

## Creating corporate advantage in purchasing

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# **Creating Corporate Advantage in Purchasing**

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# **Creating Corporate Advantage in Purchasing**

## **PROEFSCHRIFT**

ter verkrijging van de graad van doctor  
aan de Technische Universiteit Eindhoven,  
op gezag van de Rector Magnificus, prof.dr. M. Rem,  
voor een commissie aangewezen door het College voor Promoties  
in het openbaar te verdedigen op 14 september 2000 om 16.00 uur

door

Frank Adriaan Rozemeijer

geboren te Wormerveer

Dit proefschrift is goedgekeurd door de promotoren:

prof.dr. A.J. van Weele

en

prof.dr.ir. M.C.D.P. Weggeman

*This thesis is dedicated to Engel Al*

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‘s-Hertogenbosch, July 2000



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# Chapter 1 Introduction to the study

## 1.1 Introduction

This study deals with creating corporate advantage in purchasing through managing intra-company co-operation between two or more business units in the area of purchasing and supply management, or, as we refer to it, *purchasing synergy*. It discusses how purchasing synergy can be defined and which different approaches can be used to manage purchasing synergy. In doing so, it is mainly concerned with intra-organisational issues, such as how to structure and manage different relations between two or more business units, internal departments, or geographic units. Reasons for this internal focus is that the internal organisational issues are regarded as the main cause of failure of synergy strategies in general (Collins and Montgomery, 1998: 71). This study combines scientific insights from purchasing management literature on the one hand, with strategic management and organisation theory on the other hand. Also, various methodological approaches are used to answer the research questions. In this first chapter, the topic is explored, objectives (problem statement) and approach of the study are discussed, and an overview of the chapters is presented.

## 1.2 Background of the research

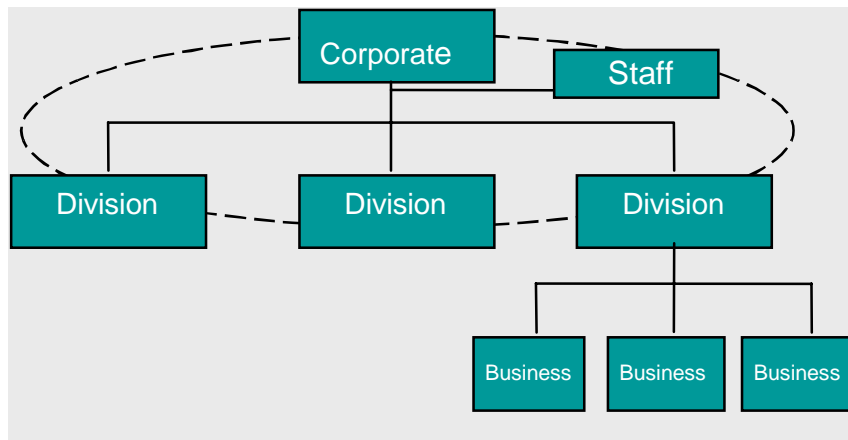
Corporations bring several business units, or operating companies which could be potentially independent, together under one corporate ‘parent’ organisation<sup>1</sup> (see figure 1.1). Such a corporate parent organisation consists of the corporate headquarters, the upper levels of management (this may include divisional, regional, group, or sector management teams), together with their staff functions and support services (Campbell and Goold, 1998:10). Mostly, a parent organisation has no external customers and generates no revenues of its own. So, corporate parent organisations can justify themselves economically only if their influence on their

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<sup>1</sup> ‘Parent organisation’ is a term used by Campbell and Goold (1998) indicating a holding company, corporate center, a division, or any other body that oversees and partly or fully owns more than one business-unit or operating company.

portfolio of businesses creates value, or synergy, as we prefer to call it. For example, the ‘parent’ headquarters can provide competent management, central functions and services, or promote better linkages between the businesses they own. Ideally, the parent must add more value than other rival parents would: otherwise all stakeholders could be made better off through a change in ownership of the businesses to a superior parent. The best corporations create more synergy, than any of their rivals would if they owned the same businesses. Those corporations have what Campbell et al. (1999:208) call ‘*parenting advantage*’, or what Collins and Montgomery (1998:71) refer to as ‘*corporate advantage*’.

Figure 1.1 Corporate parent organisation



The overall plan for creating this corporate advantage across multiple businesses in a diversified corporation is called ‘*corporate strategy*’. Besides corporate strategy, also ‘*corporate structure*’ needs attention of top management. The corporate structure must create the right conditions for a successful execution of the corporate strategy. The formulation and implementation of the corporate strategy and structure is called ‘*corporate management*’. Apart from the corporate strategy, large corporations have two other levels of strategy: *functional* (or operational) strategy and *business-unit* (or competitive) strategy. Functional strategies are concerned with how the different functions of the enterprise – marketing, finance, purchasing, manufacturing, and so on – contribute to the two other levels of strategy. The strategy that tries to integrate these functional strategies to a specific market, is the business-unit strategy. This strategy concerns how to create competitive advantage in each of the businesses in which a corporation competes. It concerns decisions about market entry, price,

financing, manpower and investments in production plants and systems (Porter, 1987).

