case description also would serve to address this aspect.

Figure 5.1 depicts the procedural map to be used in data analysis and reveals the planned sequence of steps in which description was to be developed by virtue of a matrix of analysis. This matrix approach would provide four “mini” cases, that is, case descriptions of the market and accounting orientation of each organisational function (steps 3, 4, 5 and 6) and a description of the market and accounting orientation by behavioural component (step 7). While linking the data analysis to the prior theory (Ch 2 and 3), this approach would also provide an opportunity to identify issues, view themes/patterns and/or examine contradictions within the data. Data analysis for each step was to involve multiple iterations to facilitate the development of a more complete understanding of the phenomena under research while providing the opportunity for the researcher to “check-code” the transcripts for reliability and “definitional clarity” (Miles and Huberman 1994, p.64).



**Figure 5.1 Data analysis**

**Data analysis - the iterative process**

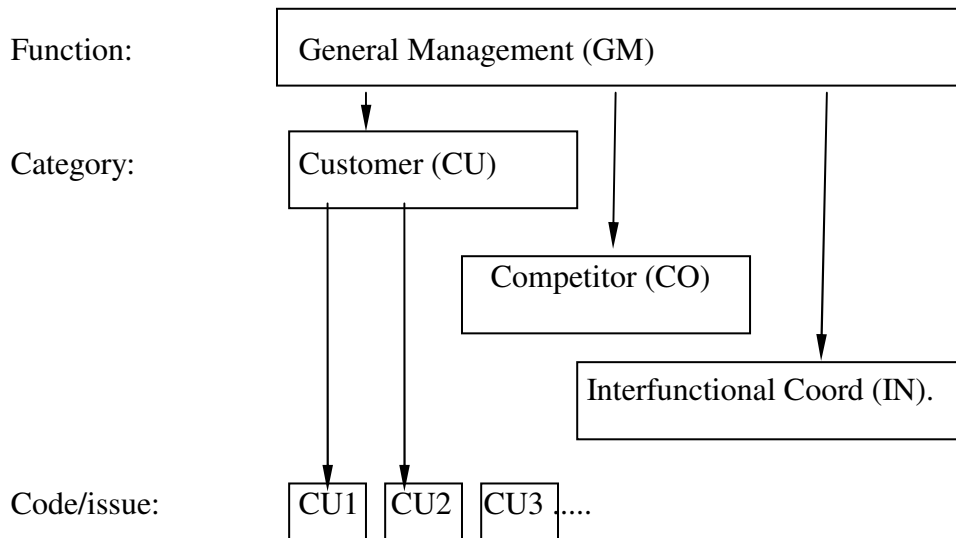
In the first two steps of data analysis, the interview transcripts were to be read several times by the researcher while listening to the accompanying audio tapes.

Sections of the transcript relating to each over-arching question and market orientation component category were to be highlighted and coded. For example, the

label CU was to be used to categorise evidence about the customer component and CO was to be used for evidence about the competitor component. If evidence, in particular, respondent discussion, related to several market orientation categories, multiple labels were to be noted on the transcripts or relevant evidence. Within each category, a “provisional “start list” of codes” (Miles and Huberman 1994, p.58) had been developed around more particular theoretical issues for each component of a market orientation which, in turn, had been incorporated within the interview topic guidelines and protocol questions (see Appendices 4 and 8). For example, in the customer-orientation category, CU1 (linked to protocol questions 1 and 5) was used to analyse data about “customer needs”. In the competitor-orientation category, CO2 (linked to protocol question 2) was used to analyse data about who was involved in obtaining “competitor information” (see Appendix 8). Care was taken to ensure that the codes were extensive enough to capture the data description and develop an understanding of the phenomena but codes were not to be so extensive as to be difficult to use and remember.

At various points, documents referred to by respondents were to be reviewed and linkages noted to the transcripts. While “precise concern” with respondents’ speech required by ethnographic studies is not required in case study research (Perry 1998), notes were to be made on transcripts where peculiarities were noticed in the voice of the respondents (Appendix 8). Features of an informant’s speech, such as stress and pitch are considered essential to the understanding of the interview and strengthen the descriptive validity of the account (Maxwell 1992; Runciman 1983). Researcher queries related to the discussion were also to be noted for further consideration. For each respondent/function, like-coded transcript sections were to be manually

collected and clustered around the three categories (transcripts copied, cut and pasted). An example of the planned approach to coding (analysis) for the General Management function is depicted in Figure 5.2:



**Figure 5.2 Coding of data**

In analysing the data, the respondent's comments, observational and documentary evidence for a particular issue were to be reviewed for confirmatory or contradictory elements or any particular points of emphasis. Constant reference was to be made to the existing theory and queries/issues/confirmations were to be noted for discussion. A case description of each function's market orientation (by component - see step 3, 4, 5 and 6 in Figure 5.1) was to be detailed and discussed with reference to respondent statements and documented evidence to illustrate aspects of the case. In keeping with suggestions by Miles and Huberman (1994) and Perry (1998), each organisational function description was to include summary displays for each market orientation component (see Table 5.1 and Appendices 6, 7 and 12) and conclude with a descriptive summary and details of key issues. These summaries and key issues (linked to the underlying theoretical framework) were to provide a

basis for further comparison and description of the customer, competitor and interfunctional coordination components across functions and, in turn, allow for additional issues, patterns and themes to be identified (see step 7 in Figure 5.1).

All summaries and issues identified were then to be analysed and synthesised to form a description of the SD case study overall (step 8). Consistent with the inductive-deductive approach advocated by Perry (1998), reference to the literature was to be undertaken throughout this stage and relevant theory examined in the light of the SD description.



## Chapter 6

### Case study - SD Pty Ltd

In this, and the following three chapters, a description, analysis and discussion of the SD case is presented. This chapter is organised as follows: first, a broad description of the organisation and the industry in which it operates is presented including details of the firm's product, structure and operations, and decision-making process. This description is based upon information drawn from discussions with respondents of the "over-arching" questions (Ch 5), observation of business operations and a review of organisational documentation and industry data (see Appendix summary).

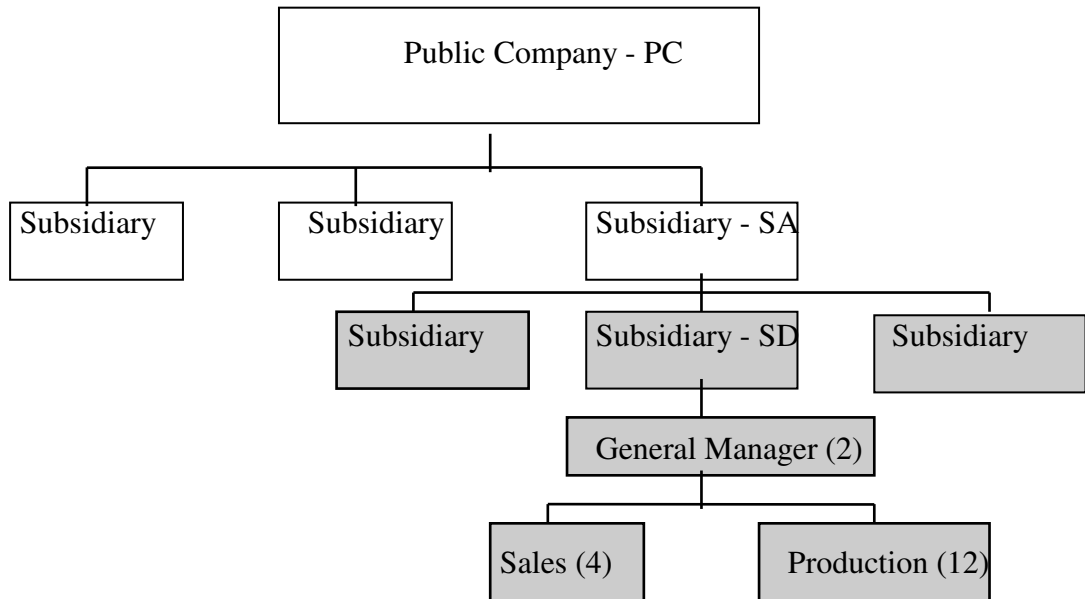
Second, a description of the marketing and accounting information used within the general management function, the first of four main functional areas examined within the firm, is presented. Each component of a market orientation - customer, competitor and interfunctional coordination - is discussed in detail. Analysis and discussion of the case in terms of the research question and the linkages to existing marketing and accounting literature is incorporated throughout the description.

#### **6.1 SD Proprietary Limited - background and description.**

The case-study organisation, "SD", was in the business of producing digital graphics for a range of customers including advertising agencies and magazine-publishing organisations and had been operating for some 35 years. SD was the wholly owned subsidiary of "SA" and was co-founded by "W" whose family had established SA in

the 1930's. SA operated "graphics" businesses in several states of Australia. In the year prior to the case study, SA had become a wholly owned subsidiary of an Australian public company. The business of the public company (PC) entailed commercial publishing and printing and had "grown to be the largest printing and publishing company in Australasia" (Company Annual Report 1996). In 1996, PC revenues amounted to A\$700,000,000 and operating profit before interest and tax of around A\$71,000,000. "W" and one other member of the family remained in the SA business.

SD comprised eighteen personnel; the general manager (GM) and his personal assistant, a production manager (PM) and assistant, 8 "Mac" (Macintosh computer hardware) work-station operators, two scanner operators, a sales manager and 3 sales representatives. The GM and personal assistant had been employed at SD for a 6 month period having being transferred from a related company of SA but located within a different State of Australia. All other personnel had been with the firm for more than two years. Support services, including accounting, administration, human resources and facilities management, were provided by SA with which SD was co-located. SD operated as an independent business unit with profit reporting responsibility to SA (see Chart 6.1).



**Chart 6.1 Organisational structure - SD, parent and related companies**

SD’s most recent financial statements showed annual sales turnover of approximately \$A4 million and a net profit after head office expense charges of \$A300,000. The GM indicated that capital equipment (“Mac” work stations, image setters, digital proofing and scanners) was valued at around \$A1,000,000 with any addition to capital items subject to approval by senior management at SA. The GM considered that the financial performance of SD was unsatisfactory which was a view shared by the management of SA and the parent company. The GM indicated that his recent appointment at SD was motivated by the need to improve financial (net profit before interest and tax) performance.

The GM had recently initiated a change in the name of the firm to SD (from SGA) which was considered to be more contemporary and which reflected the nature of the “digital” technology used in the production of the product. Previously the company name had incorporated reference to graphic arts which had represented the

traditional base and history of the firm. The GM thought this an important step in capitalising on what he considered was a competitive advantage of the firm (i.e., the firm's name and its technologies).

### **6.1.1 The industry**

The industry in which SD operated is defined by IBISWorld (2003) as "Services to Printing in Australia". Products and services segments within this industry include Traditional Typesetting, Photo-typesetting and Layout Service, Screenprinting, Book Binding, Plate Making - Lithographic or Relief - and Artwork Preparation or Graphics. Industry concentration was considered to be low with four major "players" accounting for 30% of revenues with the remaining 781 "establishments" described as small (IBISWorld 2003). Major industry operators were considered to be organisationally related to large publishing companies. This was the case with SD's parent company, SA, which was considered to be a major player (see Chart 6.1). Industry demand was affected by a number of factors including the level of economic activity in retail business and economy-wide advertising expenditure, the level of printing undertaken in Australia and the level of out-sourcing to specialist firms. In the period from 1998 to 2002, industry turnover appeared to have plateaued (declined in real terms) having peaked at A\$724,000,000 in 1999-2000 (see Appendix 14).

SD operated in the Artwork Preparation or Graphics segment of the industry, sometimes referred to as "pre-press", which was estimated to comprise 25% of industry turnover in Australia (IBISWorld 2003) or approximately A\$180,000,000 in the 1999-2000 year. The States of New South Wales and Victoria were the main

geographical markets accounting for around 74% of revenues, a factor that was influenced by a substantial printing industry in each state. In the State in which SD operated, estimated segment turnover was A\$65,000,000 in 1999-2000. In addition to the presence of the industry's major players in both of these geographical markets, there was also a substantial number of the "smaller" industry establishments. Amongst the smaller firms, price and recently developed (late 1990's) technologies, including desk-top publishing software and digital printing, seemed to be the main factor affecting the basis of competition (IBISWorld).

### **6.1.2 Product description and production process**

The product produced by SD was digital graphics and involved the preparation of graphic art prior to printing of, say, the graphics and text of an advertisement in a magazine. The GM described the product as "film separation" but changing technology meant that this would evolve to "direct-to-plate".

The product may be better understood by reference to the process which comprised several stages. The first is the provision by the customer of a document file on computer disk (or via on-line transmission) together with a print or picture to be placed within the document. Second, the picture is scanned at high resolution and the image placed into the document. Third, the document is output on to a colour process film and, fourth, a chromium proof produced from the film separation.

The chromium proof was described by the GM as

*a sub-proof that the client will look at to approve..... to check for colour, check that logos haven't fallen off etc.... they sign off and it will go to the printer and the printer will make metal plates, the metal plates wrap around the printing drums and then prints.*

Printing was not undertaken by SD but was a service often required by customers and provided by SD by utilising SA and other subsidiary companies within the group.

While the nature of the production processes described may be considered standard, the nature of the products/jobs was more heterogeneous and required various combinations of production processing and resource allocation such as labour, material and technology/machinery. Size and complexity of jobs varied.

The recent advent of new technology available to SD from within SA had created the opportunity for the firm to eliminate the fourth stage of the process in which film was produced prior to transfer to printing plates. The so-called "direct-to-plate" technology allowed the transfer of computer images and text directly to printing plates. The technology was being tested by SD prior to full scale introduction.

Preceding stage one of production was the process of obtaining orders and interfacing with customers, an activity undertaken by the sales representatives (SR) of SD. SR called frequently on clients and were responsible for quoting prices on jobs and ensuring that the jobs were finished within an agreed time frame. Close

coordination and cooperation was required between the sales and production activities of the firm in respect of meeting not only time requirements but also job quality (an aspect reported in detail in the following sections).

### **6.1.3 Product decisions**

An overview of the product decision-making process was first obtained through interview with the GM although, as the case study proceeded, further information about product decisions became available from SD managers and through observation of operational practices. While information used in strategic product decisions was sought - for example, product market strategy, product deletion - the research embraced discussion on all product decisions raised by respondents. In this way, the problem of defining strategic decisions was alleviated while recognising that strategic and operational decisions are not mutually exclusive. Hence, respondent discussion on an aspect of product decision-making may be expected to have implications at both an operational and strategic level.

The GM played a significant role in the product decision-making process. Although having only been incumbent for 6 months, the GM had initiated changes in the name/brand of the firm (Section 6.1), changed the approach to customers in terms of product ordering and service improvement (Section 6.2) and expanded the range of product attributes offered. While the core product of SD was film separation, the GM had introduced a range of additional product attributes (services) to customers which included access to Direct-to-Plate Printing, Digital Photography, Digital Library, Creative Imaging and Digital Printing (to paper). These services were accessible by SD through SA and other subsidiary companies of the PC which were

co-located with SD. Information on these product offerings was incorporated into marketing publications (see Appendix 9) and made available on SD's website.

When questioned about the motivation for the decision to introduce the new products the GM responded:

*Why did I do it? Because I knew that if we just sold film separations, in the long run, maybe twelve months, two years down the track, we'd be struggling.*

While the GM's decision clearly relates to the strategic direction of the firm, the choice to offer additional product attributes was not informed by accounting information as to the profitability associated with sales of these products, but more with the view that "this would only grow the business, I guarantee it" (GM). This absence of accounting information may reflect the fact that SD had proprietary access to these products/services through its parent company but bore no direct costs (for example, R&D, operations and maintenance costs) of the product/services until purchased.

Moreover, the decision to offer these attributes provides an indication of the GM's perceptions about customer product needs, in this case, that customers had a need for these additional attributes. However, the researcher would question whether the GM's decision was driven more by the developments in technology than by an understanding of changing customer product needs. In other words, the GM exhibited a product/technology orientation rather than a market orientation.

In the initial discussion with the GM it became evident that product-related decisions were made regularly with input from the production manager who was



seen as having a substantial knowledge on matters of product quality, technology, equipment capacity and the expediting of jobs while also maintaining a degree of direct customer contact. Customer information was regularly provided to the GM by the sales manager (SM), for example, on customer perceptions of product quality and price, however, decisions on new customers, large orders and/or issues of price were always referred to the GM. In addition to discussions with the PM and SM, the researcher was also able to observe the GM on a number of occasions (see Appendix 1) in direct contact with customers, primarily via telephone, and occasionally via e-mail and in person.

In the following sections, details of the marketing and accounting information used by the GM in making product-related decisions is described. The description is set within the context of the marketing and accounting information requirements of a market orientation as discussed in Ch. 2 and 3.

## **6.2 Market orientation and accounting - A general management perspective**

Besides general management experience the GM had previous experience within the parent company operations as production manager and as sales manager.

Considerable time was spent with the GM (some 20-25 hours over two weeks) in which interviews were conducted, a “walk through” of the process of production was undertaken, operations observed including the application of new technology in “direct-to-plate” transfer of images, and accounting and related management documents reviewed. The description (in Ch 6, 7, 8 and 9) of the market orientation of SD and its accounting information is developed around the three conceptual components of a market orientation - customer, competitor and interfunctional coordination - on which the case data were analysed.

### 6.2.1 Customer orientation

The aim of this section of the research was to develop an understanding of the customer orientation of SD by examining (and then describing) the type of customer information maintained by the firm and used (by the GM) in making product decisions. A particular aspect of this turned on the type of accounting information used by the GM when making decisions. The key issues for investigation centred around the respondent's perception of what constitutes the product, the way in which the (changing) product needs of customers were determined (market research) and the way in which markets were segmented around different customer-product needs.

The GM's initial, formal definition and description of SD's product was substantially different to the description of the product which developed over the course of the case study. At both initial and later stages of discussion, the GM referred to the product provided by the firm as "film separation", a product which was soon to be replaced by "direct-to-plate". However, throughout the course of discussions the GM also referred to other needs or attributes required by the customer. Product quality and turn-around (time to meet customer order) were emphasised often by the GM. When asked why customers would choose SD rather than another supplier the GM responded:

*(We are)The best. Service. What the service is quality and turn-around.*

*Quality and turn-around....not so much price...The clients we have they look at price but the main issue is this.*

*...they (competitors) can't always offer the quality and turn-around, where we day-in and day-out do. Like, we are trying to sell SD's (quality and turn-around) that's what we're known for, particularly in the last six months.*

The overall description of the product may then be viewed as analogous to the description of products as comprising a core component/benefit - film separation - and components that augment that core (Kotler 1984), for instance, rapid turn-around and technical advice.

A strong emphasis was placed by the GM upon the relationship of sales representatives (and of SD's staff in general) with customers in terms of keeping them informed of SD's product and process technologies which may add value to the customer by reducing costs and/or by increasing the quality of the core product.

*(GM) They (sales representatives) build a relationship with the client, they ring them on the mobile and they've got pagers. ...our reps. call basically nearly every day to each client.*

*A lot of jobs need briefings (by the sales reps. and the response to clients needs is) very important, because, if they don't respond they'll go elsewhere.*

*They (the client) basically want a sales rep. who knows the technical side of the trade.*

*..if you (the sales representative) can show them (clients) technically you know a lot in this particular trade, ... that gives you a plus alone.*

The GM also recounted a conversation he had held with a customer the previous day. The customer in this case was a large advertising firm which required graphic art as part of its campaign to win a new business account.

*He said (the customer - an advertising firm), well yeah, I want something extra which will knock the socks off Drake (advertiser's customer). I said, well we might go direct-to-plate (the new technology), you don't have to go to film. So we worked out a price for film and a price for plates and it ended up being 10-15% cheaper. And I said "you don't want to sell that you are getting it cheaper, you want to sell that you're getting better service, better turn-around and better quality" and the key word's the quality. Come and have a look. (The customer was shown the difference in product quality between a job produced on film and produced direct-to-plate). He walked out and was blown right away. He said (the customer) I've got something up my sleeve that the opposition haven't got.*

At this point, the GM invited the researcher to an area of production where the film and direct-to plate jobs could be seen and compared. In some detail, the GM explained and showed how the new technology improved the finished (visual) quality of the jobs. This extended to the GM highlighting how the technology overcame the problem of "hairs" (on the film) and how "registration" time

(positioning of the job for printing) was substantially reduced with direct-to-plate technology.