According to Van Londen (1998:10) there are more than 100 corporations in The Netherlands, with total revenues of 680 billion guilders, and employing almost 2 million people worldwide. This makes corporate management a vitally important area of management. From research, it appears that the profitability of business units is determined to a large extent by the specific characteristics of the corporate parent organisation, and only to a small extent by the attractiveness of the industry sector and the competitive market position of the business unit (Wijers, 1994:5). However, in contrast to business unit management, corporate management is still a poorly understood activity (Collins and Montgomery,1998). There is literature available on corporate management, but it is predominantly practitioner oriented and often not based on sound scientific research (e.g. Goold and Campbell (1998a+b); Wijers (1994); Van Londen (1998)). As stated by Van Ooijen (1997): “Scientific research on corporate management is rather abstract, fragmented and often only based on an Anglo-Saxon empirical base. If we only look at the Netherlands, we found that recent scientific research on corporate management is scarce (see Table 1.1). Van Ooijen (1997) investigated how the corporate centre of a divisionalised firm should manage its divisions given the firm’s diversification strategy. Vijverberg (1996a+b) developed a diagnostic model for analysing organisational (top)structures<sup>2</sup> of Dutch multi-business companies, and discusses four basic forms of relationship between the corporate centre and the business units. Luimes and Spitholt (1994) focussed their research on the decision-making process preceding the buy-out of a business unit, and tried to find out whether there is a causal connection between the lack of synergy and the disengagement of a business unit. Practitioner oriented research on corporations and corporate management in The Netherlands, is conducted by Wissema, (1992), Wijers (1994) and Van Londen (1998). Wissema (1992) explores in five different companies how they implement unit management. Wijers (1994) describes how the potential horizontal interdependencies between business units should be managed, based on case studies at five Dutch companies. Based on consultancy experience, literature study and a number of interviews with top management of Dutch

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<sup>2</sup> Top-structures are comparable with corporate parent organisations.



companies, Van Londen (1998) proposes for a framework summarising the most important aspects of corporate management; a/o. financial control, corporate strategy, synergy, human resources management, corporate organisation, corporate values, and governance structure.

Table 1.1 Dutch research on corporate management issues

Study	Focus of study	Methodology	Key findings
Wissema (1992)	Exploring how corporations implement (business) unit management	Case studies at 5 Dutch corporations	Main conclusion: radical decentralisation and strong cohesion is needed at the same time.
Luimes and Spitholt (1994)	Studied the causal relationship between lack of synergy and the disengagement of a business unit.	Survey among Dutch companies, case studies at three Dutch companies	There seems to be a relationship between lack of synergy and disengagement. However, to prove a causal relationship further research is needed.
Wijers (1994)	Exploring how the (potential) interdependencies between business units should be managed	Case studies at 5 Dutch companies in different industries	The mix of instruments used to manage synergy is determined by four factors: strategic importance, the urgency, the support base and the basic conditions.
Vijverberg (1996)	Examined the nature of the relationships between the corporate centre and the business units	In-depth case studies at 6 Dutch industrial corporations, and 7 mini-cases	A diagnostic model (based on a framework of 25 design rules) for analysing existing top-structures
Van Oijen (1997)	Investigation of how the corporate centre of a divisionalised firm should manage its divisions, given its diversification strategy	In-depth case studies at 4 Dutch corporations and a survey among 67 Dutch public corporations in different industries	High performing corporations have a better fit between centralisation of functions, strategic planning and control, remuneration, selection, transfer of skills, and diversification strategy.
Van Londen (1998)	Exploring the phenomenon of corporations and the different tasks for corporate management	25 interviews with Dutch CEO's and financial /economic journalists	Corporate management should divide its attention between creating economic value and building corporate values as a binding force.

### 1.3 Developments in corporate management<sup>3</sup>

Andrews (1960) was one of the first academics who wrote about corporate strategy. In his view corporate strategy was concerned with building a 'distinctive competence' that would provide the corporation with a competitive advantage in its various businesses. A distinctive competence could be identified through internal analysis of the corporation's capabilities. It could then be matched with the market opportunities identified by analysis of the external competitive environment in order to derive the optimal strategy<sup>4</sup>. At the same time, Chandler (1962:295-296) was addressing the issue of organisation structure inside the corporation. He documented the broadening scope of corporate activity and noted the increased complexity of the management task, and described how corporations solved the complexity by reorganising from a functional (U-form) to a divisional organisation structure (M-form)<sup>5</sup>. The M-form was seen as allowing companies to manage an extensive array of separate businesses.

During the 1960s and 1970s many corporations in the United States and Western Europe reorganised themselves into the M-form. Research showed that the M-form led to superior financial performance (Collins, 1991a:2). However, the M-form introduced a basic dilemma for corporate management: should the relationship between the corporate office and the divisions be centralised or decentralised? Should corporations closely control their business units, or should they be left to run autonomously? Centralisation theoretically facilitates efficiency and improves co-ordination, but to the detriment of incentives and entrepreneurial behaviour in business units. Decentralisation, in contrast, allows divisional management to respond to the demands of their own businesses, but sacrifices opportunities to exploit economies of scope and scale (see also Wissema, 1992).

Neither Chandler's work nor Andrew's work was specific about which businesses a corporation should participate in. This issue became particularly salient during the conglomerate boom of the late 1960s. Rumelt (1974) studied the performance of

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<sup>3</sup> For this paragraph we have used many of the insights from Collins and Montgomery as described in their paper 'Corporate strategy: a conceptual framework' (Collins and Montgomery, 1991b).

<sup>4</sup> When initially advanced, this view suffered from an inability to distinguish between strategy at the corporate and the business unit level. Consequently, the approach became more applied to business unit strategy where it was summarized in the SWOT analysis (Collins, 1991a).

<sup>5</sup> U-form and M-form are terms first used by Williamson (Van Oijen, 1997:19).

corporations as a function of the degree of relatedness among their various businesses. He found that closely related corporate strategies outperformed highly diversified corporate strategies. This finding was widely accepted and, although challenged in later research<sup>6</sup>, remains intuitively appealing because it can be explained by the ‘*synergy*’ that can be exploited among related businesses. Synergy became a widely used word in the 1970s to justify the conglomerate diversification of many corporations. By the mid-1970s, corporate managers were responsible for a range of businesses they often knew little about, and which were generally run as autonomous divisions. As the first oil crisis hit in 1973, bringing the expansion of the 1960s to an end and introducing an era of inflation, corporate management was faced with deteriorating performance and with little advice on how to act.

Into this vacuum came the Boston Consulting Group (BCG) and portfolio management. In the growth/share matrix, corporate management was finally given a tool with which to reassert control of its many divisions. Through the mid-1980s portfolio management dominated corporate strategy<sup>7</sup>. This was accompanied by an emphasis on strategy formulation at the business unit level facilitated by the introduction of tools such as Porter’s competitive strategy framework (Porter, 1985). Many corporations built large corporate departments to control the large number of frequently very diverse business units.

Developments in the capital market in the 1980s shed a new light on portfolio-management. The portfolio-matrix was built on the assumption that corporations had to be self sufficient in capital. This implied both that they should find a use for all internally generated cash inside the corporation rather than pay out free cash flow to shareholders, and that they could not raise additional funds from the capital market (otherwise any number of stars and question marks could be funded without a single cash cow to support them). In an ever more efficient capital market neither of these assumptions was correct. The capital market’s low valuation of corporations reinvesting their free cash flow in diversification illustrated the inappropriateness of

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<sup>6</sup> Van Oijen (1997:47) mentions, for example, the findings of Hoskisson and Hitt (1990:469) and Ramanujam and Varadarajan (1989:539-540)

<sup>7</sup> Haspeslagh (1982) found that nearly half of the large corporations he surveyed were using portfolio management techniques in 1982.

the first assumption. The abundance of venture capital in the eighties meanwhile demonstrated the fallacy of the second implicit assumption of portfolio management. At the same time, the enormous corporate infrastructures (e.g. large corporate staff departments) assembled by many large diversified corporations to manage and support their divisions, raised the fundamental question of what value that overhead contributed to the autonomous business units.

Easy access to debt financing through the junk bond market encouraged management buy-outs (MBO's). These MBO's showed, in many cases, that corporate overhead contributed little economic value, or even worse were often destroying value. The result was an increased focus on value-based strategy and an increased emphasis on shareholder value. If the stock market valued the corporation at less than the sum of its individual business units valuations, the prescription was to sell off those divisions which were implicitly being undervalued, and only concentrate on their core businesses. According to Collins (1991:4) by the late 1980s, large multi-business corporations were struggling to justify their existence, and the find answers to the fundamental issues that corporate strategy must address: (1) How is economic value created in a multi-business corporation?, (2) How must the corporation be structured and co-ordinated to realise the benefits of its multi-business activities?, and (3) Why should those activities be undertaken inside the corporation rather than through contracts, joint ventures, or other institutional arrangements with external parties (e.g. suppliers)?<sup>8</sup>

Given the belief that there must be a rationale for corporations, academics and consultants looked to develop typologies of corporate strategy that answered the first of these three questions. Porter (1987) advanced a typology of four corporate roles to create value: portfolio management, restructuring business units, stimulating transfer of skills, and stimulating sharing activities. Earlier, Chandler (1962) distinguished four roles for the corporate centre: (strategic) planning, allocation of resources, evaluation of divisional performance and co-ordination. Daems and Douma (1989:225-226) distinguish five roles: capital provider, restructurer, advisor, co-ordinator and defender. Goold et al. (1994:78) define four ways of creating value for

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<sup>8</sup> See also Quinn (1992).

the corporate centre: stand-alone influence, linkage influence (co-ordinator), central functional services, and corporate development. To summarise, Van Oijen (1997:43) states that the corporate centre can add value through: 1) *business development* (strategic planning and allocation of financial resources), 2) *control* (performance evaluation and rewarding), 3) *intervention* (restructuring existing and new businesses development), 4) *appointing key managers*, 5) *co-ordination and central services* (exploiting potentially valuable relationships across business units).