The GM continued by saying that

*this (the new technology and its impact on quality) is what I am trying to get across to the reps to sell to our new and existing clients.*

In this example and related discussion, the GM drew attention, although not deliberately so, to the linkages between the various activities of SD and the related linkages between the product attributes. For example, coordination of activities in the development of technologies, the implementation of technologies into production and the change in marketing strategy can be seen to impact upon the attributes of product quality, turn-around-time, image, competitive edge and sales service.

The importance of product quality, rapid turn-around time for jobs and competitive edge was also indicated in recent initiatives implemented by the GM. For example, the GM had introduced a one page “tick the box” form to be completed by customers which summarised key aspects and needs of their particular job. Referred to as a “bureau” (or brief) sheet, (Appendix 10) this document included key customer contact details, required delivery time, details of software used, page size, colours and media type (cartridge, DAT tape, CD). In discussing this document, the GM indicated that he preferred the sales representatives (SR) to complete the sheet with the client. This provided the SR with an opportunity to make suggestions

and/or inform the client of recent developments in product and/or process technologies. The GM also noted that the information on the bureau sheet “allowed for faster processing of the job and less errors”. Information from the bureau sheet was later transferred to a “job sheet” which was the formal document required to initiate production (Appendix 11).

The decision by GM to undertake a change in the company’s name to SD (from SGA), accompanied by changes to marketing and promotional materials (brochures (see Appendix 9), product samples and letterheads) emphasising the technological expertise of the company, also indicated a recognition by SD of those aspects of the product considered important by customers.

Table 6.1 summarises the product attributes described by the GM, observed in operations and company documentation. The attributes reflect a product which draws upon a range of organisational resources to meet customer needs and provide an insight into the activity areas to examine in order to calculate the costs of providing such attributes.

<b>Product attribute</b>	<b>Brief description</b>
• Product quality	Reflected in the finished film/picture quality described as the degree of “finesse”.
• Turn-around time/on-time delivery	Time taken from receipt of order to the delivery of the finished product.
• Technical expertise of sales representatives	Important to be able to advise customers immediately at point of order about product and process technologies.
• Sales service response	Regular (daily) servicing of customers and rapid response to customers calls.
• Reputation - name/brand	Maintaining image as the leader in digital graphics - core product of high quality.
• Competitive edge	The product provided customers with a competitive edge over their competitors.

**Table 6.1 Product attributes - GM**

Two main issues arise from the GM’s discussion of “product” and the attributes necessary to meet customer needs. The first relates to the way in which the needs of customers are established and whether different customer segments are identified (market research) and, the second, to the way in which accounting (cost) information is used in making decisions about the level of resources required to satisfy the range of product attributes (that is, to satisfy customers at a profit).

When asked who undertakes the activity of establishing the changing needs of customers the GM responded that:

*SD and our parent company, we're altogether as a group to try to inform the clients that this (changing technology of direct-to-plate) is the future.*

This response reinforced the GM's emphasis on production technology and the need for customers to be regularly informed, but did not, however, provide an indication of how SD established information about customers' other product needs (Table 6.1). This was questioned further by the researcher and was met by the response that :

*The rep (SR) goes out and asks those sort of questions, "What do you need?".  
.....Well, no-one else could do that, I mean unless you have a marketing person who goes out and researches.*

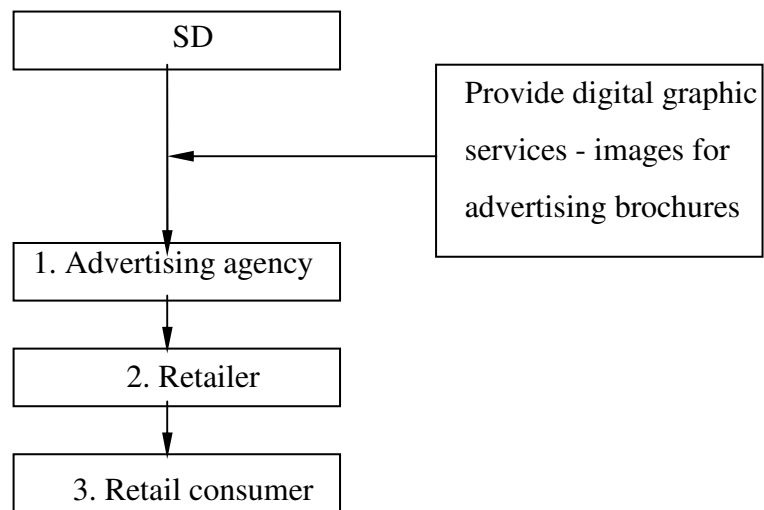
The GM continued by saying that they did not do market research "not really, not here". The "not here" comment prompted the researcher to investigate whether they obtained market research from the parent and/or whether a system existed for collecting information about customer's needs. After a slight pause the GM responded;

*Good question - no we don't (receive information or have a system).  
(We don't) because we think their needs are what's in new technology....  
which saves them time and costs.  
There are still customers out there who have no idea of what we do.....they don't understand that we go direct-to-plate now, with digital photography, digital printing, digital library, they don't realise that.*



At a later stage, the GM noted about any form of survey sent to clients “they’ll throw it in the bin” and that SD tried to keep informed of customer needs by “building strong client relationships”, mainly through the sales force.

In seeking to establish the extent (and form) of SD’s market intelligence, the GM was asked to discuss whether the firm sought to develop an understanding of the product needs of other customers in the extended value chain, that is, SD’s customers’ customers. For instance, 90% of SD’s current business was with advertising agencies which, in turn, serviced an array of customers, for example, large retail organisations which were developing advertising literature. This is depicted below in the form of a customer-distribution chain:



The GM referred to his previous example (of “Drake”) of how SD was able to provide a competitive edge for its customer (an advertising agency) through its direct-to-plate technology. The competitive edge lay in the ability of SD’s customer to provide, in turn, its retailer customer with a product (advertising brochure as part of a campaign) of higher quality and in a quicker time than other competing

advertising agencies. This situation suggested that SD may have considered its role in the customer-distribution chain as depicted above and had an understanding of the needs of other customers in the chain.

The GM stated that this was not the case, that is, SD did not endeavour to establish the needs of customers in the distribution chain, but, in a somewhat contradictory way, he stated that SD had noted a change in the way retailers (and other large organisations) conducted business. This change was reflected in the number of customers who were “by-passing” agencies and coming “direct” to SD. This comment by the GM suggested that SD was more reactive than proactive to the market and prompted discussion on the way in which SD researched and segmented its customer markets. On the issue of a developing market of “direct” customers, the GM was asked how big the market may be:

*Potentially it could be huge over the next 12 months to two years. I don't know. That's something that (we) might have to do a bit of market research on to find out.*

Further, in response to a question about the size of SD's existing market, the GM answered with a great deal of hesitancy:

*Well, it's a hard one to answer. There is a hell of a lot (of customers) to be honest. Off the top of my head I don't really know.*

The GM continued to say that no information was maintained about market size, however, the researcher was shown reports which detailed SD's "Top Twenty" customers in sales revenue. These customers were loosely classified as "direct/corporates" or "indirect" (customers who were acting as agents for others). The GM went on to describe his aim to target "corporates" who required digital graphic art as a component of their company annual report sent to shareholders. The GM viewed corporates as a developing market as the corporates start to by-pass advertising agencies and "head down the path of producing them (advertising designs) internally". One example was noted by the GM in which SD had placed their own staff within a major corporate client's premises to assist in training/education on digital graphic design as part of a two-year contract for SD to produce the finished product via direct-to-plate processing.

In a further example, the GM described what he referred to as "customer re-education" where customers received training within SD:

*.... a new customer worth about 350-400 grand a year and their files, their documents are pretty average. Now what we've done is a training program starting next week it is, total of 22 in groups of 4 and 5, .... come in here from next week, spend two hours for us to show them how they should present their files. So that's a need which the customer wants.*

It is noted that this "new customer" was quite substantial in so far as the revenue amounted to around 10% of SD's turnover.

The examples and description of the customer orientation at SD raise the second issue, that is, what type, range and extent of accounting information was used by the GM in making customer product decisions? For example, were the costs of providing each product attribute described in Table 6.1 taken into account by the GM when making decisions about pricing strategy? how did the change in, and cost of, new technologies affect the GM's decisions? and how did the GM determine the long-term profitability of market segments?

In looking at the accounting issue, there is evidence to indicate that the GM considered both the customers' cost to purchase and SD's cost to produce and supply the product on time. As noted above, the GM had introduced a bureau sheet to be completed by clients with the aim of reducing errors and the time to process jobs. Client errors in files were a cost borne by the client but also created costs at SD by slowing processing overall.

There were indications that customer-related attribute costs were taken into consideration in product decisions, although this was not done in a formal way. That is, the GM did not use any formal costings or cost benefit analysis for customer-orientated activities such as the introduction of the bureau sheet and the customer re-education program. Rather, the GM's decision criteria and motivation were the desire to maintain a high quality of the core product while maintaining efficiency of production to meet delivery time requirements.

There was no accounting information (documentation) maintained to indicate the costs associated with the product attributes noted in Table 6.1, a fact that may be

attributed to the GM's focus on the importance of the product and process technology. Furthermore, there was no detailed accounting information, for example, product costings, to indicate the impact of using direct-to-plate technologies. Again there was some evidence that costs had been considered by the GM in the decision-making process but that constituted what might be described as a "rough estimate" which concentrated on the material and labour cost differences between film separation and direct-to-plate technologies. The GM's estimates about the cost of the two technologies sometimes varied and indicated a lack of precision or attention to costing matters. The GM also strongly emphasised the time saved by using the new technologies. The following dialogue reflects the GM's considerations about cost issues:

(Researcher) What sort of information (cost/profit) do you take into account when you make your decision (to adopt the new technologies)?

*(GM) Good question - ummm... I know with direct-to-plate, it's not going to really make any difference internally. We've still got to put the files together.....*

(Researcher) When you say it does not make any difference internally, any difference to **what**?

*(GM) Well, it doesn't take any longer to put a job together. Actually it's a shorter turn-around time for us because we don't have to run film any more.*

*The only difference is that they (the parent company) pick up our file on line  
.... and run the job-to-plate.*

*So it is less time for us but we still have to have plates made over there  
(parent company) - right - now I've worked it out. It will cost the same  
amount to run to film as if we're going to run to plate. So the cost structure is  
the same.*

*It's quicker to run to plate than to run to film, that's where we make the  
money. The material cost is the same.*

When questioned on the costs of labour and the other processes involved in production the GM stated that labour costs would also be saved as there was no need to set up to run film, a process that may take between 1 hour and 20 hours "depending on how involved the job is". He noted also "that we haven't done a job yet" direct-to-plate which suggested to the researcher that detailed cost analysis of the new technology had not been considered. This was further highlighted when the GM noted that several stages of the production process could be eliminated (such as set-up for film) but the costs saved by the firm had not been budgeted. The direct-to-plate technology also allowed the jobs to be queued using computer technology "and run overnight", an operation which could not be undertaken using previous methods. Costs saved had not been established but rather the GM noted that "it gives us more capacity to do more work".

The researcher formed the view that the cost structure and operations at SD had changed and were changing substantially as a result of new product and process technologies. The GM indicated that “just one unit (of the direct-to plate equipment) alone is worth \$900,000”. Although this was a cost borne by SA, detailed knowledge of the associated cost changes (or charges to SD from SA) and any long-term financial benefits flowing from technology changes, changes in labour hours/costs and increases in capacity had not been considered by the GM in detail. In the process of making product decisions, the GM took into account “rough estimates” of material and labour cost and emphasised the increased capacity and reduced time to process jobs. Notably, no cost information relating to the changing product materials and processing technologies was supplied by the accountant or was it requested by the GM.

The GM also considered “reasonable estimates” of supplier costs for the development of marketing materials associated with the organisation’s name change to SD. However, no formal accounting information was used to determine the costs of the name/brand change and the potential benefits (sales increase), for example, a detailed budget or cost benefit analysis.

It was noted previously that the GM had only informal classifications of market segments and did not have any information about the size of the markets currently serviced or the potential new markets identified. Not surprisingly, the GM had not considered the profits associated with the markets but tended to emphasise the importance of increasing sales by way of new technology.

So, from a general management perspective, what does the description above tell us about the customer orientation of SD and the way in which accounting information is used as an input into customer product decisions? SD's understanding of its customers' product needs was heavily centred upon its close relationships with customers and maintained through the sales force and GM's direct and regular contact. No formal (survey) research of customer needs was undertaken. A range of product needs or attributes was understood by the GM although not formally documented within SD, for example, in terms of details for marketing strategy. Of these attributes, product quality, in terms of physical characteristics, and delivery to customers on time were the attributes most heavily emphasised. Moderating the customer orientation was the technology "push" by the GM in which customers were constantly introduced to (and the product sold on) changing product and process technologies. This push was, however, linked to the product attributes, particularly the two aforementioned attributes of quality and time and would suggest that a technology orientation (Houston 1986), is not incompatible with, but may be complementary to, a customer orientation.

The satisfaction of customers "at a profit" was not a central component in the decision-making of the GM, but an emphasis was placed more upon sales volumes/revenues and the capacity to increase production throughput. Hence, one view of this situation is that the limited use of detailed cost and profit information was deemed to be sufficient for decision-making where the GM's emphasis for SD was on sales, technology, product quality and delivery time.



Utilising the customer orientation format presented in Table 5.2, this position may be summarised as follows:

<b>Element of customer orientation</b>		<b>Description</b>
Degree of knowledge of customer attribute needs	➔	Extensive
Manner of collection of information	➔	Unstructured/Informal
Management of information	➔	Informal
Financial orientation data	➔	Sales; non-financial
Extent of accounting information usage	➔	Limited
Type of accounting information	➔	Simple

**Table 6.2 Customer orientation at SD - General Management function**

The situation at SD raises the question as to whether the GM's emphasis on sales, technology, quality and time can be viewed as market orientated where the "at a profit" decision criterion is absent. The researcher's impression of the situation at SD, and of the GM in particular, was that the current emphasis would lead to long-term profits. In other words, by increasing sales volume and expanding capacity by using new product and process technologies, profits would follow, a situation which is consistent with a market orientation. This approach may result from the GM's past experiences in related businesses and his knowledge of "critical factors" for success in the industry. The type and extent of accounting information used by the GM in making decisions may then be seen as appropriate given the GM's goals at

this point in time. This issue was raised in section 2.3 in the context of discussing the relevance of accounting performance measures and the (changing) strategies of firms over time. Just as different accounting performance measures may be seen as desirable (appropriate) for different strategies, SD's situation would lend support to the general argument that different types/forms of accounting information are required for different degrees of customer orientation. As to whether the accounting information used by the GM at SD was the most "appropriate" is open to further research. However, it must be said that SD may have been better informed of the likely long-term profit outcomes if financial plans - accounting information - had been developed that took into account changes to cost structures, capacity levels, changing customer bases and sales volumes. This begs the question as to why this "strategic" accounting information was not considered by the GM.

### **6.2.2 Competitor orientation**

The literature on the competitor component of a market orientation discussed in Ch. 2 indicated that market-orientated firms maintain intelligence about their competitors' industry positions and value chains in a way that allows sources of competitive advantage to be identified. In this section the competitor information used by the GM of SD in the product decision-making process is described as is the accounting information used in this process.

Initial discussion with the GM centred around the size of the market, how and by whom the information was obtained and how information was used in terms of determining sources and positions of competitive advantage.

In discussing the size and number of competitors in the industry, the GM stated:

*I'd say probably.... our **main** competitors would be about 3 or 4 large.*

*.....And then you'd probably have your competitors who are sort of middle of the road, small (one) man operations, probably about ten of those.*

(Researcher) How do you go about identifying who your competitors are?

*Well, we talk to our customers - our clients. (They inform us) what other people have got - what services they provide.*

Initially, this description appeared to show SD as more reactive (wait until we are told) than proactive (seek to find out) in their competitor intelligence, but the researcher considered that this may well reflect the GM's more detailed knowledge of the market resulting from his 15 years of industry experience and his view of SD as the dominant firm in the industry. The following dialogue gives an indication of this:

*None of those competitors out there have got what we've got, they can't provide the service we provide.*

(Researcher) How do you know that?

*Because I know!! Clients tell us how they (competitors) haven't got (what we've got)... they haven't yet done the research and development we've (SD and the parent company) done over the last 14 months to get it right.*

(Researcher) Could they acquire the R&D or technology?

*They could but it's going to cost them a lot of money, I mean, just one unit (direct-to-plate) alone is worth nearly \$900,000.*

*Well put it this way, our PC is the largest graphic reproduction firm in the southern hemisphere, there's nothing - nothing like it. I don't think there ever will be.*

(Researcher) Why?

*Expertise - no one's got the expertise like the group has now, they've been going since 1928 and these other companies have been going for 20 years. And I hear they are struggling.*

In this dialogue the GM shows he has a knowledge of competitors in terms of their resources (financial) and their capabilities or "expertise", and although obtained through informal ways (the GM had also previously worked with a competitor), indicates a more strategic perspective in decision-making than was first apparent. This perspective was further supported when the GM noted that from time to time

he monitored the quality of the competitors' finished jobs and that the standard was "moderate... acceptable to some clients but not to the majority of them".

In seeking further to establish whether the GM had considered the basis for competition within the market, he was asked about the most important competitor information gathered by the firm.

*Price. That's what they're (sales representatives) trying to find out, information from their customers.*

(Researcher) So you compete on price?

*Mm - as well as quality but I'm trying to get this issue to the guys to sell quality and turn-around more than price.*

(Researcher) So are your competitors targeting exactly the same people as you?

*Of course they are, except for corporates. I can't see them targeting corporate or direct retail.*

Why Not?

*Because they haven't got the resources, they haven't got the money.*

Other than the occasional competitors' price list (observed by the researcher at the time), the GM did not maintain any documentation on, or about, competitors. While there was an absence of formal market research procedures/policies at SD in terms of examining competitors, a considerable informal competitor information network exists which appeared to be built upon the relationships of SD (sales representatives, production manager and the GM) and their customers and SD's long history of market operations. One question that arises is how much information gathered over time has "survived" within the firm? This, the informal approach to obtaining competitor information and the GM's discussion emphasis on customer relationships, was noted by the researcher with a view to establishing any further evidence of this aspect within SD.

The GM's discussion indicates that he has considered the comparative competitive position of SD on key product attributes of product quality and turn-around time/delivery. This comparison has been used to effect change in the market strategy of SD, that is, by differentiating SD in terms of quality, turn-around and expertise. Further, the GM had considered the ability of competitors to enter SD's target markets.

The same may be said about the use of accounting information by the GM in making competitor-related product decisions. The GM made several references to competitors being unable to match SD (as part of a larger company) in terms of financial resources. Furthermore, the GM indicated a knowledge of the cost structure of SD during a discussion on competitive advantage:

*We've got the reputation out there, if you want something done right, on time, right price, they come to us.*

(Researcher) Do you think your competitors are in a position to offer a lower price as you have overheads that may be they don't?

*SD - No. We have been set up - because you know, there's only 18 of us. We can work at a rate we'll get off a client - a cheaper rate because we've got less overheads than even Scanagraphics (main competitor). And the turn-around will be quicker than Scanagraphics. Quality will be better than Scanagraphics.*

This indicated that the GM had given some consideration to competitors' cost structures at the business unit level (as distinct from the attribute level). This was not undertaken in a formal way and the researcher wondered whether the GM's view would, or could, in fact, be proven. This said, competitor cost information was considered in the decision process. Table 6.3 presents a view about the competitor orientation of SD from a general management perspective.

<b>Element of competitor orientation</b>		<b>Description</b>
Maintenance of competitor information	→	Minimal
Source of information	→	Informal
Regularity of review	→	Ad hoc
Information detail	→	Limited
Extent of accounting information	→	Limited
Nature of accounting information	→	Financial accounting - basic

**Table 6.3 Competitor orientation at SD - General Management function**

What Table 6.3 does not disclose or emphasise fully is the “informal” way in which competitor information is obtained and, in turn, formulated as part of the product decision-making process. “Informal” in this case is used to describe information which results from multiple opinions of customers conveyed to employees of SD about SD’s competitors’ products and new developments over time. The information was not documented in any way but there was an observable prevalence of information sharing amongst the SD staff. This was the case on each visit by the researcher to SD and most notable between the GM and PM. Accounting information also relies upon the historical view of the firm’s cost structure rather than any actual competitor cost analysis.

The description of the competitor component of a market orientation at SD raises several questions of relevance to this thesis. For instance, does the informality of



the competitor orientation at SD suggest that the firm is any more or less market-orientated? It must be said that situations can be envisaged where the completion of written (formal) reports on competitors' operations may be inappropriate, for example, where intimate contact is maintained between highly experienced individuals versus limited contact between inexperienced individuals.

Is the competitor information obtained and used by the GM sufficient to allow SD to make informed decisions about long-term profitability? In the literature, the principal test to date of the appropriate level of market orientation has been the profit performance of the business unit. While the profit performance at SD was considered by management to be poor, it cannot be said this was a direct result of SD's competitor orientation.

The questions posed above link back to the issue of how much market orientation is enough, a point which Narver and Slater (1990) address by stressing that a market orientation is a continuum (p.32). While noting that businesses having the highest degree of market orientation are associated with the highest profitability they note that at some point the incremental costs to increase market orientation will exceed the incremental benefits (p.33). Perhaps this is the point at which the degree of "formality" alters?

### **6.2.3 Interfunctional coordination**

The third component of a market orientation - interfunctional coordination - was not examined to the same extent as customer and competitor components, but rather this aspect was to be considered by way of the over-arching questions and by way of

observation of the business practices at SD. In this section, the interfunctional coordination component is viewed from the general management perspective.

The marketing literature reviewed in Ch 2 suggests that in a market-orientated organisation, information would be disseminated across functions and that interfunctional coordination would facilitate the meeting of customer needs at a profit to the firm. Of particular interest in this case was the coordination between the marketing and accounting function at SD.

At the outset, the most notable aspect concerning the description of interfunctional coordination was the absence of Marketing and Accounting functions within SD. The GM, who had been incumbent for 6 months had assumed the responsibility for marketing. Other than General Management (and associated administration assistance), the main functions at SD were the Sales and Production functions. Accounting, Human Resources, and Research and Development services were provided (and charged for) by the parent company (PC) with whom SD was co-located.

The term “notable” used here reflects the researcher’s view of a contrast between SD and the expectations created within the market orientation research literature that organisations are composed of all functions across the value chain (Porter 1985). This is unlikely to be the case in situations where the particular business unit is a subsidiary within a group and “shares” the parent company’s resources or where functional operations (such as Human Resources, Distribution, Accounting, Legal, Payroll and Marketing) are outsourced to independent providers.

The staff (18) and equipment (production and processing technology) at SD were located in an open plan facility which allowed all to view operations and communicate, freely, in person. Over the course of several weeks the researcher was able to observe the interaction between the GM, production and sales staff. For instance, several management situations related to the pricing, quality and delivery of jobs were observed which indicated a uniform approach and attitude in meeting the customers' needs. Staff frequently discussed job quality and problems associated with job processing and on many occasions the GM was asked for his ideas in trying to resolve problems. Close coordination between the GM and the sales and production functions was taking place at SD and was supported by job processing documents (bureau sheets) which dealt with issues such as job quality and turn-around times. While reference is made here to "functions", SD operated very much in an integrated or cross-functional team manner.

The GM indicated (and was later confirmed by the accountant) that accounting services were provided by the PC and were predominantly restricted to a monthly meeting between the accountant, GM and the chief executive officer of the PC wherein the previous month's budget versus actual performance was reviewed. The GM was responsible for the profit performance of SD and made decisions without reference to the accounting function (except in the case of large capital expenditures). For instance, the GM made decisions relating to the change of the firm's name to SD, the extension of the firm's product attributes/range (including the direct-to-plate technology) and the targeting of new market segments (corporate direct). While there had been opportunity to do so at several points, at no stage in

the course of discussions with the GM was reference made to the accounting function about these instances.

Clearly the coordination and communication between SD and the PC accounting function was limited. There are several possible explanations for this. One may rest simply in the fact that the accounting function is located “outside” SD. While being physically distanced from SD, the location of the accounting function within the PC may also indicate that the firm (SD and its PC) does not view accounting as important as the core operating functions such as production and sales. Second, it may be that the GM is unfamiliar with the accounting discipline and in this respect is unsure of what it is that accounting can provide in order to facilitate decision-making. Third, despite his previous experience (predominantly sales and production) within the PC organisation, the GM had been in the position for a 6 month period only and may not have yet had time to familiarise himself with the accounting and operating structure and processes of SD and the PC.

The researcher formed the view that it was the second factor, that is, that the GM was unfamiliar with “accounting”, in combination with the GM’s emphasis on increasing sales volumes that most likely explains the situation. On several occasions when conducting casual (unrecorded) conversations, the GM commented in passing that “I’m not an accountant Rob....” and that sales in the new “corporate” markets were most important. Direct-to-plate and related technologies dominated conversations.

One view then is that the GM's strategy on increasing sales (through close customer relationships and new technologies) while maintaining production efficiency would yield long-term profits and was an approach which did not require any "sophisticated" accounting information or detailed interaction by the GM with the accounting function (an interaction the GM did not apparently want to have).

Table 6.4 summarises the position at SD in terms of interfunctional coordination from a General Management perspective:

<b>Element of interfunctional coordination</b>		<b>Description</b>
Interfunctional meetings within SD	➔	Continuously held
Range of value-chain functions represented	➔	Few
Information source	➔	Informal
Accounting information	➔	Minimal
Nature of accounting information	➔	Basic - Financial accounting

**Table 6.4 Interfunctional coordination - General management function**

### **6.3 Summary**

The General Management function at SD places a relatively heavy emphasis on understanding customers and their product-attribute needs. This understanding is developed in an on-going, but informal, manner by interaction principally between customers, SD sales representatives and the GM. This understanding can be seen to be cumulative as the relationship with customers is strengthened over time. No

formal documentation of customer product-attribute needs or explicit ranking of product attributes in terms of importance was maintained. However, a customer-orientated philosophy was apparent in the behaviour of the GM and reflected in the decision-making process by an emphasis on customer product attributes as points of reference, in particular, attributes related to quality of the physical product and “turn-around time”. Product decisions were also influenced by the advances in product and process technologies developed by SD and its parent company. SD’s focus on customer relationships also served as a principal source of competitive information as customers passed on their knowledge of competitor operations. Again, the competitor information was not sought, received or documented in any formal or structured manner by SD. Competitor and customer information when received was shared across the main functions of SD (noting that there were only three main functions) and was used by the GM in making product-related decisions, for instance, in pricing decisions.

Accounting information used by the GM in the product decision-making process is described as simple - sales orientated - and lacks a strategic customer- and competitor-orientation as the literature indicates would be present in market-orientated organisations.

Overall, the description of the general management function at SD suggests a situation where the notion of market orientation has not been formally addressed but nonetheless appears to exist and operate in an informal way. Similarly, the idea about what accounting information is necessary for market-orientated decisions has not been considered, with management using non-financial criteria related to

customer product needs to inform decisions. What has evolved (in terms of market-orientated activities) at the general management level appears to have been affected by the GM's perception of SD's (superior) market position, his experience and qualifications, changing product and process technology and the way in which the organisation has been structured.

## **Chapter 7**

### **Market orientation and accounting - A production perspective**

In discussing the “over-arching” questions with the general manager (GM) and in observing the operations at SD, it became apparent that the production function played a substantial role in the market orientation of SD. In this section the three components of a market orientation and the use of accounting information within these components will be described. The description is based upon discussion with the production manager, a detailed “walk through” of the production process with the production manager (PM) and general observation of production operations at SD. The production “walk through” was the second taken by the researcher and allowed for an opinion to be formed about the PM’s understanding of the operations while providing an opportunity to compare and contrast this with the GM’s understanding.

The PM, who had been in this position for a period of three years, described his responsibilities as ensuring “quality product delivered in a specified time-frame” and that he had a role in product decision-making but this was more on day-to-day issues as distinct from more strategic or long-term product decisions.



## 7.1 Production and customer orientation

The focus of this component of the study was to describe and develop an understanding of the customer orientation within the production function at SD and the way in which accounting information was used in the process of making customer-related decisions. Protocol questions centred around the way in which the (changing) needs of customers were determined, the respondent's conception of what constituted the product (attributes) and the way in which markets were segmented (if at all) around different customer product needs.

It became evident at the outset that the PM established an understanding of customer needs from two main activities, namely, direct client contact and contact made via sales representatives. This latter activity is discussed in the section below on interfunctional coordination, however, the researcher was interested to hear the PM describe the extent of his direct relationship with clients. The following excerpts give an indication of this:

*(sometimes the sales) reps don't even know the work is coming (into the firm), so because there is a certain, I suppose umm - bond or link between us (production) and our client, they'll ring up and say, "hey Chris, I've got this job to come in, (or) I need it this afternoon, I need it this morning".*

(Researcher) So the customers will actually ring you?

*Yes. There's a lot of work that comes in here that would be unquoted.*

(Researcher) If a customer rings you direct, who quotes on the job in terms of, say, price and other things?

*It would be quoted after it is finished*

(Researcher) And they (customers) accept what comes through?

*Well, when some jobs come in they may say “..look tell M (the sales representative) to give me a ring for a quote. Other jobs come in - (where) there is no price attached, they seem pretty cool with the price afterwards.*

(Researcher) What percentage of jobs that you put through would come direct to you (as compared to those produced via orders from sales representatives)?

*I'd go conservative, I'd say 40%.*

This discussion provided an insight into what seemed to be a substantial relationship developed with customers who, the PM noted, were predominantly the advertising agencies while also indicating what may be seen as a separate market segment - advertising agencies who deal direct with SD's production where price is not an issue. The PM did not in any way, however, indicate that he explicitly identified any market segments.

With a view to establishing whether particular product attributes were considered by the PM, he was asked to describe the product provided to the customer and whether he believed that the product was just physical.

*No, it isn't, no. It is services. It is being there to help them (customers).*

(Researcher) Could you define services?

*Umm - oh support - support would be one.*

The PM described support in a way that indicated that SD was aiming to help the customer (an advertising agency in this example) achieve a competitive advantage and that this advantage came from SD's rapid delivery of product. This rapid delivery allowed SD's customer, in turn, to provide a faster service to their customer.

*If they (the advertising agency) have got a tight deadline, if they are pitching for new business, whatever it may be, we understand that and we will do everything we can to push that (job) through.*

In response to further probing about the notion of "services" the PM responded

*Oh I'd probably - I don't know whether umm...I don't know how to describe - we have that rapport with them, just having an understanding (of customers)*

(Researcher) Understanding - of what, their needs?

*Probably always not.... being able to speak freely with them... Honesty I suppose.*

The PM indicated that SD did not set out to detail client needs formally, but rather this understanding was “more of an education about different clients” and something that was built up “from experience”. Throughout the course of the study, the PM’s relationship with clients was observed in a number telephone conversations in which client job “updates” and details were discussed in the “free and open manner” as described by the PM.

The PM described customers’ “film specifications” and the meeting of these specifications by SD as the critical factor in satisfying customers’ needs and may be equated to the “core” product attribute as described within the general marketing literature (Kotler 1994).

*You’d have to know the film specs, you have to know when (the customer) wants it, and you have to know what it is. How big is the job.*

This same point was also made by the GM (Ch 6.2.1). The importance of the “film specs” was further highlighted when the PM led the researcher through the production process. The PM referred to the bureau and job sheet (see Appendix 10 and 11) for the job-in-process at that time, indicating the importance of details for software, colour and job size for production scheduling, managing capacity and meeting time and visual quality standards of the customer.

One further product attribute - client education - was identified by the PM in the course of discussing the changing needs of the customers. Client education had become an attribute by virtue of the technological developments made by SD in product and process technologies. For example, customers were unfamiliar with the “direct-to-plate” processing technology, a technology that SD believed may improve the quality of the finished product and had the potential to reduce costs and improve product turn-around times.

Customers consequently needed to be educated about these new technologies by SD and, over time, had grown to expect this education from SD.

(Researcher) ..and so the quality is even better presumably if you go direct to plate?

*Yes, but they're (customers) seeing a digital proof run and they are used to an analogue proof I suppose, so there's a bit of education in that for the client*

Table 7.1 summarises the key product attributes referred to by the PM.

<b>Product attribute</b>	<b>Brief description</b>
• Adherence to “film specification”	Production of physical product in line with customer specification.
• Turnaround time	Time taken from receipt of order to the delivery of the finished product.
• Customer support	Rapid response to changing client needs - rapport developed from an understanding of client business.
• Competitive edge	Product provides customer with a competitive edge.
• Customer education	Update customer on new technologies.

**Table 7.1 Product attributes - PM**

As alluded to above, a major avenue for developing an understanding about the product needs was obtained by the PM through direct contact with customers and was a situation that had developed from the interaction of the PM with customers over a period of years. This has implications for the management of activities within the organisation, for example, the coordination with the sales function to ensure familiarity with customers' needs is maintained and that pricing strategies are considered (discussed further in the following section). At SD, the production function played an integral part in its customer orientation.

The activities of the production function raise questions about the way in which accounting information was used in making product decisions. For instance, when jobs are quoted/priced, are the costs associated with the production manager's time spent on educating and advising clients taken into account?

Further, when meeting the changing needs of customers, for example, re-scheduling production to meet the customer requests for rapid product delivery, are (the probable increases in) costs associated with this taken into account? This re-scheduling situation would suggest that some customers create greater demand on organisational resources than others, a factor that would generally be revealed in customer profitability analysis. Similarly, the PM had stated that the major change in customer needs over recent years had been the demand for fast “turn-around” of jobs, again raising the question as to how the costs of meeting this change, for example, the cost of introducing new technologies, had been taken into account in decision making.

The answer to these questions is, essentially, that the PM did not concern himself with costing issues, but rather focussed on non-financial information associated with the product attributes in Table 7.1, in particular, whether the job was on schedule to meet customer delivery time requirements - “(PM) *work is wanted quicker and quicker*” - and on the physical quality of the job. These attributes were seen by the PM as providing customers with a competitive advantage. Although not concerned with costing issues per se, the PM was aware of the financial consequences of not meeting customers’ product needs. For example, when discussing the importance of obtaining accurate film specifications, the PM stated:

*Well, you can't finish it (the job), and we won't finish it until we know (exact film specifications) - otherwise all we have got to do is end up doing the job again, blowing the profit, get the kick in the 'ass' and it's still going to run late for the client, so no one has won.*

In short, it may be said that the PM placed emphasis on information and activities associated with efficiency and effectiveness of production output more than on the cost, but that there existed an implicit understanding of the profit implications of not meeting customer needs.

The PM possessed substantial knowledge of customers' needs, but this knowledge was not sought or recorded in an explicit or formal manner within the firm - no written documentation existed about customer product attributes or ways of researching customer needs. The high level of customer orientation of the PM was developed through long-term (personal) relationships with customers. Table 7.2 summarises the customer orientation of the production function at SD in a similar manner to the summary of the customer orientation of the general management function in Ch 6.

<b>Element of customer orientation</b>		<b>Description</b>
Degree of knowledge of customer attribute needs	→	Extensive
Manner of collection of information	→	Unstructured/Informal
Management of information	→	Informal
Financial orientation	→	Non-financial - time and quality
Extent of accounting information usage	→	Limited
Type of accounting information	→	Simple - non-financial emphasis

**Table 7.2 Customer orientation at SD - Production function**



## 7.2 Production and competitor orientation

This aspect of the study sought to describe the competitor orientation of the production function at SD by researching the way in which the PM considered competitors' products and competitive positions and how (if at all) this information was used to determine competitive advantage.

The PM's knowledge of competitors could be described, at best, as minimal. The discussion with the PM revealed no formal research or analysis of competitors' operations, but some "ideas" (only) that firms within the industry used different production technologies (PC technology rather than Macintosh). These firms were not perceived as competitors at the time. The following dialogue provides an insight into the PM's competitor orientation:

(Researcher) Can you tell me about who your main competitors are and what their capabilities are in terms of providing the same customer requirements (as you)?

*I wouldn't know all the competitors and I wouldn't know everything they have got there.*

(Researcher) Would you know your main competitor?

*There wouldn't be one competitor. I mean they come in the type of other trade houses. Well bureaus, bureaus get more and more work because of the dollars, they'll run the job for (virtually) nothing.*

The PM continued to indicate that they (SD) did not see themselves as competing with “bureaus” which tended to just “run the disk straight to film without checking anything” which was not the way in which SD operated and that this market was mainly for “small clients”.

Having suggested that SD did not really have competitors, the PM in a somewhat contradictory way, stated “it seems to me a lot of our competitors have got PC’s whereas we have not”. In following this up, the PM was asked whether he considered the PC market a threat.

*I think there is. Gary (GM) doesn’t but I think there is. The only time you read anything about Apple - I mean they’re in all sorts of trouble.*

In short, while the PM had a view about competitors, this was not based upon any formal research undertaken by the PM, and appeared, at times, to be contradictory. The researcher gained the impression that overall, the PM’s knowledge about competitors was minimal. Further, this lack of competitive intelligence precluded further discussion with the PM about competitor cost comparisons. Table 7.3 summarises the competitor orientation of the production function.

<b>Element of competitor orientation</b>		<b>Description</b>
Maintenance of competitor information	→	Negligible
Source of information	→	Informal
Regularity of review	→	No review undertaken
Information detail	→	Limited
Extent of accounting information	→	Not used
Nature of accounting information	→	Non-financial information only

**Table 7.3 Competitor orientation at SD - Production function**

The question that the researcher now ponders is whether or not it is unusual for the production function of an organisation to have such minimal competitor intelligence. The market orientation literature reviewed in Ch 2 suggests that market-orientated firms coordinate and communicate across functions in order to satisfy customer needs at a profit. One view then would be that without a knowledge of the cost of the production function to satisfy customer product attributes relative to competitors, the firm's ability to ascertain and/or maintain competitive advantage and long-term profit may be restricted.

Another view is that this information need not necessarily reside with the production function but within another functional area, for example, within the accounting or general management functions. It would seem, however, that in this case, competitor orientation and related accounting information was not an aspect with

which the PM was familiar, suggesting that such information is not integrated interfunctionally.

### **7.3 Production and interfunctional coordination**

One of the most notable features of the production activities observed and discussed at SD was the constant interaction and coordination with the general management and sales functions. Indeed, a major source of the PM's knowledge of customer needs was via interaction with sales representatives. This interaction operated in two ways. First, where customers had contacted the PM directly, the PM would discuss the job details with sales personnel and the GM to ensure that all functions were familiar with overall sales and production levels and operations. Second, the opposite scenario existed where jobs had been brought and communicated to production by sales representatives. The following dialogue reflects the position at SD:

*We (production) can help them (sales) with turn-around if they can help us with the specs (job specifications). I've worked before when sales and production have been split right down the middle and it's shocking..... You can't get anything done. They'll say "that's your problem, your production" ..... but like I'll speak with Ross (sales representative) a dozen times a day. Even if it's just to give him the confidence to know that things are okay. Yeah - it's important for him to know that if he goes into a client meeting that he knows the job status. You need to know that. No one wants to walk into a client and before you even open the door they are shooting harpoons at you for letting them down.*

The researcher was able to observe the interaction between the production and sales functions in a similar way to the interaction between the production and general management functions. The researcher sought to probe whether the close coordination between functions was a consequence of the (small to medium) size of the organisation. The PM's response indicated that this was a factor:

*..... if I look at (the parent company), one of their big problems is that they're too big, no one really seems to work together. Their mentality at the moment is - "this is my department, this is what I do".*

*..... (at SD) there are a lot of things that (the GM) does that would not be under - what you would see a General Manager doing. But it is good that he does. Because it is a small team, if they see the guy at the top doing it, well, 'gees', they're not going to quibble about, you know, doing more than what their job entails.*

This dialogue provides an insight into the way in which the behaviour/actions of senior management has an influence on the behaviour and attitude of other functional managers and arguably the extent of market orientation within the firm (Maltz and Kohli 2000). The dialogue also raises the question as to whether the size of the organisation is the factor that permits this type of behaviour to take place or whether behaviour (like the behaviour of the GM as described here) is independent of firm size (in this case, in terms of number of employees).