A real breakthrough in the attempt to understand the sources of corporate value came from what is called the '*Resource based view of the firm*'. The 'market based view of the firm' is rooted in neo-classic microeconomics and industrial organisation economics, and argues that industry structure influences corporate strategy, which in turn affects performance. The 'resource based view of the firm', in contrast, suggests that competitive advantage originates at the firm (rather than industry) level, specifically in the resources and capabilities of the firm (Capron and Hulland,1999:42). This stream of literature views the firm as a unique bundle of inimitable tangible and intangible resources, which collectively form its 'distinctive competence'. Recently there has been an increasing interest in the role of the firm's resources as the foundation for corporate success, mainly driven by the work of Hamel and Prahalad (1990) and Quinn (1992). According to Quinn (1992), successful corporations derive sustainable competitive advantage not from superior products, but from a deep understanding of a few highly developed knowledge and service based core activities that leverage intellectual assets. Corporations should focus on those core activities and outsource all other activities to world-class suppliers. Hamel and Prahalad (1994) present a somewhat similar view, but speak of 'core competencies', in stead of core activities.

In the resource-based theory, distinctiveness in the product offerings is tied directly to the distinctiveness in the inputs – resources – used to produce the product. The corporation is regarded as a seeker of unique or otherwise costly-to-copy resources that can provide competitive advantage in exploiting market opportunities (Boone, 1993:30). Hamel and Prahalad (1990: 79-91) argue for corporate growth and diversification around core competencies in order to dominate future product markets. In their view, core competencies are the connective tissue that holds together a

portfolio of seemingly diverse businesses. If control over scarce resources is the source of economic profits, then it follows that such issues as skill acquisition and learning become more fundamental strategic issues. It is not only the effective and efficient bundling of unique resources (capabilities) that matters, but the mechanisms by which firms accumulate new skills and capabilities, and the forces that affect the rate and direction of this process.

According to Senge (1990) it is not sufficient only to concentrate on your core competencies. In order to create a corporate advantage, it is also necessary to develop these core competencies better and faster than your competitors. Therefore, corporations should become 'learning corporations' (Senge, 1990). In this view, corporations will increase their value through technological sophistication, a better knowledge base, more creative customer responsiveness, and the unsurpassed management of human and intellectual capital that competitors cannot produce. Over the last decades there seems to be a shift in corporate strategy from 'market based' towards 'resource based' (see Table 1.2).

In the 1970s and 1980s, parent organisations were regarded as only a holding organisation providing financial funds to the businesses and balancing the portfolio to create steady earning performance. Today, this is not acceptable anymore. The efficient capital market and the shareholders require each corporation to have a meaningful focus, causing parent organisations to question their mix of businesses. Consequently, corporate parent organisations have been very active over the last ten years restructuring their businesses<sup>9</sup>. In the Table 1.2, we present an overview of the different orientations to corporate strategy based on a framework of Campbell (1996).

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<sup>9</sup> The 1990s will go down in history as the time of the biggest merger and acquisition (M&A) wave of the century (Sirower, 1997:3).

Table 1.2 Overview of the differences over time in corporate strategy

Period	Corporate strategy	Corporate structure	Corporate management	Authors
1950s	Financial planning	Functional	Managing access to resources	Drucker (1946)
1960s – 1970s	Strategic planning	Divisional (subdivision of huge firms into separate and more manageable profit centres)	Coping with market growth, conglomerate diversification	Ansoff (1968), Chandler (1960, 1962)
1970s – 1980	Portfolio planning	Hybrid / Matrix (product divisions combined with central functional departments)	Coping with the economic downturn	Boston Consulting Group
1980s – 1990s	Strategic management	Business unit (responsibilities are placed as low as possible to cope with increased competition)	Managing the business unit market position for competitive advantage	Peters and Waterman (1982), Porter (1980, 1985) Moss-Kanter (1989) Mintzberg and Quinn (1991)
1990s	Knowledge and Resource management	Centre-led (decentral BU autonomy combined with central steering) <sup>10</sup>	Concentrate on core competencies and business resources, and develop them	Hamel and Prahalad (1990), Quinn (1992), Senge (1990), Weggeman (1997b)
>2000s	Value Management	Networks (intra and inter company)	Managing value creating networks by using information technology (e.g. internet)	Evans and Wurster (2000)

Apart from corporate strategy we also describe the related changes in corporate structure and the corporate management. Ansoff and McDonnell (1990) argue that the pattern of evolution and application of ideas on corporate management can be closely linked to the need to cope with the increasing changeability of the business environment, and its increasing unpredictability, turbulence and complexity. Important research on this was done by Lawrence and Lorsch (1969). These authors defined a set of (normative) propositions on that have come to be known as ‘structural contingency theory’. Based on empirical research, they claim there is a positive correlation between the degree of environmental uncertainty and the degree of flexibility in the firm’s organisational form. With the changes in the business environment in the last decade – more efficient capital markets, globalisation of

<sup>10</sup> More or less similar with new organizational forms like network organization and virtual organisation.

competition, developments in information and communication technology, shortened product life cycles, shifting customer expectations, and the emergence of new markets in Asia and Eastern Europe - old ways of doing business (e.g. vertical integration, large bureaucracies) are becoming less and less effective. Leading management theorist Peter Drucker states that the underlying driving force behind the development of new concepts and techniques for corporate management over time, is the shift from ‘*an economy of goods*’ to a ‘*knowledge economy*’ (in Micklethwait, 1996). What will be the effect of this development on corporate strategy and structure? Evans and Wurster (2000) predict that in the near future, driven by the developments in information technology, large corporations will be ‘*blown to bits*’. Traditional business definitions and organisational boundaries can no longer be taken for granted. Organisation within a firm and organisation across firms (e.g. suppliers, customers and competitors) increasingly becoming variations on the same thing (Evans and Wurster, 2000).