Interestingly, the observed behaviour of the GM and the impact on the attitude of the PM was an aspect unable to be shared by the accounting function due to both the physical location of accounting away from SD and the infrequency of interaction between production and the accounting function. In fact, the PM was not a party to any meetings with the accounting function, and, as noted above, the PM used little, if any, accounting information in making product decisions. Moreover, the PM's decisions emphasised non-financial information such as product quality, delivery, and client education. Table 7.4 summarises the position at SD in terms of interfunctional coordination from a production function perspective.

<b>Element of interfunctional coordination</b>		<b>Description</b>
Interfunctional meetings within SD	➔	Continuous interaction
Range of value-chain functions represented	➔	All SD functions
Information source	➔	Informal
Accounting information	➔	Minimal
Nature of accounting information	➔	Primarily non-financial

**Table 7.4 Interfunctional coordination - Production function**

#### **7.4 Summary**

In the previous sections, each behavioural component of a market orientation - customer, competitor and interfunctional coordination - has been described. The descriptions have sought not only to develop an understanding about market

orientation but also to examine the way in which accounting information is used as an input criterion in product-level decisions.

The production function has a strong customer orientation that has developed from, and is maintained by, a direct production-customer interface and from a focus by production on satisfying key product attributes, in particular, quality of physical product and delivery time. This finding highlights how functions other than the marketing function may provide a reliable source of customer information.

The customer orientation is supported by extensive coordination of activities between production, sales and general management functions.

While described as extensive, the way in which information is collected/sourced and communicated could be described as informal. This reflects the absence of any formal policies, procedures or requirements about how functions within SD should obtain and disseminate customer information. The term informal does not, however, indicate a lack of regular attention to customer information, rather, constant (daily) interaction with customers and between production and other organisation functions regarding customers (with the exception of accounting - see below) appears to be the norm at SD. Rather than being viewed as a separate, independent function, production may be best described as operating in a functionally integrated manner and displaying what Jaworski and Kohli (1993) refer to as a “connectedness” among departments (p.63). Further, the lack of formality is not necessarily related to a market orientation although some suggest that formality may possibly impede market orientation (Narver and Slater 1990, Jaworski and Kohli 1993) an aspect that is examined further in Ch 10.

There was also a noticeable absence of accounting information used in the product-related decisions within the production function. Despite a clear understanding of the product attribute needs of customers' (Table 7.1), the costing of product attributes was not undertaken nor were cost comparisons made with competitors. The PM's use of accounting information extended to consideration of the unfavourable profit impact of operating problems such as delays in processing jobs and poor quality products which may be subject to re-work. The question that remains and is considered in further detail in Ch 10 is whether a firm can be market orientated and meet the satisfaction of customer needs *at a profit* where there is an absence of accounting information as an input criterion in product decisions, in this case, within the production function. Rather than accounting information, the PM used non-financial criteria related to product attributes to guide product decisions and it may be also debated whether non-financial criteria can be surrogates for accounting information.

Also notable within the production function was an almost complete absence of a competitor orientation which raises the issue as to whether the absence of competitor intelligence within the production function has a significant impact (if any at all) on the market orientation of SD. The marketing orientation literature is silent on its own operational detail in this case, that is, (i) while customer and competitor intelligence are requisites for a market orientation, the extent of how much detail is sufficient is not addressed, and (ii) there is very limited discussion as to whether all functions within a firm require the same customer and competitor intelligence. Narver and Slater (1990) broadly address the first point by stressing



that a market orientation comprises a continuum while, on the second point, the literature maintains that interfunctional integration is closely linked to the customer and competitor components and all individuals within an organisation can potentially create value for customers. In light of the SD case description, this issue requires far greater research and detail.

## **Chapter 8**

### **Market orientation and accounting**

#### **- An accounting perspective**

The accounting services for SD were provided by the parent company which was located in the same premises as SD. Discussions took place with the accountant (AC), who had been with the parent company for over two years, and a range of accounting reports - sales representatives performance report, customer sales report, operating (profit and loss) - were viewed and analysed. Discussions with the AC centred around the types of accounting information that were in existence and any planned accounting developments. The researcher sought to identify the extent to which accounting information had been developed for, and/or was consistent with, the customer, competitor and interfunctional coordination components of a market orientation.

#### **8.1 Accounting and customer orientation**

The market-orientation literature reviewed in Ch 2 indicated that particular accounting information would be present within firms that maintained a customer orientation. This information included: (i) measuring the cost and revenue dynamics of the customer in terms of acquisition and product-in-use costs; (ii) measuring the costs of the seller in meeting the customer-specified product attributes; and (iii) measuring profitability of customers. Whether this type of accounting information, or accounting information with characteristics associated

with a customer orientation, was used (or was present) in product-level decision-making is the focus of this section.

Despite the apparent lack of marketing-related data that was revealed in earlier discussions with the GM and PM, (for example, no clearly defined market segments, customer groups, or formal descriptions of customer product attributes) the researcher was conscious not to presume that market-orientated accounting information and activities would consequently be absent. It may have been possible that accounting information had been designed with a customer and competitor orientation in mind. For example, the accounting staff may have had some previous experience, education and/or exposure to a market orientation which had influenced the design of accounting information.

At the outset, the accountant described the type of information provided as “some of it’s client driven and some of it’s production type stuff” with management reports provided on a monthly basis. The AC described two main client-driven reports as :

*... sales as separate by sales rep, which sort of measures each sales rep’s performance. And the second one is by customer, how many, what sales they have done in the month against the budget, etc, etc. These are the individual sales reps budgets for the current month and their actual sales for the month. Right - this is really more a measurement of the sales reps requirements at a variance.*

The description by the accountant and the focus of the reports was one in which productivity of sales representatives was paramount, with an emphasis on the amount of sales revenue generated more than on the profit, although this latter aspect was accounted for in the customer profit report (discussed below) and monthly operating (profit and loss) statement (Appendix 13).

In describing aspects of what was referred to as the “monthly report package” the AC emphasised sales per employee as follows:

*Sales per employee, just a little bit of a relationship about how much work we are getting through and how many people you’ve got in place and the sites that are doing best have definitely got the highest you know, if you like, sales per employee numbers, .... you know, getting the most out of their people I suppose.*

The AC’s response seemed to indicate that the sales report had been developed for all divisions (“sites”) of the organisation, not just SD. This was confirmed in further references by the AC to developing reports for “the group” and a later description of his role as “national” which required travelling “interstate all the time”.

In responding to a query by the researcher as to whether the accounting function reported profit by employee the AC noted that :

*I don't know if a profit per employee would give much more than sales per employee in terms of - what I'm trying - what this KPI (key performance indicator) is trying to do is how much output or throughput and I think that's probably better measured by sales per person rather than a profit per person.*

This sales emphasis was consistent throughout discussions, as was the need to measure the capacity utilisation of labour resources and would seem to support the emphasis on productivity. A question most pertinent to this research is, however, whether the accounting reports are used in a market-orientated way? For example, was the customer profit report used in a way in which decisions about target customer groups were identified for strategic purposes such as further customer market penetration or perhaps deletion of a poor profit contributing customer? This was not an issue considered by the AC or was it an aspect considered by the GM or PM. When prompted on aspects of target customer groups the AC responded :

*We tried to do that - or I tried to do that earlier on, didn't really get very far with it, making market segments if you like. Certainly would be something worth pursuing, yeah, but not that we have.*

*Yeah yeah so - I mean we certainly could do it, it's getting more and more that we're dealing directly with corporate entities you know, ANZ, Kraft, Gillete, rather than through advertising agencies.*

While in this instance the AC acknowledges what seems to be a developing target market or group, that is, corporate entities who deal directly with SD, the AC had

not yet considered the notion of accounting for these “new” customers. This same target market had also been identified by the GM who saw this as a growth market, but the profit impact of providing services to this market had not been made explicit by either the GM or AC. One reason for this may be the view of the firm as the largest, and only, provider of a full range of digital graphic services within the southern hemisphere, a point that was made by both the GM and AC when discussing the competitive environment.

The AC maintained reports on the top twenty customers which were determined by gross sales revenue. The profitability of these top twenty customers was then monitored. The AC described the process of arriving at customer profit, as one in which the total sales for a customer, JWT, for example, were accumulated for a month, from which the total costs - material and labour - for all jobs for JWT were subtracted. The rate at which the labour hours were costed was established by accumulating the total budgeted labour costs and the budgeted equipment depreciation costs of each production processing section divided by the budgeted number of labour hours per processing section. An additional rate per labour hour was included that related to the cost of

*repairs and maintenance, other costs, consumables, technical services, ....administration, finance, freight etc, etc. So it's fully absorbed includes all of those things” (AC).*

To this costing rate per hour was added a profit element described by the AC as:

*We use a - this thing here (AC pointing to data on a report), it brings in a profit factor ...which is basically our budgeted profit spread over the number of hours to give - add that on to every hour and we make our budgeted profit.*

In the context of this research, it may be said that the way in which the customer profit information was developed was not in keeping with the customer orientation component of a market orientation. The cost information was not developed from the identification of product attributes - which may then provide attribute costs, or was it based on activities that related specifically to the attributes of importance to customers - a form of activity-based costing.

Rather, the cost element of the customer profit report was developed from a labour-based hourly average of an amalgam of line item expenses of production and overheads, for example, materials, direct labour, administration, technical services, and included an amount for profit. This approach in which total costs and budgeted profit are averaged over one common base - labour hours - has been strongly criticised within both the marketing and accounting literature as it assumes that all costs, in particular, production overhead costs (e.g., technology and equipment costs), are driven (change) in proportion with a change in labour hours (see Section 3.4.3). Further, the greater the variety/diversity in products/jobs (impacting on the combination of different resources required for the product) the greater the likelihood that inaccuracy in costing will occur due to cross subsidisation of product costs resulting from averaging. In discussing product costing and the heterogeneous nature of the products/jobs that the firm produced, the AC noted problems with the accounting for product costs:

*Absolutely - each and every one (job) is completely different - which is part of the problem with giving them hourly rates or costs per A4 job, you know just say, well an A4 job you should be charging \$200 , some of them will cost - will require six hours of up front you know, colour work on them and some will require half an hour or none, so it's not really a generic sort of product.*

In a somewhat contradictory way the AC continued by noting that by using an average hourly rate, the difference between jobs was overcome:

*I suppose the thing with this is - with this system is it's only on an hourly rate, so regardless of whether the job is generic or not if it takes two hours in terms of capturing a cost of that, well two hours costs the same as - each hour costs what each hour costs. So hopefully it gets around that, the idea is that it gets around the lack of consistency in the job.*

There was no explicit evidence of product attributes being costed by the AC.

However, in the course of discussion on accounting reports produced by the AC, mention was made of two aspects that the AC viewed as important for customers:

*I suppose the two major things that determine how well we're going to do as a group (SD and parent company entities) is on-time delivery and the amount of rework that we have to do, which is really a reflection of the quality of the work we're putting out, so those two - those two sorts of things.*



*....the KPI's (key performance indicators) that we have at the moment, things like numbers of jobs late and average invoice values and on-time delivery percentages, those sorts of things that are all well and good, very handy sales per employee, type things.*

On-time delivery and quality of product were also mentioned by the GM and PM as being important customer requirements and a consistency on these aspects of a customer orientation between the AC and functional areas of SD became apparent. The AC had developed a cost for re-worked jobs which were classified as “house corrections” and “author’s rework” by extending the number of hours of re-work time by a predetermined rate and adding additional material costs. The AC explained that the GM or SM would use this information about author’s rework (where customers’ orders/data contained faults) to charge customers additional amounts to recover costs and profit. The AC’s emphasis was on ensuring profit was maintained.

In sum, the accounting information at SD was generally not in keeping with the information the researcher had identified as being relevant for the customer component of a market orientation (see Sections 3.3 - 3.4). Product costs were established using a “traditional”, single, labour-based overhead rate, a technique which has been the subject of much criticism within the literature. The subsequent use of these product costs in SD’s customer profit reporting also raised some questions in terms of accurately reflecting customer profitability. Financial reports reviewed by the researcher and discussed with the AC emphasised sales and production efficiency - increased volume of output and maximum use of labour and

equipment/technology resources. This said, the AC had developed customer-orientated non-financial reports to provide information on two key product attributes - on-time delivery and quality of product.

## **8.2 Accounting and competitor orientation**

The marketing orientation literature reviewed in Ch 2 pointed to certain accounting information being present when making strategic product decisions. Specifically, the costs of competitors to provide the same product attributes required by customers and the value chain cost structure of competitors. While the former information can be derived from the latter, both sets of cost information provide a basis for analysing competitive advantage. The view put forward by the researcher (Ch 3) was that attribute-based information provides far greater detail and scope for identifying areas for advantage than information at an “aggregated” level of the value chain. Further, the focus of competitor analysis at a product level makes clear the nexus between the customer component of a market orientation (by identifying customer needs in the form of attributes) and competitive product decisions.

Accordingly, in discussing competitor orientation with the AC, the researcher was seeking to establish the type of accounting information (if any) maintained on competitors’ product and value-chain costs. This discussion proved to be the most brief of all topics covered with the AC due to the absence of any substantial competitor accounting information within SD while still providing an interesting insight into why this was so. The competitive environment, the firm’s position in the industry and historical factors relating to the development of customer relationships seemed to influence the (lack of) formal competitor information. The

response by the AC to the researcher's first question on this topic area best reflects the situation at SD:

(Researcher) Do you undertake an analysis of your main competitors operations?

*I'd love to but no.*

When prompted further the AC indicated that there were no perceived competitors for the parent company (PC) but there may be for SD. The researcher's view was that this was probably not an area of accounting analysis that the AC had considered and was influenced by comments by the AC such as:

*...I think we could get the information, realistically there's not that many people that you would call genuine competitors. They're much smaller organisations - they are competitors with SD that are equivalent to SD, but not a PC (parent company) type, scale and no - no basically is the answer. It would be good if we could. I don't know how I'd access the information.*

While the AC indicated that information was not maintained, the researcher was interested to establish how the AC had, in fact, concluded that there were not any competitors. The AC's response to a question about this revealed an informal information network within the PC which provided competitor information throughout the wider organisation.

How do you know that there is no one of PC's size? (Researcher)

*Through knowledge of the market, passed on to me by (sales) reps and mainly through W (CEO of the parent company and co-founder of SD) really - yeah.*

*W, do you know W's background?*

The AC continued to describe how W's family had founded the organisation, how the firm had dominated the industry for 70 years and "propped up" many customers in "tough times".

*...the W(family) name is like very well respected in the graphic arts industry and all the .... big companies have always had long and close relationships with W and his knowledge of the industry is second to none. So there is a lot of information gleaned through that (W's) sort of industry knowledge.*

In this description the AC provides some insight into why (formal) competitor cost information may not be considered as necessary at SD. That is, competitor cost information is not necessary where: (i) the firm has long and close relationships with its customers; and (ii) is the dominant supplier in the industry. As to whether these two points are mutually exclusive also presents an interesting research proposition. Further, whether these two points are necessary, or sufficient, to influence the decision to initiate competitor cost analysis is also open to question. Another factor that may influence the adoption of competitor cost analysis relates to the business acumen of the AC. To the AC, the notion of more formal competitor information appeared new and he was unsure of how to "access information". Hence, the

knowledge base of the AC may be an additional factor influencing the decision to adopt competitor cost analysis.

The researcher was interested to examine the impact of a perceived lack of competitors by the AC on the nature of the competitor information maintained by the firm. The AC was asked about the effect of potential competitors entering the market from overseas. The AC's response focussed on the financial aspects associated with barriers to entry and the perceived core capabilities of the organisation:

*It could be (possible that overseas competitors would enter the market). I mean potentially it would take a huge investment, it would take someone a lot of time to get in and set up. I mean I think the thing that we have got and this is even on an international scale, is a very good quality product. Our colour management system skills are like second to none, the technology..... and also from the people and training we sort of - they learn a lot more here than they would elsewhere.*

In this description the AC identifies industry experience, capital expenditure, technology, people skills and management systems - training - as factors providing competitive advantage. These add further to the aforementioned factors (customer relationships and market dominance) which appear to influence the decision as to whether competitor cost analysis, particularly at a product level, is adopted in a firm. (This issue is discussed further in Ch 10). There was no documentary, observational

or oral evidence at SD of the presence of accounting information about competitor product attribute costs and competitor value chain costs.

### **8.3 Accounting and interfunctional coordination**

One role of the accounting function and interfunctional coordination is the provision of information across a range of organisational activities/functions about the costs to meet customer product attribute requirements. Further, this information may be provided and examined under different scenarios in which organisational activities are reconfigured with a view to creating greater value for the customer through improved product and/or reduced product cost. To enable this to take place requires the communication and coordination of the accounting function with marketing (and other functional areas of the firm). For example, to determine product profitability, the accounting function needs to be informed by the marketing function of the product attributes required by the customer. In formulating market strategy, accounting needs to be informed by marketing of target market segments in order to provide segment profit estimates. Consequently, this aspect of the study sought to identify information that indicated the way in which the marketing and accounting function within SD coordinated their operations.

In addition to the monthly reports on sales revenue by SR and customer (Section 8.1), the AC provided the GM with a monthly operating (profit and loss) statement for SD (Appendix 13). The detailed report provided information on sales revenue, direct material costs, labour and associated on-costs (e.g., leave and payroll costs), sub-contract services and a range of production, selling, general and administrative overhead costs. This information was presented by “month”, “year-to-date” and

“full-year” with financial information for actual, budgeted and previous year actual results. The report was discussed at a monthly meeting between the GM, AC and the CEO of the parent company (PC).

While the report provides financial information for which the GM was responsible (operating profit), to the researcher (and accounting colleagues), the report seemed quite complex. This suggested to the researcher that the report, and other monthly reports provided to the GM, had not been designed with the GM or a market orientation in mind, a point which was confirmed (with great pride) by the accountant when asked if he alone had designed the accounting system.

*Absolutely. Little © in the corner!*

The AC continued to describe the reason why this particular accounting system was developed, a description which confirmed a lack of involvement/input from other members of the organisation:

*And this system because **I felt** (author’s emphasis) that there was a real lack of grasp of what jobs were costing us and which clients we’re making money on etc. etc. So just starting from scratch.... I suppose **I felt** (author’s emphasis) it was the best way to cope with the fact that there’s no way you can really put in a standard costing system.... and you know, **I felt** (author’s emphasis) that this.....*

While the development and provision of the accounting information had been a substantial increase on that previously available, the AC had designed the accounting information in isolation from the general management, sales and production functions of SD, a behaviour not in keeping with effective interfunctional coordination which requires sensitivity and responsiveness to the needs of other departments (Anderson 1982). Some reasons for this “functional isolation” of accounting became apparent in further discussion with the AC. On several occasions, and at different stages of the interview, the AC expressed concern about providing sales personnel, in particular, with accounting information.

First, apparently on grounds of competitive importance, sales representatives were not told of product cost formulations or the desired profit margins. Instead the profit margins were built into the overall hourly product cost rates (Ch 8.1):

*...because the minute you tell the reps we're making 30% profit everyone in the industry knows we're making a 30% profit or trying to make a 30% profit and they all think we're 'ripping' them off*

When prompted by the researcher about the limit on how much information the sales representatives were provided, the AC indicated that the representatives may in future become customers or perhaps competitors.

*...in the last two years I've been here, had quite a turnover of reps, which means that the rep will be here one day, working for a client and sort of bit*



*you know, I'd really love them to be fully informed and understand completely how it all works.*

In addition to the AC's concern over industry customers and competitors (this competitor aspect is hard to reconcile with the AC's earlier comments that there were no perceived competitors in the industry) becoming aware of margins, the AC also noted that in providing accounting information for sales representatives :

*...just keeping it simple for them so that they don't need more, no idea of that's what I'm aiming for and yeah...*

Two further issues develop from this statement. The first is the quantity of information that the AC perceives as being sufficient, rather than excessive, and the way in which the information is used. The following descriptions from the AC provide an indication of this view:

*One of the things with a lot of this stuff (reports) is that it's pretty new ... and just giving them (managers) too much is going to kill them. (Give managers information) Bit at a time. That sort of thing.... it worries the 'shit' out of me to give it to them (sales representatives) because they run off and - in some instances they might be charging \$150 an hour, this says \$100.*

The second issue, which relates to the first, is that the AC sees the function of accounting as one which makes decisions about the likely reaction of managers and other personnel to accounting information and about the quantity and type of

information organisation members can accommodate. This again appears to be a decision made in isolation from other functional areas and further suggests that the accounting function does not act in a coordinated or integrated manner with other functional areas. This situation became even more evident when the AC was asked if the detailed product costings he had developed were provided to the GM for pricing and other purposes. The AC's response was preceded by a lengthy pause and concluded with a (rather hasty) change to another topic of discussion.

*Umm... the pricing thing yeah ... some of the General Managers and Sales Managers have those hourly rates. How they translate them into their sales rates is really something that I'm not 100% on - they know - they have that information then they apply whatever the best price they can get for this, so yeah - I mean they do have it and they do use it, but it's not really, I just go that plus 10% or 20% whatever, yes, anyway. This is my customer report.....*

At a later stage of discussion with the AC the opportunity arose to question further whether the accounting function cooperated with marketing and other functional areas. The AC was asked to discuss whether there was an opportunity to work with production, GM's and sales people (at both SA and SD) in developing costings or whether these groups "kept to themselves" on matters of costing and pricing. The AC's response:

*I suppose in a nutshell, no - I don't really - yeah very limited involvement with that sort of thing.*

When asked if there was any additional information that he would like to develop, the AC noted strategic KPI's would be desirable and that this would require talking to the GM about "what the major directions are" and to "get their involvement" at that stage. While suggesting a future movement toward interfunctional integration, the AC's comments here suggest that the accounting function was not yet involved or explicitly aware of strategic directions and supports the view that accounting was somewhat isolated from other functions.

Further, there were no regular meetings between the AC and the GM or other managers of SD to discuss matters of product strategy. As noted in Ch 6, the GM had recently initiated changes to the firm's name and image and introduced the use of new production technologies. The projected costs and benefits of these changes had not been examined by the AC even though the production technologies, in particular, impacted on the cost structure/elements of the product. This said, it may also be the case that the GM had not sought to inform the AC and/or seek his views on this and other issues. An alternative, but perhaps related, explanation for the AC's limited involvement with the GM and SD managers may be the "national" role of the AC and his responsibility for multiple business units, for example, SA.

The aim of this section was to describe the way in which accounting and marketing information were used in an "interfunctionally coordinated" way. However, there was little, if any, evidence that the information flows between the GM, PM, SM and accounting function, were coordinated. Moreover, the accounting function tended to operate in an isolated manner, developing accounting information without reference to the other functional areas, was unfamiliar with the strategic directions

of SD and withheld details of product costings and profit margins from SD managers.

#### 8.4 Summary

Table 8.1 sets out the theoretical accounting requirements of a market orientation (Fig 3.8) and the development and provision of “market-orientated” information by the accounting function to SD.

Accounting requirements of a market orientation	Details
Customer product-in-use costs	➔ No cost analysis undertaken.
Attribute costs	➔ No attribute costing undertaken. - traditional product cost system.
Customer profit analysis	➔ Customer top 20 sales reported monthly. Profit monitored by AC.
Competitor attribute costing	➔ No attribute costing undertaken.
Competitor value chain analysis	➔ No value chain costing undertaken

**Table 8.1 Accounting information provided to SD**

In this, it can be observed that limited customer- and competitor-orientated accounting information was provided by the accounting function for product-level decisions. Product-attribute and competitor-product cost information had not been developed. There was also limited interfunctional coordination between accounting and the production, sales and general management functions at SD which may have contributed to the (lack of) development of market orientated information for product decision-making.

Accounting information provided to SD was in the form of product cost rates, budgets and reports that emphasised productivity - maximisation of sales and resource (labour and technology) capacity. Product cost rates included a range of organisation overheads and profit, specific details of which were not provided to sales and general management. Product costs and accounting reports had been developed by the accountant based more upon the “groups” information needs than SD’s. The costs of meeting specific customer product attribute needs and competitors’ cost positions were not explicitly considered in the design.

Clearly a difference exists between accounting requirements for a market orientation determined from the literature reviews in Ch 2 and 3 and the position at SD. There was no explicit evidence that the AC had a knowledge of recent developments in management accounting such as product-attribute costing, strategic cost analysis and customer profitability analysis. At a product-level, does this mean that SD was not, or could not be, market orientated, or does it mean that the firm may well be market orientated but accounting information of the type identified in Table 8.1 is not necessarily required for a market orientation? For instance, was the AC’s formulation and use of non-financial indicators for product quality and on-time delivery sufficient for the market orientation of SD at that point in time? These questions are addressed in detail in Ch 10.

## **Chapter 9**

### **Market orientation and accounting - a Sales perspective**

Due to organisational difficulties at SD at the time of undertaking the case study, the sales function was not examined and data about the sales activities were obtained via the GM and PM, both of whom had involvement with customers. However, it was later considered that information obtained directly from the sales function may add substantial depth and understanding to the case. Consequently, the researcher returned to SD 18 months later to study the sales function.

The formal organisational structure and size of SD, in terms of staff numbers, had not changed over the 18-month period. There had been some changes in personnel with a new sales manager (SM) having been appointed while the previous GM had moved to a managerial position with SA. The SM had been in the position for 12 months having previously been a senior member of the SD sales team for 4 years. Sales was composed of the SM and three sales representatives all of whom spent a high proportion of their working day “on the road”. The responsibility of the sales function at SD was the generation of sales revenue against budgeted targets.

Interviews were conducted with the sales manager and observations were made of meetings between the SM, PM and GM when discussing “clients”.

## 9.1 Sales and customer orientation

Paralleling the research emphasis taken in the other functions at SD, the focus in this section was to develop an understanding of the customer orientation of the sales function and the way in which accounting information was used in product decision-making.

The SM was particularly focussed upon meeting the needs of the “clients” and this philosophy was reflected in the way the SM managed the sales function. To meet the customer need for a rapid “turn-around” of jobs, the SM stated that

*.. a sales/production meeting (is held) every morning and that will start at around 8.15 a.m. so we can go through all the jobs that are in place .... so we would be looking to be contacting our clients preferably before 9.00 a.m. to let them know where their job is sitting*

*..most clients in our market would be looking to see (our) people around 9.00 a.m.*

*..if you let them (clients) down at the turn-around then you are finished and they go next door (to the competition)*

The daily meetings were supported by monthly sales team meetings at which discussion took place about:

*...results from the previous month, any client concerns, any production concerns, any jobs that have gone off the rails that we have to talk about.*

*Obviously we don't want this to happen again. ...we discuss our sales and our client base and how we feel things are going.*

*We have a good team here and we tend to act quickly. Some people (clients) would prefer to come and deal with us.*

Providing clients with “service” was a recurring point made by the SM. Service was often defined in a number of ways but more often associated with developing customer relationships. One aspect of service was the need to have constant communication with the clients. The SM stated that, whenever possible, completed jobs would be delivered personally by the sales team rather than by courier. Completed jobs primarily referred to the “film”, “transparencies” or “proofs” of digital graphic designs.

*...we try to take the jobs out as well, obviously, just to be on their doorstep and be in their face as much as we can*

*... it is more like one on one client service*

*... (this allows us to) build up a relationship and then things come of it. ...the more you present yourself the more opportunity you have got...*

The face-to-face meeting with clients also allowed SD sales staff to inform clients of new technological developments within the firm that may be of value. The firm, in this case, referred to SA (parent company) which provided SD with access to



research and developments in process and production/printing technology. In discussing technology the SM noted:

*It's like any new technology that comes along, you've got to sell it....and you have clients who want the new (technology) and it's having the 'spunk' of having something(new)...*

Technology was raised when the SM discussed the importance of the “print quality” of the finished job. The SM recalled a recent situation in which a potential customer was invited to SD to compare a competitor’s job to the equivalent at SD.

*..they (the customer - AFL)(sic) weren't happy with a couple of (SD's competitor - Scanner Graphics) scans so I said 'look, you bring in those transparencies and what we'll do, on the spot as a live job, we'll do them here, show you and explain to you what we are doing and you can compare for yourself the quality'. They were astounded at the difference in quality.*

(Researcher) Why? Because of the technology.

*Because of the apparatus that we have and the technology is pretty good.*

The ability of the technology to improve the quality of graphics in “pre-press” (and ultimately the printed product) and the expertise of staff within SD were factors identified by the SM as he described the need for SD to provide clients with a

competitive advantage. These characteristics were similar to those identified in previous interviews with the GM, PM and AC.

*Through the resources we have through the group we can provide our client with the best possible product out there in the market-place with regards to advertising material to enhance their business; we have the best possible equipment, the best staff, always the first with the best....*

*Generally the clients will come to us because they want to obviously look good in front of their clients by delivering the best possible print quality job they can get.*

Table 9.1 summarises the product attributes emphasised by the SM. Many of these attributes seemed to be interlinked and required a high level of cooperative interaction between the sales and production functions. For example, providing customers with a competitive edge required a high quality of finished product which was delivered on time. This, in turn, required sales to provide production with accurate job specifications. The areas emphasised by the SM were consistent with those of the GM and PM some 18 months previously.

<b>Product attribute</b>	<b>Brief description</b>
• Product quality	Consistently providing the best possible print quality
• Turn-around time/on-time delivery	Time taken from receipt of sales order to the delivery of the finished product.
• Level of service	Regular (daily) servicing of customers and up-dating customers on new technologies.
• Competitive advantage	The product provided customers with a competitive edge for their clients.

**Table 9.1 Product attributes - SM**

The SM appeared to have a detailed understanding of customer needs but did not acquire this information from formal market research. When asked about market trends and the impacts of technology, the SM responded by saying:

*...as a sales manager .. you try to look at the market trends and look at where you are going to be in 12-18 months time and the way things are changing it does get very difficult. .... So it's really hard to foresee what's happening...*

Customer information was obtained more through the daily interaction of the sales function with customers and through information sharing between members of the sales function and the PM and GM. SD's technological developments also served to create customers' needs although the SM emphasised that "it all comes down to relationships". There was no formal segmentation of markets, however, the SM indicated that sales and production had worked together to establish two broad types of customers.

*..we basically deal directly through to production so we have obviously divided up our clients accordingly, one will pretty much service like agency-based and the other would service like a catalogue type base. We tried to get that mix as clear as we can...*

The SM also alluded to a distinction between sizes of customer jobs based upon the volume of printed output. Single large jobs were more often associated with advertising agencies and smaller jobs with catalogue clients.

Different classifications of customers and jobs have implications for the type of accounting information needed to inform customer-orientated decisions. The former is associated with maintaining distinct cost information for each customer segment/group to allow customer profitability analysis to be undertaken while the latter would suggest the need for distinct product costs to allow more precise job cost estimates and prices to be established. In probing the product-cost aspect further the SM was asked;

Would you prefer to have one large job than 100 small jobs?

*Exactly*

Because of the production type costs?

*Exactly, the set-up costs. You load it (a small job) all up and make sure the fonts and everything is there and then you just get into it and its finished. The*

*next job will come along and you've got to take another brief to make sure you are comfortable with everything that has to be done. If there are any queries? The client might not supply all the fonts, whereas if you have one(large) job, all that's checked prior to the first job or as they are getting into it they might start to finish the first page and if there's something missing that will come up and that will be generic or common for the rest of the job. So if it is a big job you can come down substantially (in price) especially if there is no work in place.*

When asked if he had a preference for a particular type of work the SM responded:

*The agencies without a doubt, because it's a lot cleaner work and their files are always well presented, their instructions are always very clear and you get top money for their work.*

SD continued to use the "bureau sheet" although the SM indicated that "some clients don't like them".

*...The clients that don't like them, they have generally got a good ordering system where they have clear instructions and what has to be done on the job.*

While recognising differences between customer jobs, the SM used the same standard cost for each job based on a rate per page.

*We have come up with a system like a page rate....So it's pretty basic....So it's a \$100 a page for catalogue work and we have a set structure with regards to*

*digital photography, day rate and smaller films. So we really just work in sizes - A4, A3, A2, A1 ....and all that's costed in labour, materials, the whole works.*

(Researcher) Margins are in the rate as well?

*All our margins, everything. So it's a pretty basic system now with regards to costing. It's just all inclusive. Most of our clients have our prices.*

While using a standard rate for costing/pricing jobs, the SM often varied the price of jobs in certain circumstances. In the first instance, price was decreased;

*(The) first one is if there is work in the place, the capacity of work in the place. You're better off having some work going through the place where you are just making small margins rather than having the guys sitting around doing nothing.*

The second instance (in which prices were increased) was where the job was being undertaken through an advertising agency. The SM explained;

*They (the advertising agency) have their 10% agency commission so sometimes the higher the price the more they get plus they pay good rates because they maybe want quicker turn-around or whatever. So it is really a matter of trying to work out which clients can pay.*

The third instance followed a comment by the SM that average invoice value had decreased from the previous year and the price reductions appeared to be motivated by both competition and the need to meet sales budgets:

*It is really a matter of if you are decreasing the prices to win work you just got to win a greater market share of that work to cover yourself. Obviously, as you know, you pretty much know we have our budgets for the year. ...you just got to increase your sales and increase more volume. We don't drop our rates for everyone but it's just certain clients if we know they do \$15000 worth of work per month and we are making \$5000, I might say lets drop the rate by 10% .... we might get more bigger jobs which once they are in the system they go along so that you are actually increasing the sales even though you have dropped the invoice value.*

There was no documentary or observational evidence to indicate that the SM used accounting (more particularly cost) information, other than standard job rates, in making decisions about customers or products. The SM's decisions were more orientated toward increasing sales although he recognised the impact on profit where jobs were not completed satisfactorily the first time.

*As sales manager that's my responsibility to make sure the actual business achieves its budget in terms of sales. With regards to making sure the place is profitable, that's up to the General Manager, we have our sales, we have our pricing structure which is there and it is structured so we will make money.*

*There's nothing worse, you do a job two or three times and your losing out on actually paying high prices for materials, so that is my responsibility.*

The additional “cost” for the SM in having jobs re-done because of errors was the inability to have other customer jobs processed and the likelihood that repeat sales may be jeopardised.

*And we had a couple of jobs where the presses have been sitting idle for hours and its \$4-500 an hour waiting for a remake of plates, so the clients won't go down that path ever again.*

The researcher formed the view that the SM had more of an intuitive understanding of (or feel for) SD's costs when making product decisions than a knowledge of the actual costs involved. For example, the SM seemed aware that there was a cost involved in SD having idle productive capacity but the magnitude of this was not known. Moreover, the SM perceived idle capacity to be the result of insufficient sales volume, an area for which he was responsible. This seemed to be of particular concern for the SM as competition had increased substantially over the last 18 months (Section 9.2).

While there had been no change in the structure or the operations of SD in the same period, there was a heightened attention to meeting customer needs and maintaining customer relationships. Product prices were more likely to be reduced to maintain or increase sales, particularly where idle capacity existed, than was the case 18 months earlier when the GM had attempted to introduce (higher) pricing to



differentiate SD's product quality. While some knowledge of market segments had developed in the sales function at SD, this had occurred in an informal manner and more by way of a reaction to the type of customer sales received than a formal plan on target market segments.

In sum, the SM had a detailed knowledge of customer needs (Table 9.1) the satisfaction of which the SM considered would lead to continued sales. As to how profitable the sales were to SD was determined by the standard cost rate which incorporated a set profit percentage and by any variations to prices decided by the SM. Customer and product profit analysis were not undertaken by the SM and variations to particular job prices were not supported by any formal costing or links to market strategy. Product decisions were regularly made in conjunction with the PM and GM and often in response to competitors' actions. Table 9.2 summarises the customer orientation of the sales function in a similar manner to the summary of the general management (Table 6.2 ) and production (Table 7.2) functions.

<b>Element of customer orientation</b>		<b>Description</b>
Degree of knowledge of customer attribute needs	➔	Extensive
Manner of collection of information	➔	Informal
Management of information	➔	Informal
Financial orientation	➔	Gross sales revenues - increased productivity
Extent of accounting information usage	➔	Limited
Type of accounting information	➔	Simple - product cost rate and sales prices

**Table 9.2 Customer orientation at SD - Sales function**

## 9.2 Sales and competitor orientation

In observing and discussing aspects of a customer orientation it became apparent that many actions of the sales function were linked to competitors' behaviour. Sales staff contacting clients by 9.00 a.m. was identified as a key customer product attribute but was also necessary because of competition as reflected in the following comments by the SM;

*...we really have to get out there and **fight for every job** (author's emphasis) so I try to get the sales staff out of here by 9.00 a.m.*

*..there are three or four other companies out there that are offering the same turn-around, speed, service. It's a very competitive market out there.*

These comments suggest that the SM had a detailed knowledge of competitors' offerings on several key product attributes and when questioned the SM was able to specify four organisations which he considered were "really competitors" of SD. In one example, the SM detailed how the quality of one competitor's "scans" was "pretty ordinary" and how SD had taken advantage of this to win a major account from the competitor.

Advances and cost reduction in technology appeared to have changed the characteristics of the industry and increased the level and type of competition compared to that experienced by SD in the previous 12-18 months. The SM alluded to this technology issue on a number of occasions and highlighted how it had affected SD's (value chain) activities:

*So CTP (computer-to-plate - sometimes referred to as direct-to-plate) came along very quickly and we were selling that but now a lot of printers have gone out and invested money and set up their own computer display devices.....*

*....so printers(printing organisations)are controlling the backend.*

The SM described how technology had also affected the “front end” of jobs by allowing clients to prepare jobs in a high, rather than low, resolution format thereby eliminating the conversion process previously undertaken by SD:

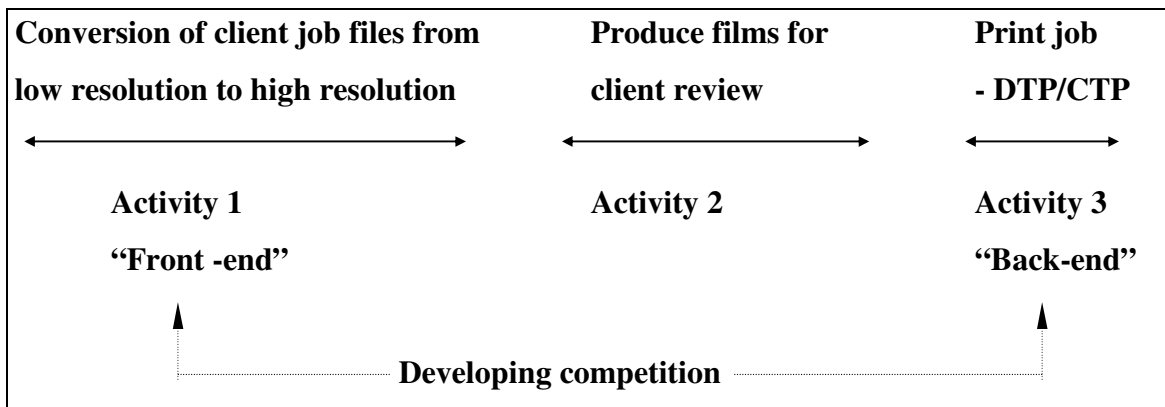
*... so the client would do the low res, then the job once it's approved it's broken up a bit then it comes to us and we put it all together in high res and that's where we generate our funds and (the job) then runs general or CTP.*

*...two years ago an IMAC or Apple Mac computer might have 500 Meg of hard drive space and now they have 10 Gig so the clients can invest double their money and get all high res data and storage on their computers and its not dogging down their system because they've got the equipment that runs fast enough...*

*...lots more clients are taking on that responsibility because two years ago I was still putting jobs together high res but now they are putting them together ...because(now) their equipment is a lot faster and it's not really costing them any more time.*

*...our catalogue stuff is actually decreasing quite rapidly because of technology.*

Figure 9.1 summarises the competitive impact of technology, in particular, the cost of acquiring advanced technology, on SD’s activities. Where 18 months earlier SD had little or no competition in three key production activities, it now faced competition in all activities, but particularly in 1 and 3.