#### **1.4 Developments in purchasing management**

Among the various resources that can be owned by corporations, purchasing resources<sup>11</sup> are increasingly recognised as a crucial subset. Many (academic) authors stress that during the past few years, purchasing has begun to play an ever more important role in the strategy of the firm than was true in the past (Morlacchi and Harland, 2000; Botter, 1999; Carter and Narasimhan, 1996a+b; Chadwick and Rajagopal, 1995; Spekman et al., 1994; Tully, 1995; Ellram and Carr, 1994; Brandes, 1994; Gadde and Hakansson, 1994; Keough, 1992). Although purchasing has always been an important function in business, little was done to formalise its role until the end of 19th century. The greatest interest in and development of purchasing during the early years occurred in the USA after the 1850’s - a period that witnessed the growth of the American railroad. In 1887, the first book exclusively about the purchasing function was published<sup>12</sup>. The book discussed purchasing issues that are still critical today, like the need for technical expertise in purchasing agents, the need to centralise the purchasing department under one individual, and the lack of attention often given to the selection of personnel to fill the position of purchasing agent (Monczka et al.,

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<sup>11</sup> Including functional resources, information, knowledge, supplier relations and supplier resources.

<sup>12</sup> Title: “The handling of railway supplies - their purchase and disposition” (in Heberling, 1993).



1998). The late 1800s signalled the beginning of organising purchasing as a separate corporate function requiring specialised expertise. Before this period, this separation did not occur, the internal customers did their own purchasing. After the first non-railroad purchasing book was published in 1905, the number of purchasing publications increased significantly during the beginning of this century, reflecting the growth of the function (Heberling, 1993). Despite the long history, however, this recognition gradually decreased towards the fifties and definitely during the sixties and early seventies. Farmer (1974) characterises this period as the era of '*purchasing myopia*'<sup>13</sup>. In the mid 1960s, according to Henderson (1975:44), procurement was regarded by executive management as a '*negative function*' – in this outdated view, purchasing could hinder the company if not done well, but could make little positive contribution.

It is only in the latter half of this century that the importance purchasing has been widely recognised. Driven by the 1973 Oil crisis top management started taking an interest in the importance of suppliers and consistent supplies, and purchasing slowly started to evolve into more than just a clerical function. In the 1980s, foreign competition, from Japanese automakers in particular, was taking significant market share from Western companies. Besides this, companies were faced with the severe economic recession of the early 1980s. Industrial executives turned to the purchasing function, this time to secure the supply of the highest quality raw materials, components and other goods and services (Morgan, 1983). Until mid 1980s, purchasing research concentrated primarily on the improvement of activities executed by the purchasing *department* (Ribbers,1980) Only after business process management became a central focus in practice and theory, the focus shifted towards the purchasing *function*: management of a cross-functional chain of purchasing activities (Hahn and Kaufmann.al, 1999). Over the last decade, researchers in the field of purchasing have examined issues related to the increased (perceived) strategic importance of the purchasing function, which has produced a significant shift from the '*traditional*' purchasing role (an operational stand-alone function) to what Kraljic (1983) called '*supply management*' (a more integrated and strategic function). Since

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<sup>13</sup> Purchasing myopia: while the fundamental importance of a pro-active purchasing function was at least as valid as it is now, both the business community and the academics regarded purchasing as administrative clerical activity rather than a strategic function (Farmer, 1974).

1988 there has been a steady flow of ideas from academics and consultants regarding the stage-like development of purchasing toward a strategic business function (Reck and Long, 1988; Syson, 1989; Bhote, 1989; Freeman and Cavinato, 1990; Cammish and Keough, 1991; Van Weele, 1994; Keough, 1993; Burt and Doyle, 1993; Monczka and Trent, 1995; Chadwick and Rajagopal, 1995).

According to Monczka et al., (1998), the purchasing function has won a reputation over the past decade in many executive boardrooms as a powerful tool for improving profitability<sup>14</sup>. This is driven by three major benefits to be achieved from a stronger focus on purchasing: (1) major area for (potential) cost savings; (2) major impact on quality ('suppliers can make or break a company'), and (3) technology development and improvement of product and process designs (Monczka et al., 1998). Consequently, buyers are no longer just processors of requisitions and order forms, but increasingly also involved in more strategic activities including supplier development and improvement, early supplier involvement, cross-functional teams, the use of full-service suppliers, total cost supplier selection, and integrated information system linkages with suppliers. Based on research among 302 NAPM<sup>15</sup> members, it has been demonstrated empirically, that strategic purchasing activities are positively correlated with business performance (Carter, 1996b:24). Seven strategic purchasing factors accounted for 43,15% of the variation in the participating firm's composite index of performance (i.e. sales, market position, goal and market share) (see also box 1.1). However, based on quantitative data from 328 firms over a five-year period 1990-1995, David et al. (1999) observed no simple, direct effects of purchasing management strategy on a firm's financial performance. The study shows that when the purchasing management strategy is appropriately matched with the product/market strategy, improved financial performance is observed. Conversely, inappropriate matches are associated with poor financial performance.

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<sup>14</sup> See also Smeltzer (1997).

<sup>15</sup> NAPM is the National Association of Purchasing Management of North America.

*Box 1.1*

*General Motors*

In November 1992, General Motors (GM) was suffering of financial losses, there even was speculation that the company would file for bankruptcy. Instead of opting for another marketing, design or production fix, the newly appointed CEO, Smith, took a new track for GM. He set down the outlines of a corporate supply strategy; one that looks at competitiveness in terms of how well a company uses the resources of its suppliers. It was a strategy that put purchasing at the forefront of the sourcing, quality, and design processes. Top management decided to make sure that the people responsible for purchasing of goods and services were in charge and not subservient to the designers and builders. So far, the move seems to be paying off. In the 1995 annual report GM's North American Operations Management list purchasing as a significant contributor to the \$8 billion turnaround since 1992. For purchasing the turnaround meant finding way to consolidate its 27 relatively autonomous purchasing groups into a single organisation that uses the same processes and measurements around the world. What they came up with was a world-wide purchasing group that swaps GM's traditional hierarchy and independent buying camps for a process-driven, grid-shaped organisation that leverages the company's size and knowledge base to make sourcing decisions on a global basis (Minaham, (1996).

Because the strategies that purchasing develops can be considered to assist in achieving the organisation's overall goals and objectives, it is no longer unusual that purchasing managers report directly to the board of directors (Fearon et. al, 1993). A recent CAPS<sup>16</sup> study (Johnson et al., 1997) revealed how 119 large companies have changed their purchasing organisations over the period 1987 to 1995. A significant number of firms changed their purchasing organisation structure towards a combined centralised/decentralised form. Apart from this they also changed the reporting relationship, and introduced a Chief Purchasing Officer (CPO). Apart from structural changes, recently many other topics related to organising purchasing have been investigated:

- 'Working in cross-functional teams' (Giunipero, 1997; Monczka and Trent, 1993),
- 'Status and recognition of the purchasing function' (Pearson et al., 1996);
- 'Purchasing's role in new product development process' (Wynstra, 1998);
- 'Integrating purchasing strategy in the overall strategy' (Watts, 1995; Freeman and Cavinato, 1990);
- 'Using information technology to support (initial) purchasing' (Telgen, 1998; Van Stekelenborg, 1997);
- 'Motivating the purchasing professional?' (Pagell et al., 1996).

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<sup>16</sup> CAPS stands for 'Center for Advanced Purchasing Studies' the research center of the NAPM, based at Arizona State University.

These studies indicate that the shift in the purchasing function from simply being a processor of paper, to the architect of value streams and manager of commercial supply relationships, means a lot more than just changing the name from 'buying' to 'supply management' (Kraljic, 1983).

## 1.5 Problem statement

As described before, a lot of developments are going on both in corporate management and in purchasing management. Regarding corporate management, we observe a rise in the number of books and articles on corporate synergy<sup>17</sup>, which indicates a renewed attention for this topic. This can, at least, partly be explained by the shift in belief about what determines corporate success. Today, deploying hard-to-imitate capabilities and resources<sup>18</sup> where they are important to the competitive advantage of the individual business units is at the heart of corporate strategy. Sometimes it makes sense for business units to share a common resource, like a sales force (Sohi et al., 1996), a group of purchasers or a supplier. In other cases resources can be transferred across businesses with a minimum of co-ordination costs. This can be regarded as an important driver behind some consolidation initiatives and a number of mergers and acquisitions aimed at creating corporate advantage through direct cost and revenue synergies. Wijers (1994:18) describes three reasons for the increased attention for corporate synergies:

- Financial market and shareholder pressure for value creation. Corporations that do not fully succeed in capturing all potential synergies will be punished by their shareholders.
- Technological developments especially in the field of information and communication technology (ICT). At the same time ICT creates potential synergies and also technically enables the capturing of this synergy.

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<sup>17</sup> Zwartendijk (1999), Campbell and Goold (1998), Goold et.al. (1998a;1998b), De Vaan and Maas (1998), Asseldonk and Blom (1998;1997), Jansen and Van Heuvelen (1998), Reavis (1998), Van Londen (1998;1992), Collins and Montgomery (1998;1995;1991), Van Oijen (1997;1995), Gruca (1997), Geneen (1997a+b), Nouwen, (1995), Vizjak (1994), Wijers (1994), Luimes and Spithold (1994;1991) Van den Bosch (1993), Bosman (1993), Gerken (1993), Hopstaken and Blokdijk (1993), Montgomery (1992), Wissema (1992).

<sup>18</sup> Resources can be both tangible (assets and people) and intangible (skills, knowledge and capabilities).

- Increased multi-business competition: large corporations more and more compete with each other on different markets. This drives the need to look for cross business-unit opportunities to enhance competitive advantage.