**Figure 9.1 SD Developing competition in SD’s production activities**

Throughout the dialogue, the SM indicated a knowledge about the changing (cost) structures of businesses within the industry and the resultant competitive impact. In seeking to explore from where and how the SM acquired his competitor intelligence the researcher asked:

How do you keep track of your competitors? Have you got a list of them or do you just generally know who they are?

*We generally know who they are. I try with my informants (client organisation) (to find out) who I am quoting against..... ..some clients I get along with pretty well give you their (SD's competitors) price list*

*...I get a hold of (competitors') price lists, so I've got 3 or 4 of them.*

In seeking to investigate the extent of competitor intelligence gathered by SD further, the SM was asked;

Do you actively go out and do a formal analysis of your competitors at all?

*Not really, its hard to find the time and its hard to get accurate information.*

*Competitors' prices fluctuate. ....accurate analysis on what they (competitors) are quoting to the dollar for each client is pretty much impossible.*

The SM's responses invariably came back to competitors' pricing. After questioning as to whether any information other than price was monitored, the SM indicated that he looked at the services (product attributes) offered by competitors and alluded to a potential threat again related to issues of technology.

*We are losing a bit of market share as well to what's called Digital Print. We have our own digital print facility (available through SA)...but we are down the bottom of production quality with this. Whereas our competitors, CS and E have a true (better quality) digital print.*

The SM went on to explain how SD and the parent company (SA) were planning a conference (in 6 month's time) in which the acquisition of state-of-the-art digital print technology was to be considered. This process suggested to the researcher that SD was more reactive than proactive in its competitive planning and that what had once been SD's competitive advantage - advanced technology - had now been substantially eroded.

Of interest was the SM's identification of SA (parent company) as a competitor in several instances. This had eventuated by virtue of the SM's search for increased sales revenue in the agency market to counter a reduction in the volume of SD's catalogue work. The "top-end" of the agency market had traditionally been the domain of SA but SD had recently been pricing under SA's quotes using SA's price list for information. Although SD had always sought "agency" work, the SM stated that he was more aggressively targeting those agencies who may not always be able to afford the higher prices of SA and that SD could cater for "the next bracket down". In this way the job would stay "within the group".

Despite the apparent understanding of competitors' operations, the SM did not have any documentary or other evidence of competitors' product costs or organisational (or value chain) costs. Most competitive decisions involved reference to competitors' sales prices and the need for SD to maintain continued sales volumes and, in some cases, at reduced prices when the firm had "idle" production capacity.

Table 9.3 presents a summary of the competitor orientation of the sales function at SD.

<b>Element of competitor orientation</b>		<b>Description</b>
Maintenance of competitor information	→	Moderate
Source of information	→	Informal - customers and sales representatives
Regularity of review	→	On-going
Information detail	→	Minimal
Extent of accounting information	→	Very limited
Nature of accounting information	→	Technology cost estimate; sales prices

**Table 9.3 Competitor orientation at SD - Sales function**

The limited competitor, in particular, competitor *cost*, information within the sales function raises questions over the extent of SD's market orientation. Is it sufficient for competitive action to be taken on the basis of competitors' pricing alone? The market orientation literature reviewed in Ch 2 suggests that a knowledge of competitors' cost positions is necessary in order to determine positions of advantage and profitability. But how should such a knowledge of competitors' costs be established? Is it the domain of the sales function, the accounting function or both to develop this information? The market orientation literature suggests that information should be communicated and coordinated across all functions of the organisation.

However, given that the sales function at SD was responsible for achieving a budgeted level of sales, what would be the motivation for the SM to seek competitive cost information?

What the study of the sales function at SD highlights is that the type of information required, for example, competitor attribute or value-chain cost information, must be identified as being necessary and responsibility allocated for its development, communication and actioning across the organisation. The detail of how and when this process takes place is absent within the market orientation literature (Goebel et al. 1998).

### **9.3 Sales and interfunctional coordination**

There was a high degree of coordination between sales and the main operational functions of production and general management. The sales team met with the production team each morning to review the current status of client jobs and to discuss any issues or problems associated with customers and/or their jobs (Section 9.1). When possible, production would schedule jobs to be completed early in the morning to allow sales staff to deliver jobs directly to clients without returning to the office to collect them. This assisted sales in meeting or exceeding customers expectations on “turn-around”.

The SM had an understanding of the PM’s need to maintain operating levels and prevent production facilities “sitting idle for hours”. The SM also noted the difficulty experienced by production with set-ups and the problems experienced when inadequate client information was provided. In response, the sales function



ensured, wherever possible, that a “bureau form” was completed by clients to ensure production was able to process jobs efficiently and effectively.

On a number of occasions the SM referred to the “the pretty good team we have here” (sales, production and general management) and this team was observed making decisions on large (high dollar value) jobs. Discussion in these meetings usually centred upon the pricing of the job compared to competitors, the volume of estimated and scheduled production and the likelihood of repeat work from the client. While the SM indicated that he and the sales representatives made decisions on small jobs, the decisions on “big jobs” were made in conjunction with the GM and the PM. On several occasions, the sales and production functions had worked together when a client had been brought to SD’s premises to observe the process of production and view the print quality of SD’s jobs.

What was absent from the discussions and meetings between sales and the production and general management functions was a reference to cost information. Decisions to take or reject certain jobs were made more on the basis of non-financial criteria (capacity available) and sales volume and revenue. This emphasis mirrored the decision-making process between the GM and PM observed and noted 18 months earlier.

Table 9.4 summarises the position at SD in terms of interfunctional coordination from a Sales perspective:

<b>Element of interfunctional coordination</b>		<b>Description</b>
Interfunctional meetings within SD	→	Continuously held
Range of value-chain functions represented	→	All SD functions
Information source	→	Informal
Accounting information	→	Minimal
Nature of accounting information	→	Sales; non-financial

**Table 9.4 Interfunctional coordination - Sales function**

#### **9.4 Summary**

The sales function at SD was highly customer-orientated with the SM indicating a detailed understanding of the product attributes most highly sought by customers. Sales had a high degree of interrelatedness with the production function to ensure that customers' requirements for print quality and turn-around were met. In many ways, the sales and production functions operated more like one integrated unit rather than separate functions.

The way in which information about customer attributes was acquired can be described as informal but deliberate. The informality of customer attribute acquisition refers to the lack of documentation and processes established to acquire and maintain customer information. This said, the sales function quite deliberately sought to establish and maintain strong relationships with customers with a view better to understand customer needs and generate sales revenue. The sales function did not, however, undertake or solicit market research, formally identify market

segments or seek to formalise any long-term market plans. Irrespective of the detailed understanding of product attributes (Table 9.1), cost information was not used when making product-level decisions.

There was also a lack of formal competitor information within the sales function although the SM demonstrated an understanding of competitors' operations, particularly in terms of the technology used and the quality of competitors' products. This information had been acquired primarily from SD's customers and emphasised the type of services offered by competitors, the turn-around time and pricing of competitors. No competitor product-attribute cost information was maintained or used by the sales function when making product decisions.

Despite an accepted view that there had been an increase in competition in the last 12-18 months, there seemed to have been little change in the mode of operations at SD. The emphasis on the customer and interfunctional coordination components of a market orientation and the informal, yet deliberate, way in which this occurred was consistent with the observations and findings of the general management and production functions 18 months previously.

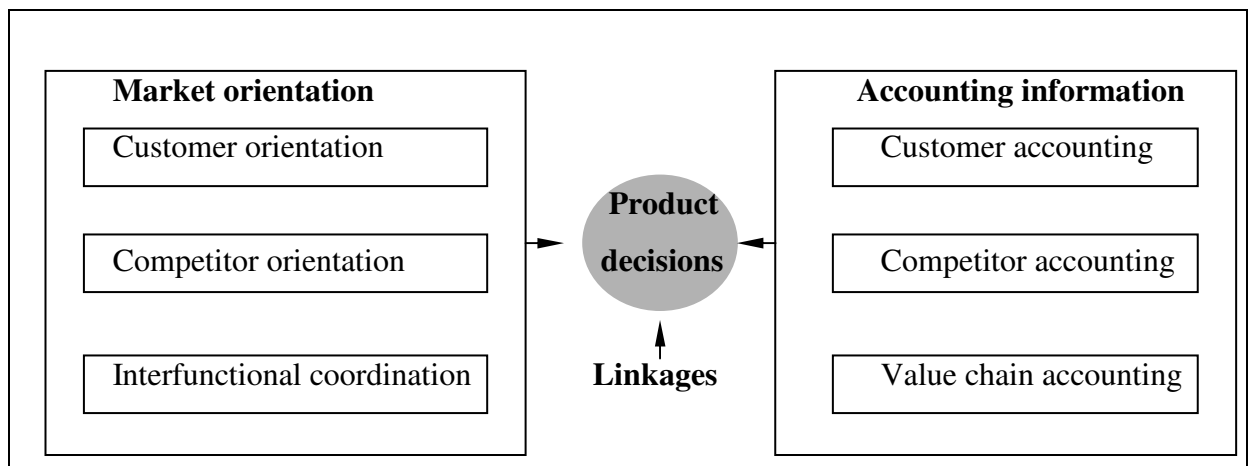
Similarly, there remained an absence of market-orientated accounting information as described in Chapters 2 and 3. The absence of cost information, in particular, raises the question as to whether the emphasis on maximising production capacity through competitive pricing and increased sales volumes is sufficient to allow profitable product decisions to be made?

The SM's emphasis on the customer-orientation component of a market orientation and the designation of the sales function as responsible for revenues (only) also raises the question as to: (i) how, if at all, the responsibility given to functional areas affects the degree of market orientation of that function and of the organisation; and (ii) whether different degrees of emphasis on the components of a market orientation is appropriate for different functional areas. These questions are considered in detail in Ch 10.

# Chapter 10

## The SD case study - cross-function analysis and discussion

Based upon a detailed review of the extant literature in marketing (Ch 2) and accounting (Ch 3), a model (Fig 4.1 reproduced below as Fig 10.1) was developed (Ch 4) that reflected the theoretical links between a market orientation and accounting information. Within this model, accounting techniques/methods particular to each component of a market orientation were identified (Fig. 3.8).



**Figure 10.1 Framework for examining market orientation and accounting information linkages**

Using the theoretical model as a framework for investigation, the primary aim of this thesis was then to examine empirically the way in which marketing and accounting information is used in organisational product decision-making.

In contrast to previous survey research which has focused predominantly on market orientation at a business-unit level and on accounting as an output measure of

business-unit performance, the SD case study has provided an integrated product (attribute) decision-level view of market orientation and accounting information across a range of organisational functions.

In this chapter, key issues and questions identified for each organisation function are analysed cross-functionally and reported for each behavioural component of a marketing orientation with a view to identifying central themes or patterns upon which theory may be developed (Fig. 5.1). Chapter-end summaries (Ch 6, 7, 8 and 9) of key issues and questions together with summary displays (tables) for each market orientation component form the foundation of the analysis.

This is followed by a detailed discussion of several key ideas that emerge from the analysis: first, how market orientation and accounting for a market orientation may be present and operate in different ways (may focus on one component) within an organisation and the factors that moderate this emphasis; second, whether a firm can be market-orientated where the nature of accounting information is not market-orientated, i.e., whether a firm can satisfy the needs of the customer and meet long-term profit objectives where the specific costs of the customer needs and competitors' cost positions are not known; and third, organisation structure and how market orientation may be present and operate to different degrees within individual organisation functions.

### **10.1 Cross-function analysis - customer orientation**

A cross-function analysis of the general management, sales, production and accounting functions revealed that, with the exception of accounting, managers had

a detailed understanding of customer product-attribute needs. Such an understanding is pivotal to customer orientation and allows the firm to profitably create “value” for buyers (Narver and Slater 1990; Slater and Narver 1995; Narver et al. 1998). Seven product attributes in total were identified across the four functions (see Appendix 12 for details). Most notable was the similar emphasis placed on attributes by the general manager (GM) (Table 6.1), production manager (PM) (Table 7.1) and sales manager (SM) (Table 9.1). While not explicitly or formally ranked at SD, the attributes of product quality and turn-around time were outwardly of most importance. These attributes were frequently referred to in interviews and were prominent in general conversations observed between managers.

These two attributes were also emphasised by the accountant (AC) who had designed documents - cost of re-work reports - which formalised the emphasis on product quality and complimented documentation (bureau sheets) that had been formalised by the GM, SM and PM to record and detail film specifications and delivery requirements of customers.

How less important the other attributes were is an interesting issue. Three attributes - sales service response, customer support and technical expertise of sales representatives/customer education - were closely linked to the information interface of SD with customers and these attributes were also heavily emphasised by the PM, SM and GM. The way in which the managers described these three attributes and the two aforementioned attributes suggested that product attributes were not seen as mutually exclusive. The researcher formed the view that providing five attributes -

product quality, turn-around time, sales service response, customer support and technical expertise - contributed to SD being able, in turn, to provide two further attributes - competitive edge and reputation/image.

Supporting this view was the recurring discussion by the PM, SM and GM about the importance of maintaining strong client relationships and providing clients with a competitive edge. Product decisions were dominated by reference to customer product attribute needs and, with the possible exception of the sales function, with relatively little attention to competitors. There was also a strong interfunctionally coordinated emphasis on, and commitment to, customers within SD rather than on market (or customer) segments. This emphasis on customers is consistent with the “relational level” described by Helfert et al. (2002) in which “firms have to understand what the individual customers want” (p.1122) in order to respond better to their different needs.

A further theme across SD functions was the “informal” way in which customer information was acquired and disseminated across functions, the emphasis on productivity of labour and (production) resources, a focus on sales volumes and an emphasis on non-financial criteria for product quality and turn-around time (Tables 6.2, 7.2 and 9.2).

This cross-function analysis of the customer orientation at SD reveals that a better measure of market orientation can be located in the clear and consistent understanding of customers’ product-attribute needs across organisational functions. In seeking to operationalise market orientation, this finding is consistent with, but



further extends, the theoretical measures developed by Deshpande and Farley (1996) which focused on organisational “activities”, more so than the underlying product attributes, and more formal (regular, routine and systematic) measures and dissemination of information. While this measure is also generally concordant with Narver and Slater’s (1990) conception of market orientation its emphasis leans more toward a “relationship perspective” view of market orientation (Helfert et al. 2002), i.e., it is more customer- than competitor-orientated.

However, despite the cross-function understanding of customer product-attribute needs, in particular, in the sales, production and general management functions, customer-orientated accounting information of the type described in Ch 3 was not found at SD. For example, when making product decisions, rather than product-attribute costs and/or product-in-use-costs, the accounting information provided by the AC and used by SD managers was more consistent with “traditional” financial accounting information focussed on the cost of the physical/manufactured product (Table 8.1).

## **10.2 Cross-function analysis - competitor orientation**

The analysis of the competitor orientation across each function at SD focussed on the activities undertaken in obtaining competitor information and how such information was used to inform product decisions (see Tables 6.3, 7.3 and 9.3).

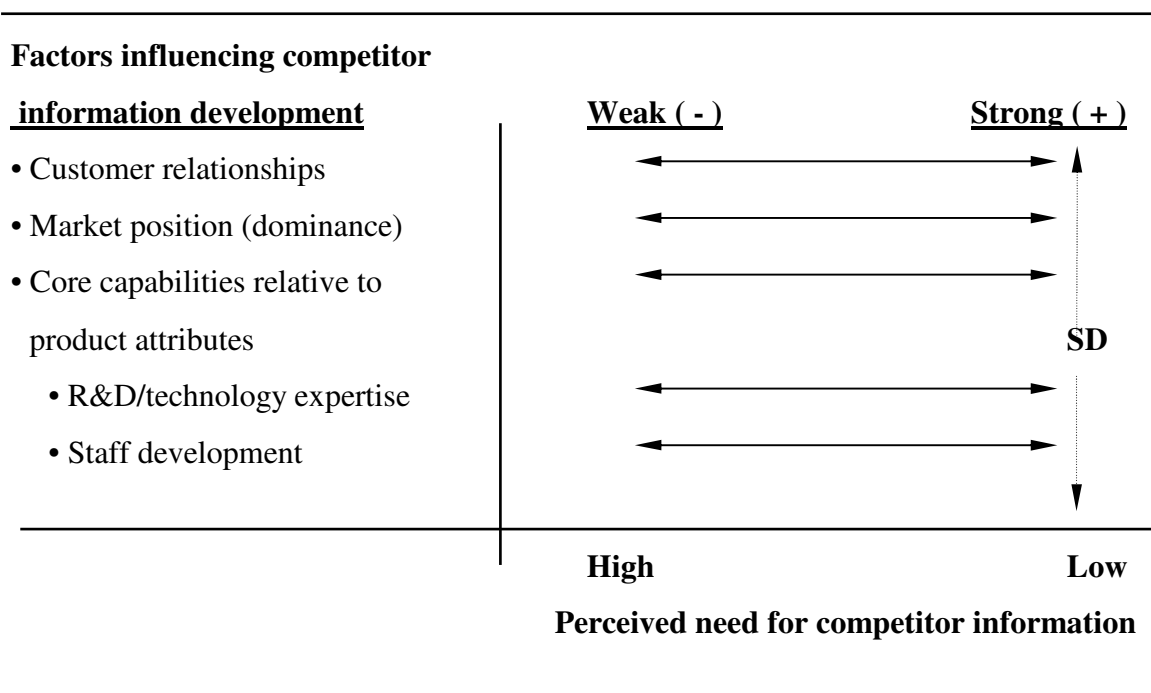
What becomes apparent from the analysis is the absence of any formal competitor information, for example, product-attribute cost comparison, value-chain analysis or market share, within SD or the accounting function. In terms of competitor

information, pricing was the main factor considered by SD managers when making product decisions. A number of similar and interrelated themes appear across functions which seem to moderate the need for competitive information at SD while also providing an explanation for the emphasis on the customer component of a market orientation.

The cross-function analysis reveals an informal system of competitor analysis, with intelligence about competitors gained from customers via regular communications with the SM and sales representatives, the GM, PM and senior management at SA, the parent company. Day (1990) describes this as a “market back” approach in which customers make the comparison of the business with competitors (p.126). Market intelligence contributed to the formulation of a view on the strength of the firm’s relationship with its customer base and the size of the firm within the industry - that is, the extent of its dominant position. (Note that “size” was not defined by respondents but implied by description to be associated with physical production capacity and financial resources). All functional areas at SD shared a common view that it had substantial and long-standing relationships with its clients and that SD was the dominant firm in the industry.