Most authors writing about purchasing structures do not explicitly give attention to synergy. The classic debate is about the two ends of the centralisation-decentralisation continuum. Corporate strategies and organisational structures aimed at creating corporate advantage, as currently implemented in several large corporations, has not often been the topic of scientific research. Consequently, the ways in which corporations resolve the problems and issues related to capturing the potential synergies are still rather unclear. That stimulated us to initiate a research project on this topic.

According to Collins and Montgomery (1998:27) there is a close relation between the mechanisms used to transfer or share resources and the kind of resource you are trying to leverage. We decided to focus our research efforts on corporate synergies in the area of purchasing, for several reasons. Firstly, from the developments in purchasing literature described earlier, it becomes clear that among the various resources that can be owned by corporations, purchasing resources<sup>19</sup> are increasingly recognised as a crucial subset. Secondly, an increasing number of corporations recognise the potential benefits of pooling (common) materials requirements purchasing (Van Weele, 1994:191), and implementing corporate purchasing strategies. For example, over the last three years Philips Electronics, Shell, Unilever and KLM all announced cost reduction programs, aimed at saving them multi-billion guilders, in which corporate purchasing synergies played a critical role<sup>20</sup>. However, there is still much room for improvement. Based on a qualitative study of annual reports of 44 leading Dutch corporations, Van Weele and Van der Vossen (1998) found that only 8 corporations have corporate programs aimed at reducing external costs. Research data<sup>21</sup> (Monczka and Trent,1995:46-47) indicates that there has been an actual increase in the corporate-wide volume consolidation of purchases (combining purchases of common

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<sup>19</sup> Including the processes, technical resources (e.g. information systems) and human resources.

<sup>20</sup> The announcements were made in the Dutch newspapers 'NRC Handelsblad' and 'De Volkskrant'.

<sup>21</sup> Data based on a 100-plus item questionnaire. The sample involved 40 firms in 1990, and 61 in 1993.

items or families of items across buying units) since 1990<sup>22</sup>. Also, firms are increasingly consolidating volumes across worldwide units rather than domestic units only. Even though consolidation efforts have increased since 1990, business units still indicate that only a moderate level of consolidation actually occurs, even when major opportunities exist to realise cost savings through purchase volume consolidation. Monczka and Trent (1995:66) state that because of the relatively low emphasis on purchase consolidation over the last 10 years, purchase volume consolidation provides tremendous cost-saving opportunities. Apart from Box 1.1, this can be illustrated by the examples of DaimlerChrysler and Ahold (see Box 1.2 and 1.3).

*Box 1.2 DaimlerChrysler*

On May 6, 1998 the board of management of both Chrysler and Daimler approved a historic merger, creating a \$130 billion automotive colossus known as DaimlerChrysler. Analysts say: "If ever a merger had the potential for synergy this could be the one. By spreading Chrysler's production expertise to Daimler operations and merging both product development forces, the new company could cut costs by up to \$3 billion annually – including \$1.1 billion in purchasing costs". Apart from increased negotiation power due to the bundling of demands, they can share their best practices in the area of purchasing. Chrysler, for its part, has the industry's best supplier relations, while Daimler still relies on strong-arm techniques to get lower prices from its suppliers. (Business Week, May 18, 1998, pp.20-23).

*Box 1.3 Ahold*

Ahold is a globally present Dutch retail corporation that successfully follows a strategy of "local shops for local customers". However, from 1990 on, a top management committee, headed by the CEO of Ahold USA, initiated a number of initiatives to realise synergy across the retail chains in the USA (Stop&Shop, Giant Washington, Bi-Lo). Important point of departure was that all activities that were directly related to local customers remained the responsibility of local management. All other activities were considered as potentially interesting for realising synergy, including purchasing. For example, the buyer who paid the lowest price for oranges, was made the lead-buyer of oranges for Ahold USA. Today almost all potential synergies have materialised. The CEO estimates that the synergy initiatives yield about 20 to 25% of additional returns. The next step for Ahold will be to search for synergies in activities like purchasing on a global scale (Zwartendijk, 1999; Koelewijn and Otten, 1999).

The third reason for focusing our study on purchasing, is the fact that still very little academic publications illustrate why corporate purchasing strategies and structures are implemented, or under which conditions they will be successful (Chapman et.al.,

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<sup>22</sup> The average score increased from 3.76 in 1990, to 4.73 in 1993 on a 7 point scale ranging from score 1= limited consolidation occurs to 7 = high consolidation occurs.

1998). There are only some publications that present successfully implemented new practices, or suggest standardised solutions for gaining corporate advantage in the area of purchasing (Arnold, 1997; Arnold and Essig, 1997; Jones, 1997; Hughes et al., 1998; Van Weele and Rozemeijer, 1996; Akbar and Lamming, 1996). Matthyssens and Faes (1997b) formulated several suggestions for further research in this area, that are closely related to this main research objective:

1. Contradictory tendencies are reported concerning future purchasing co-ordination. Therefore a representative sample of multi-plant companies should be involved in in-depth interviews probing for the *contextual factors leading to a co-ordinated purchasing approach*. This could present a more refined outlook on the future of co-ordination.
2. Which types of co-ordination exist, and in what form are they implemented? To answer this question, a study from a *dynamic perspective* is needed. In this way, insight may be generated into the different barriers of implementing a co-ordinated purchasing approach.
3. Further *empirical validation* of the different co-ordination approaches for different types of products/industries should be undertaken and other relations between the different co-ordination criteria have to be explored.
4. Which approach of co-ordination leads to *the best result*? One could, for instance, measure the satisfaction levels of buyers as well as the types of measures adopted to improve internal as well as external co-ordination effectiveness. This could lead to guidelines for a co-ordinated purchasing approach.