This market derived intelligence contributed to, and was combined with, more internally derived perceptions of the capabilities of the firm to satisfy customer product-attribute needs. The AC and the SD managers also perceived the core capabilities of the firm as resting in its (R&D) technology (to produce graphics digitally) linked to the colour management system and the high calibre of its staff (ultimately reflected in the quality of finished product). In this a linkage can be

observed between the product attributes and the core capabilities of the firm and it is hypothesised that the strength of the linkage influenced SD's view as to the need for, or extent of, competitor information. The description of the competitor orientation at SD provides a valuable insight into how and why a competitor orientation may (not) develop within an organisation over time and provides a basis for operationalising the competitor component of a market orientation.



**Table 10.1 Factors influencing the perceived need for competitor information**

The model in Table 10.1 identifies the variables influencing the perceived need for competitor information at SD. The perception, across all functions, of SD's strengths on three key factors, seemed to influence the managers' perceived need to maintain (minimal) competitor information.

### **10.3 Cross-function analysis - interfunctional coordination**

A high degree of interfunctional coordination was found between the sales, production and general management functions at SD with information about customers being exchanged constantly (daily) and activities coordinated to ensure customers' needs were the focus of operations (see Tables 6.4, 7.4 and 9.4).

By way of contrast, the accounting function was found to have limited interaction with the GM, SM and PM with its main role being the provision of monthly financial reports to SD and participating in a management review of SD's financial performance (budget versus actual) with the GM and management from SA (Section. 8.3). This interaction between the accounting function and the SD functions reflects what Roslender and Hart (2003) describe as a "traditional relationship" in which "cooperation" is based on a "narrow range of practices", involves only a limited amount of "management accounting content", an accounting emphasis on budgetary control and limited interfunctional coordination (p. 263).

Both observation and cross-function analysis of interview data (see sections 6.2.3, 7.3, 8.3 and 9.3) provide several possible explanations for the close coordination of the SD functions and the lack of coordination with the accounting function; physical proximity, organisational size, non-financial product decision criteria and accounting orientation.

In observation, the close physical location of the SD functions and the relatively small size of the organisation in terms of the number of employees (18) appeared to facilitate visual and oral communication and the coordination of activities. This

finding is consistent with the suggestion by Griffin and Hauser (1996) that the co-location of functions promotes a greater exchange of information among the functions. In contrast, the AC function was not physically located with SD but was located within the parent company premises. Throughout the duration of the case study (6 separate visits and approximately 50-60 hours of on-site attendance by the researcher) the AC was not observed at SD either casually or formally (for example, in meetings). This may, in part, be explained by the AC's national responsibility and regular interstate travel.

The emphasis by SD managers on similar product attributes and non-financial criteria when making product decisions may also provide an explanation for the lack of integration with the accounting function. That is, the motivation for interaction with the accounting function was decreased as a consequence of the decision criteria - customer-orientated and non-financial in nature - used in making product decisions.

A further, and not unrelated, aspect which may also provide an explanation for the absence of communication and coordination with the accounting function relates to the lack of "accounting orientation" of the SD managers. All managers showed an aversion to accounting and a lack of familiarity (and knowledge) about accounting, in particular, cost, information. Moreover, the organisational responsibility of the SM and PM for sales revenue and product quality and delivery, respectively, did not require cost information. While not within the specific focus of this research, this flags the need for management to consider the role of functional responsibility and accountability (for costs, revenues and capital expenditure) in designing

“management control systems” (see Anthony and Govindarajan 2001) in keeping with a market orientation (Goebel et al. 1998).

While the SD managers may have had a limited “accounting orientation”, the AC also acknowledged a limited practical understanding of the way in which SD operated in terms of its activities associated with product attributes. This understanding may also provide an insight into the extent to which the accounting function had developed (or, indeed, could develop) a market orientation.

#### **10.4 Discussion**

A review of the extant marketing literature reveals how little is known about market orientation at the product decision-making level. Even less is known about market orientation and accounting at this same level. After developing an initial model of the linkages between market orientation and accounting information, the undertaking of a case study has facilitated the description and exploration of this phenomena, and the contextual issues within an organisation, in more detail.

In many ways the case study has raised more questions than were initially asked and has provided data about separate issues of market orientation and accounting information, as well as related issues, which were not initially considered in the theory development phase of the case design; a situation not uncommon in case research (Gergin 1982; Yin 1994). The discussion of these questions and issues is embodied in three key ideas that have emerged from the case analysis.

#### 10.4.1 Component emphasis, product attributes and decision-making

While Narver and Slater (1990) infer from the literature that the three components of a market orientation “are, on average, of equal importance” (p.23) this was not found to be the case at SD. Does the absence of a distinct competitor orientation and an emphasis on the customer component make SD any more or less market orientated? Day and Wensley (1988) suggest that in terms of assessing advantage,

*an explicit effort must be made to achieve a degree of balance and interaction between the customer-focused and competitor-focused perspectives (p.17).*

a point which is also noted by Narver and Slater (1990). Day and Wensley also maintain that a (pre-occupation with) customer focus is limited as

*unfortunately, most of the customer-focused measures are remote from the activities of the business.. and that .. it is **seldom apparent** how the **attributes** that are important to the customer are influenced by **activities** in the value chain (p.17).*

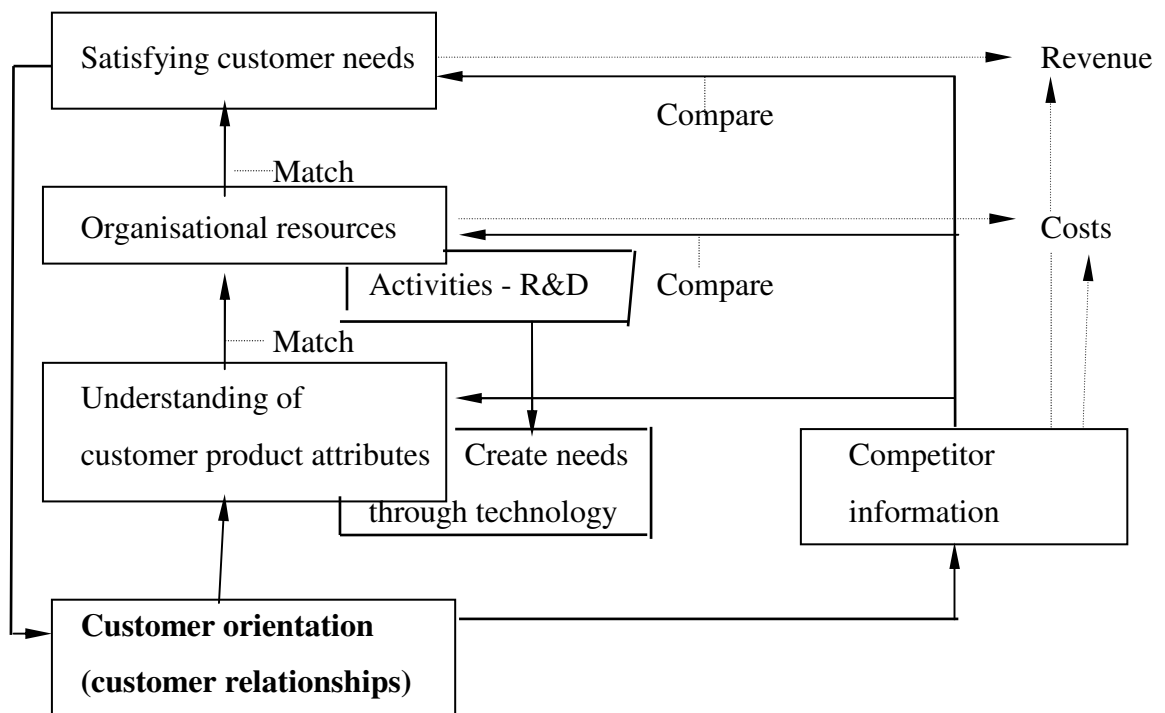
Undertaking this case study at the product level has revealed findings that run contrary to Day and Wensley in several ways.

First, while Day and Wensley advocate a balance of orientations, the SD case would suggest that a market orientation with an interfunctionally-orientated emphasis on customer information (which incorporates customer-derived competitor information) may be maintained and operate effectively. A predominant focus on

customer orientation is not without support within the literature (see, for example, Peters and Waterman 1982, Peters and Austin 1985) and, interestingly, in synthesising a scale to measure market orientation more effectively, Deshpande and Farley (1996) find all scale items “deal with ‘customer focus’ notions of market orientation” (p.10) while issues of competitor information/orientation did not enter the scale. The SD case adds further support to the theory of a market orientation having a predominant customer emphasis.

Second, the customer information maintained at SD reflected an understanding of customer product attribute needs which were, in turn, linked to organisational resources and activities. SD also maintained both formal and informal performance criteria linked to customer needs. Figure 10.2 has been developed from the functional managers’ descriptions of product attributes (Appendix 12) and the activities of SD observed by the researcher in meeting customer needs. The dotted lines reflect the theoretical linkages to accounting information rather than the findings at SD. The accounting aspect is discussed further below.





**Figure 10.2 Linking factors influencing a customer emphasis at SD**

Contrary to Day and Wensley’s view, it **was apparent** how the research and development, production, distribution and marketing activities of SD were influenced by customer needs. One particular organisational resource related to meeting (or perhaps better described as “creating”) the needs of customers was technology. In this case, customers were “educated” about changes developed and/or acquired by SD in process and production technologies which had the potential better to meet customers’ needs, for example, in terms of providing a higher (visual) quality of finished product in a shorter period. Interestingly, this technology emphasis was cited by Kaldor (1971) as one reason why an organisation may not adopt a customer focus but more a production/technology focus.

However, the SD case would suggest that a technology focus is not incompatible with a customer orientation but may form an integral part of a customer orientation, a finding that also runs contrary to Kohli and Jaworski's (1990) proposition that market orientation is less important in industries characterised by rapidly changing technology (p.14). Moreover, the customer-orientated coordination and integration of the production, sales and general management activities at SD support the proposition that a market orientation provides both a direction for, and way of encompassing, other management orientations. In this way, the potentially negative side effects of neglecting other, perhaps equally important, management orientations (Fritz 1996), such as production and technology, may be overcome.

Third, rather than seeking to establish how attributes "are influenced by activities in the value chain" (Day and Wensley 1988, p.17), the SD case would suggest that the reciprocal approach is more aligned to a market orientation, i.e., value-chain activities are influenced by attributes. For instance, identifying and developing an understanding of the way in which attributes interrelate may provide a focus for (better) managing or developing the firm's customer orientation. Just as Porter's (1985) value chain model seeks to identify and optimise communication and coordination linkages between organisational activities to establish competitive advantage at a business unit level, identifying and managing linkages between customer product attribute needs may yield advantage at the product level.

The SD case analysis also reveals the significant role of customer relationships in developing the firm's knowledge of product attributes and the related management of organisational resources and activities to meet customer needs (see Fig 10.2).

The importance and long-standing history of SD's close customer-relations (built primarily from SD's founder, "W") was a recurring theme across all SD functions and the accounting function. The strength of these relationships facilitated not only the detailed understanding of customer needs but also provided competitor-related information.

This particular finding highlights an interface between market orientation, in particular, the customer component of a market orientation, and relationship marketing (Sanzo et al. 2003). While, theoretically, this is not surprising given the common aspects of both concepts (Dalgic 1998), the SD case study provides a much needed insight into how the integration of relationship marketing and market orientation may operate (Helfert et al. 2002; Sanzo et al. 2003). Three main interrelated operational aspects were evident. First, product attributes such as customer education, sales service response and customer support, which facilitate on-going communication and indicate the firm's level of commitment to customers, may be viewed as *contributing to* the development of customer relationships; second, an understanding of those product attributes of most importance to meeting the customer needs, e.g., levels of product quality and required turn-around times, can be viewed as *developing from* customer relationships; and third, the creation of customer value through the "delivery" of product attributes, e.g., high quality finished product, competitive edge (Appendix 12), serves to *maintain and strengthen relationships*.

This description of SD's way of undertaking business sees its relationships with customers, "a key aspect of relationship marketing" (Sanzo et al. 2003, p.93), as

very much intertwined with, or a central component of, the customer component of a market orientation. This way of doing business also reflects a “market-back” approach in which the firm’s resources, activities and processes are adapted to its on-going experiences in meeting customer needs (Narver et al. 1998).

The case findings at SD empirically support the theory that a market orientation (and sustainable competitive advantage) develops from understanding those attributes that deliver value to customers (Forbis and Mehta 1981; Bromwich 1990; Walker 1992; Bromwich and Bhimani 1994; Slater and Narver 1995; McNaughton et al. 2002) and the interfunctionally-coordinated development of activities and processes to meet customers’ needs continually (Slater and Narver 1994, 1995, 1998; Narver et al. 1998; Porter 1985). Moreover, the findings further support the current author’s earlier proposition (Section 10.1) that a better measure of a firm’s market orientation is one located at the product-attribute level rather than the activity level, i.e., the extent of a firm’s market orientation rests in the level of detail of customer product attributes.

#### **10.4.2 Market-orientated accounting information**

This research has theorised that market-orientated product decisions should be informed by similarly market-orientated accounting information (MOAI). In other words,

*a critical element in the process of adopting and executing a market orientation is the capability to account properly for the resources used in*

*carrying out market-oriented activities. ...firms must account for the costs associated with a market orientation (Goebel et al. 1998, p.498).*

Figure 10.2 details how SD has managed its resources and activities around a knowledge of customer product attribute needs developed from its on-going customer relationships. Given SD's strong customer orientation, it follows from the theoretical model developed in this thesis (see Fig 10.1) that customer-orientated accounting information would be an input into product-decision-making. For example, using customer product-attribute information, customer profit analysis would provide valuable information about the profit returns from customer relationships and guide longer-term customer-related decisions (Noone and Griffin 1999; van Raaij 2003).

However, despite SD's detailed understanding of customers' product attribute needs there was no detailed accounting for the costs of meeting these needs. Furthermore, there was no formal, documented, competitor cost information, for example, value-chain analysis, maintained by SD. Table 10.2 outlines the accounting information used at SD compared with the market-orientated accounting information developed from the literature reviewed in Ch 2 and 3 and summarised in Figure 3.8.

<b>Accounting requirements of a market orientation</b>	<b>Findings on accounting information present at SD</b>
Customer product-in-use costs	→ No cost analysis undertaken.
Attribute costs	→ No attribute costing or target costing undertaken. → Traditional product cost system. → Some query over accuracy of costs.
Competitor attribute costing	→ No attribute costing undertaken.
Competitor value chain analysis	→ No value chain costing undertaken
Customer profit analysis	→ Customer gross profit reported monthly. No activity-based costs.

**Table 10.2 Market-orientated accounting at SD**

Rather than using accounting information to inform product decisions, SD focussed operationally on increasing the productive use of labour, technology and equipment by increasing sales turnover. This was clearly evident in the sales function where, in the face of increased competition, sales prices had been lowered with the view to increased sales volume. Product decisions were often taken with recourse to the current “capacity” level of production. The need to reduce the time taken to produce products was viewed by managers as consistent with customer needs and a means by which additional sales may be processed and, as a result, profits increased. This approach has been described by Day (1990) as “self centered” and one in which sales growth is viewed as a key indicator of competitive performance and where ratios, such as sales per employee, are monitored for improvements. While this approach is at odds with the more contemporary views (Ch 2 and 3) of providing cost information for decision-making (Kaplan 1990; Bromwich 1990; Goebel et al. 1998; Zeithaml et al. 2001; van Raaij et al. 2003), it is consistent with

the view of Pelham and Wilson (1996) that small firms typically respond to increases in competitive intensity by reducing prices.

Given the description of the SD case, was the type and degree of accounting (and non-financial) information sufficient to meet the requirements of SD's market orientation at a particular point in time? As Narver and Slater (1990) and Kohli and Jaworski (1990) stress, a market orientation comprises a continuum (from a low degree to a high degree of orientation), the extent of which may be influenced by the market and the firm's internal environment. The SD case would suggest that the accounting requirements of a market orientation may also encompass a continuum - from a minimal degree (of detail) of customer and competitor accounting information to an extensive degree of accounting information (Bhimani and Keshtvarz 1999).

The managers' view of SD as the dominant firm in the industry would seem consistent with the level of development of accounting information, that is, only relatively minimal accounting information was required as all sales were considered to be profitable in the absence of competition. Hence, the absence at SD of market-orientated accounting information of the type identified in Table 10.2, which reflects a more theoretical ideal (or extensive degree of development), may be simply explained by SD's current stage of development.

However, following this line of reasoning, the noted changes in the competitive environment over 18 months and the related impact on customers, competitors and SD's value chains combined with the (continuing) absence of satisfactory financial

returns would suggest the need for a shift in organisational focus from customers to competitors (cost positions) and from simple to more sophisticated and extensive accounting information (Simmonds 1981).

There appeared to be several factors within SD's internal environment that influenced the (lack of ) adoption of such accounting information. The first was the SD managers' shared belief in the strength of their relationships with customers and the firm's ability to better match its resources and capabilities to customer product attribute needs than competitors (Section 10.1). The SD approach is consistent with the notion that it is the firm's focus on "idiosyncratic competencies" (Lado et al. 1992) that can generate competitive advantage. There was, however, no formal evidence that this was a deliberate managerial focus at SD, but may have been part of the more "informal" SD culture (Harris 1996) developed and influenced by the firm's founders over time.

As Pelham (1999) notes

*..a strong market orientation culture may be an especially significant source of competitive advantage for small firms with limited resources to pursue a low-cost-based or R&D spending-based strategies, but with greater capacity for customer contact and flexibility/adaptability (p.49).*

Second, the SD managers, and to a limited extent, the AC, placed an emphasis on non-financial criteria in planning and making product decisions which were consistent with a customer orientation, i.e., criteria linked to customer product-



attribute needs. These criteria appeared to be better understood by the SD managers than accounting information which suggests that non-financial criteria may provide an alternative form of information for strategic product decision-making (Bhimani and Keshtvarz 1999) and market orientation. Recent studies (see, for example, Ittner and Larcker 1998; Yeung and Ennew 2000) provide some evidence to support the positive relationship between non-financial measures of customer satisfaction and financial performance. The emphasis on, and preference for, non-financial criteria linked to customer attribute needs may also provide an explanation for the reported absence of attribute costing within firms (Roslender and Hart 2003).

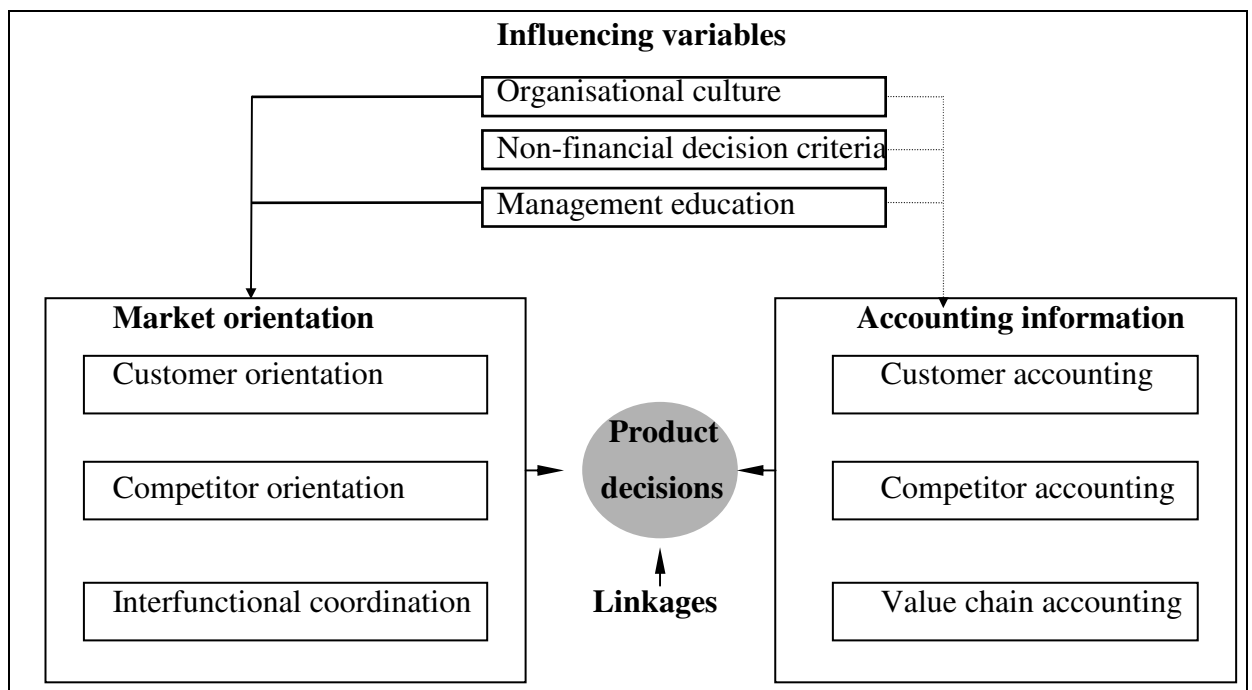
Third, the AC had a more limited view of product attributes than the SD managers, was unfamiliar with the notion of competitor analysis and was uncertain how he would “access the information” about competitors’ costs. There was a similar unfamiliarity with the notion of competitor analysis, and cost information in general, displayed by the GM, SM and PM. Given SD’s emphasis on customers and non-financial decision criteria noted above, the absence of formal competitor cost information in product decision-making is perhaps not surprising.

This finding suggests that the level of management knowledge (understanding) of, in this case, competitor, and competitor-cost, analysis may moderate the extent of market orientation (Gray et al. 1998). Horng and Chen (1998) find that higher levels of “management capability training” positively impact market orientation in small and medium enterprises. Similarly, Ruekert (1992) and Harris (1998a) allude to the potential (positive) impact of training and education on market orientation. The SD case findings would suggest the need for management “education”, in

*accounting* for market orientation, i.e., it cannot be assumed that management is au fait with contemporary developments in accounting and the way in which these relate to market orientation.

These three factors raise some questions about the theoretical links between market orientation and accounting information that were developed from the literature reviews in Ch 2 and 3 and depicted in a theoretical model (Figure 10.1). The case findings at SD suggest that the model would be more robust if additional variables - organisational culture, non-financial decision criteria and levels of management education - were more extensively incorporated into its development.

Figure 10.3 reflects this development with the dotted lines depicting the linkages of the three influencing factors to the adoption and/or level of accounting information in product decisions.



**Figure 10.3 Market orientation and accounting information linkages and influencing variables**

The solid lines reflect the theoretical linkages that have previously been reported within the market orientation (Harris 1996; Pelham 1999; Gray et al 1998; Horng and Chen 1998; Ruekert 1992; Harris 1998a) i.e., culture and management education may influence the development/level of market orientation. The SD case suggests that these two variables and one further variable - non-financial decision criteria - have a similar influence on the development/level of market-orientated accounting information (MOAI).

In generalising the case findings to the initial theory developed in this thesis, it can be stated that the absence of market-orientated accounting information as an input to the product decision-making process did not allow SD to understand the profit implications of such decisions. Despite research findings that link customer-orientated non-financial measures to improvements in financial performance (Ittner and Larcker 1998; Ennew and Yeung 2000), reliance on these measures and aggregated business-unit level (“traditional”) measures of financial performance remain problematic and fail to provide sufficient information to establish the profit obtained from different customers and their different products attribute requirements (Helfert 2002 et al. 2002; Sanzo et al. 2003; Zeithaml et al. 2001).

#### **10.4.3 Locus of orientation, organisation size, structure and informality**

The limited view of product attributes held by the AC, different degrees of emphasis on market orientation components across SD and the AC function and the way in which information was acquired and communicated at SD, raises several interrelated questions about market orientation and organisation structure:

- (i) what is the composition of organisational functions required to establish the “optimum” market orientation?
- (ii) do all functions within an organisation require the same degree of emphasis for each market orientation component? and,
- (iii) what is the most effective way to communicate information across functions?

Using the SD case as a base, Figure 10.4 presents a model highlighting a range of possible alternatives of component emphasis across a range of possible organisation functions. For illustrative purposes (only), the relative emphasis on each component in each function is weighted “high” or “low”.

<b>Organisation functions/departments</b>				
<b>Market Orientation component</b>	<b>Production</b>	<b>Sales</b>	<b>Accounting</b>	<b>General Management</b>
Customer	High	High	Low	High
Competitor	Low	Low	Low	Low
Interfunctional coordination	High	High	Low	High

**Figure 10. 4 Diagnostic for cross function and market orientation component emphasis**

Within the existing literature a market orientation is generally prescribed as being “organisation-wide”, however, what constitutes an “organisation” is left unaddressed. The detail of how business units are composed, for example, the number and type of functions (primary and service), how functions/departments are physically located and the way information is communicated has not been examined in detail. Some insight is provided by Lear (1963) and Harris (1998a, 2000), who allude to the potential for the organisation structure to impede market orientation

development. Maltz and Kohli (2000), in researching conflict between marketing and manufacturing, R&D and finance functions, highlight the potential benefits of “cross-functional teams” in decision-making.

The SD case provides a detailed insight into organisation structure and operational dynamics with a small number of closely located functions obtaining a range of resources and services (Research and Development, Accounting Services, Human Resources) from outside its immediate organisation structure. The way in which customer and competitor information was acquired, maintained, communicated and product decisions were made was predominantly informal. For example, Figure 10.2 highlights how SD’s customer needs were effectively linked to organisational resources and activities but without formal mechanisms for so doing. Pulendran et al. (2000) highlight how some larger organisations are now seeking to encourage informal meetings with a view to facilitating interdepartmental communication and connectedness. This approach is akin to a focus on an organisation’s “verbal and behavioural artefacts” rather than “physical creations (for example, information systems)”, a focus which Harris (1998b, p.368) suggests may help develop an understanding of market orientation.

SD’s structure and operations are characteristic of small firms (Pelham and Wilson 1996) and facilitated an organisation of low “conflict” and high “connectedness” which Jaworski and Kohli (1993) find promotes market orientation. The SD case findings and the recent findings by Pulendran et al. (2000) and Harris (1998b) support a theory that “small-firm” type structure and informal communications may better engender a market orientation. However, whether, or how, firms have (re)

designed organisation structures to facilitate market orientation are questions yet to be fully developed in the literature.

A further question of particular importance to this thesis is whether the accounting function should be a part of the firm's organisation structure and/or in what ways is market-orientated accounting information integrated into product decision-making?

The SD case study provides an insight into how a lack of day-to-day or regular interface with personnel within the firm may impact upon the extent of the AC's understanding of that particular firm's business, its information needs and market orientated philosophy. This, in turn, may limit the degree of the firm's market orientation (Lear 1963; Kumar 1998; Harris 1999). Furthermore, the location of the accounting function outside SD's organisation structure may be seen as a formal recognition that it is not responsible for "servicing the market". A recognition of, and coordinated effort in, servicing the needs of the market are central to effective interfunctional coordination and market orientation (Deng and Dart 1994; Narver et al. 1998).

The findings in the SD case suggest that the decision to locate the accounting function, or any other organisational functions in general, outside the firm's formal organisation structure, should be taken only after consideration of the probable impact on the firm's market orientation. At a time when many organisations are seeking to develop and integrate management accounting techniques in order to understand better customer and product profitability (Nielsen et al. 2000), the "outsourcing" of the accounting function would seem to be counter-productive to developing a market orientation.

The marketing literature is also silent on whether all organisational functions (whichever they may be) need to have the same degree (or extent) of emphasis on each market orientation component. As the model in Figure 10.4 highlights, there are many and varied combinations of functions which may comprise the organisation and emphases that may be placed on the components of a market orientation.

However, as to which is the most desirable combination for an organisation remains unresearched. If we are to operationalise market orientation more effectively then an understanding of the range, depth, type and form of market-orientated information required by the many and varied organisation functional areas is required.

At SD, all functions were highly coordinated and, overall, had a predominant emphasis on the customer component. This said, a difference in emphasis towards competitors by the SM was noted, as was a difference in emphasis on customers by the AC. Would the market orientation of SD have been enhanced had all functions had the same (or a different) degree of emphasis on customers, competitors and interfunctional coordination? The theory advanced in this study suggests that SD's ability to profitably "create superior value for customers" (Narver et al. 1998) was limited by the absence of interfunctionally coordinated customer and competitor accounting information in the product decision-making process.

The proposition that develops from this suggestion and the foregoing discussion in this section is that the accounting function should be located and integrated within a

firm's formal organisation structure and become a regular part of both the "informal" and formal communication exchange . Furthermore, the firm's level of market orientation will be higher where this occurs and involves the development and exchange of market-orientated accounting information at the product (attribute) decision-making level.

### **10.5 Conclusion and implications**

To summarise, despite the development of a substantial body of literature in market orientation, there remains a need for a greater understanding of the interface with accounting (McNaughton et al. 2002; Guilding and McManus 2002; Matear et al. 2002), in particular, of those accounting techniques which may inform decisions regarding the profitable satisfaction of customers' product attribute needs.

Consequently, the aim of this thesis was to establish an initial theoretical framework in which the linkages between accounting techniques and market orientation could be made more explicit and provide a foundation on which a detailed study exploring the linkages could be undertaken. The broad framework, subsequently developed from a detailed literature review, highlighted a range of management accounting techniques with similar orientations and linkages to the customer, competitor and interfunctional components of the market orientation construct developed by Narver and Slater (1990).

Using this theoretical framework, the SD case study has provided the opportunity to describe and explore the market orientation and accounting information interface, in detail, across a range of organisational functions at a product decision-making level.



This case is unique in that it has examined the integration of accounting information as an *input* into product decision-making in contrast to previous market orientation research which has generally emphasised accounting information as an *output* measure of business-unit profit performance.

This context has facilitated a greater understanding of the factors influencing the way in which market orientation and market-orientated accounting information may develop in practice. In particular, the case study has highlighted how and why organisation size, structure, culture, form and communication of information, locus of market orientation and management education/knowledge appear to influence the level of market orientation and market orientated accounting information (MOAI). While in many ways supporting previous market orientation research, these findings provide further insight into how these factors also influence and connect to the firm's product-level behaviour and activities.

The incorporation of a number of these factors into the initial theoretical framework linking market orientation and accounting information has provided a more robust and practice-orientated model than was originally developed. In this way, the underlying purpose of this study to build theory has been met. Moreover, several propositions have been advanced which will facilitate further research.

The first proposition posits that a more complete measure of market orientation is to be found in the firm's depth of understanding of customer product attribute needs and ascertained from an analysis of product-level decisions. At this level, the firm's interfunctional activities and decision-making processes more fully reflect the firm's

underlying philosophy to satisfying customer needs and the nature of the accounting information that has informed the “at a profit” criteria of a market orientation.

The nature of the accounting information used in product decisions forms the foundation of the second proposition, i.e., the effectiveness of a market orientation to satisfy customer product-attribute needs at a profit to the organisation can be limited by the nature and type of accounting information used in product decision-making. SD’s accounting information was described in this thesis as “traditional” and was insufficient, particularly in the face of increased competition and product and production technology change, to allow a detailed analysis of the resource costs required to meet competitively customers’ different product-attribute needs. To develop more fully a market orientation, information from market-orientated accounting techniques, such as attribute costing and customer-profit analysis, are required as an input in product-level decisions.

Third, to facilitate the development and functional integration of accounting information, market-orientated firms will incorporate the accounting function within the formal organisation structure and initiate ways in which the accounting function interacts with other functional areas. While the accounting function operated outside the SD organisation structure, the case study findings highlight the benefits of “small” firm dynamics in fostering information exchange amongst organisational functions. The importance and benefits of incorporating accounting in cross-functional teams finds support in the recent work of Maltz and Kohli (2000), Nielsen (et al. 2000) and more generally in the work of Harris (2000).

In addition to these propositions, the description and analysis of the SD case study has raised a number of issues and questions which provide avenues for additional research. With the exception of the recent studies by Roslender and Hart (2002, 2003), there is a demonstrable lack of field research into the interface between market orientation and management accounting. Given the relatively complex nature of the organisational interfunctional activities and processes that are to be examined, further case-study research would contribute to a more in-depth understanding of the type/s of accounting techniques and the way in which accounting information is used in market-orientated decision-making.

The theoretical model developed in this thesis provides a framework upon which such study may be undertaken and a research focus on particular components of this model would be valuable. For instance, the SD emphasis on customer relationships as an integral part of SD's customer orientation signals a need for further research into the way/s in which customer profit analysis, attribute costing and whole-life costing may inform product-decision-making and/or contribute to the profitable satisfaction of customer product-attribute needs. Moreover, further research into the market orientation - customer relationship - management accounting interface would seem to be a logical development. The SD case analysis also identified several factors that influenced the emphasis that was placed on the competitor component of market orientation. Further research is required in order to establish the significance or "causality" of these factors, or yet to be identified factors, that influence the adoption of a particular emphasis on the components of a market orientation and market-orientated accounting information.

Related to the issue of emphasis, is the question raised in this thesis as to what motivates or initiates the movement to, or development of, a market orientation generally, and more specifically, the adoption of market-orientated accounting information. The need to address this wider issue of “how to develop” market orientation has most recently been flagged by Harris (2002) who notes the absence of any “evaluative empirical research” (p.604) in this area. The SD case provides some initial insights wherein the (minimal) level of knowledge or education of SD managers appeared to inhibit the adoption of, in particular, competitor-orientated information. The further exploration of this issue using the market orientation - accounting information interface as a point of departure, may yield valuable data.

The limitations of the single-case study adopted in this thesis also provide opportunities for future research. SD, a relatively small business-unit operating within the “services to printing” industry, was composed of four key functional areas and acquired other functional resources from its, larger, parent company. Moreover, the case provided some insight into the influence of changes in product and process technologies both within the firm and the wider industry in which it operates. Clearly there remains great scope for research across a range of different industry environments, different sized and functionally-structured organisations and product-decision settings.

There is also scope for further development of the case study protocol adopted in this study. While acknowledging the usual constraints of time, resources and unencumbered access within organisations in undertaking case research, future studies may benefit from data obtained from customers about the case organisation’s

way of doing business and perceptions about its market orientation. In the SD case, such data may have provided additional confirmatory evidence, for example, about its “long-standing” reputation and history of close relationships with customers. Additional data from within the parent company and/or related business units may have also provided a better understanding of the influence/s of its immediate operational environment.

Market orientation has been advanced as an organising philosophy of the way in which business should be undertaken and which embodies the essence of the marketing concept to satisfy customer needs at a profit to the firm. However, much still remains unknown about market orientation. The development of a theoretical model linking market orientation and accounting information at a product level reflects just one further dimension in the development of market orientation. The SD case has provided an insight into how the development of market orientation and market-orientated accounting information reflect certain “organisational idiosyncrasies” that have been shaped by a range of factors from both within the firm and from its external business environment. How, when and to what extent market-orientated accounting information becomes a part of the firms way of business requires further research.

## Postscript

Subsequent to the formal undertaking and writing of the SD case study, the progress of the firm was observed with interest by the researcher who was able to meet with SD managers on one occasion and maintain regular contact with the GM on a personal level.

At the time of the last formal site visit to SD (1999) it was noted how changes in technology had affected certain stages in the production process. In subsequent discussions with the GM, he highlighted how SD's main customers (advertising agencies, graphic designers and publishing houses) were able to continue to "create their own PDF's and send jobs directly to printers". This had resulted from a significant reduction in the cost to acquire, and an increase in the standards, of hardware and software technologies allowing "customers to acquire their own servers (technology) and produce their own jobs". Competition for sales continued to increase and had generally been met by SD with a reduction in selling prices to maintain turnover but with a consequential reduction in "margins". Exactly how much margin or profit reduction there was on jobs was unclear, an aspect the GM noted had become a more significant issue.

1999 witnessed "W's" departure as CEO of SA following some differences of opinion on the way in which the business should be managed and the establishment of "W" as a competitor several months later. The accountant for SA and SD also joined "W's" new organisation.

The “new management” at SA responded to the declining profit at SD (and SA) by incorporating SD into the formal organisational structure of SA in the year 2000 and progressively reduced staff numbers. The GM of SD was appointed as operations manager of the “new” SA. The recently combined sales function was reduced from eight (8) to three (3) staff and the way in which SA undertook business was substantially changed. Typifying this change and coinciding with the reduction in the size of the sales function was a reduced personal interaction with customers and a policy on the minimum size of customer orders. While SD had previously emphasised daily contact with customers, in 2001, the “face-to-face” contact with customers by SA sales representatives was reduced to once per week. Contact by telephone and electronic mail was increased. Existing SD and SA customers were formally notified that orders for sales of less than \$500 would no longer be accepted. While many of SD’s former customers had moved to “W’s” new business operations when it was established, the GM indicated that these recent changes provided an even greater opportunity for “W” to acquire business.

Concerns raised by SA managers’ about the way in which changes were continuing to affect business “fell on deaf ears” prompting the former SD GM to comment that “management did not want to listen to the people who understand the business and understand the customers”. SA’s general manager and the most recently appointed accountant both resigned and joined “W’s” organisation which had continued to grow in revenues and staff numbers.

The profits of SA continued to decline and, in 2002, after several further iterations of staff reductions, business consultants were engaged by SA to review its organisational structure and the way in which the firm conducted its business. The eventual outcome of the consultant's report was a re-focus on a sales/customer-orientated approach not dissimilar to that which was originally in place at SD and a more deliberate focus on particular "commodity" market segments (identified as "Digital Imaging" and "Digital Media Services").

By 2003, sales revenues at SA had declined to \$15 million from approximately \$33 million in 1999. A noteworthy quotation in documents released by the SA parent company in 2003 reflects the significance of technology changes and of SA's response over recent years:

*The company's market began to disappear a few years ago....what used to be carried out on a \$10m dollar computer can now be carried out in-house on a \$2,000 laptop. SA was slow to respond to these changes.*

While total industry revenues had remained constant in the 2000 - 2003 period, independent industry data (IBISWorld, 2003) noted how the digital graphic arts industry had become "commoditised and increasingly competitive".

The GM of the former SD and then current operations manager at SA resigned in 2003. While rapid technological change had no doubt had a significant impact on the digital graphic art industry, the need to keep abreast of customers' needs and their changing ways of doing business would seem to have been critical for SD and



SA if they were to continue within the industry. The change away from a customer focus at SA (after incorporating SD) put previously established and long-standing relationships at risk, particularly when “W” was a newly emerging competitor which had achieved growth in what, on the face of things, was a mature to declining market. Moreover, the absence of any “hard” data on the profitability of SA (SD) customers appears to have limited the extent to which fully informed product decisions could be made, for example, about which customers to maintain in the longer term.

In terms of the theoretical model developed in this thesis (see Figure 10.1) both SA and the “new” (under new management) SA displayed a limited and, perhaps what could at best be described as, a declining market orientation. While acknowledging the anecdotal nature of much of the evidence garnered from 1999-2003, it comes from an informed source and is supplemented by publicly available documentary evidence about SA and SA’s publicly-listed parent company.

Following the incorporation of SD into the SA organisation structure, there had been a reduced emphasis on the customer component of a market orientation, a lack of attention to the rapidly changing competitive environment (and the related drivers of change, e.g., technology) and on-going organisational restructuring which inhibited the development of interfunctionally coordinated, market-orientated, activities. Not surprisingly, despite the significant organisational changes that had transpired, the “traditional” accounting information that had informed management decisions at SD also remained in place at SA. It would appear that the notion of

market orientation, that was so apparent within SD, may not necessarily be so much a part of a larger organisation's way of conducting business.

Taking a different perspective, however, the changes that occurred to SD and SA in the 1999-2003 period could be seen as part of a wider strategic "corporate" initiative in which the traditional business of graphic-digital arts was being "wound-down" and/or re-positioned for a "different" future, technologically-dominated, market. However, whether this initiative is best served by disenfranchising a well-established customer base remains questionable as is the disregard of the broader business philosophy of market orientation.

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