In other words, the challenge is to generate knowledge regarding how to structure and manage corporate purchasing synergy effectively on a sustainable basis given the situational contingencies. The main objective of this research project is to answer the following question:

*'How can firms create corporate advantage in purchasing?'*

With regard to the problem definition of this research, two different aspects can be distinguished: research questions and research objectives (Verschuren and Doorewaard, 1995). The overall research objective of the current study is:

*Develop a coherent set of firm specific organisational design rules for realising corporate advantage in purchasing*

This main research objective can be subdivided in the following main research questions:

1. *How can we define corporate advantage in purchasing?*

Both in practice and in theory the term synergy is often used to indicate the results of co-operation between business units. However, people using the term neglect to define what they mean with synergy. In purchasing literature, synergy is most frequently used to describe initiatives to pool negotiating power across business units. Is this the only form? We have the idea that sharing knowledge (information, experiences, insights and best practices) across independent business units can also lead to corporate advantage. What different terms and concepts can be found in state-of-the-art general management and purchasing literature?

2. *What organisational mechanisms can be used to create corporate advantage in purchasing?*

Is there a difference between potential synergy and actual synergy? What are the main problems facing corporations trying to create corporate advantage in purchasing? It is expected that synergy will not materialise automatically, some form of (social) structure and management seems necessary.

3. *How are these organisational mechanisms related to the firm specific situation?*

Under what circumstances and conditions do corporations decide to formulate strategies aimed at creating corporate advantage in purchasing? What are the driving and enabling factors underlying strategies aimed at creating corporate advantage in purchasing? We think that these driving and enabling factors will differ across corporations. By learning the different underlying driving and enabling factors we will better understand why corporations use certain organisational designs to create corporate advantage in purchasing. We



hypothesise that there is no one best way to structure for synergy, and that the different organisational mechanisms are closely linked to their specific internal and external context. The following chapters will describe whether this hypothesis is true, or not.

Since it is the quality of interventions by corporate (purchasing) managers, which is crucial in making synergies work or fail, it is to them that this study is primarily addressed. However, we will also address some of the academic shortcomings in current research as mentioned by Matthijssens and Faes (1997b). It is our conviction, that if top-managers learn to express what they actually mean with synergy, understand their underlying motives, and have a basic knowledge about what different organisational mechanisms can be used and how these are linked to their specific corporate context, they are better able to realise corporate advantage in purchasing. It is important to note that the aim of this study lies in the area of academic theory development. However, its aim is also practitioner oriented; to develop knowledge for designing and implementing effective corporate purchasing organisations in multi-business companies.

Currently, business-to-business commerce on the internet is generating a lot of interest, Companies like Ariba, Chemdex, Commerce One, and Free-Markets have attained high stock market capitalisations. Venture capitalists are pouring money into more B2B start-ups. Even large industrial firms like General Motors and Ford have announced plans to set up their own web marketplaces (Kaplan and Sawney, 2000:97). A relatively recent development in the B2B area are the reverse aggregators (or e-hubs). They form groups of buyers within specific vertical or horizontal markets and reduce two major inefficiencies. First, by gathering together the purchasing power of many buyers they can negotiate significant price reductions. Secondly, purchasing e-hubs can reduce procurement transaction costs by outsourcing the procurement function (Kaplan and Sawney, 2000). These e-business developments will have, without doubt, a significant impact on purchasing. Realising purchasing synergy between firms and within firms will become less costly and less time consuming. However, in order to focus our efforts, we do not investigate these developments in this research study.

## **1.6 Structure of the study**

In this first chapter we introduced the study and explained the background. In the second chapter we will describe the methodology that is used. The analysis begins with Chapter Three, which describes the major developments in Management and Purchasing theory. It starts by investigating different forms of purchasing synergy and finishes with an inventarisation of the driving forces and enabling factors determining the way companies manage purchasing synergy. The field research part starts with Chapter Four, which describes the findings of five in-depth case studies. Chapter Five summarises the findings of an action research project. Chapter Six will explain the survey and summarise the results. In Chapter Seven we describe and explain our design rules for managing purchasing synergy. In Chapter Eight we derive our major conclusions and recommendations. We will reflect on the research project in chapter Nine. The Figure below gives a schematic overview of this thesis.

<i>Problem statement and methodology</i>	<i>Literature review</i>	<i>Empirical exploration and testing</i>	<i>Stages of design rules improvement</i>	<i>Conclusions and Reflections</i>
<p><b>Chapter One</b> Introduction to the study</p>				
<p><b>Chapter Two</b> Research design</p>	<p><b>Chapter Three</b> Literature review</p>		<p><u>Concept 1</u></p>	
		<p><b>Chapter Four</b> Case studies</p>	<p><u>Concept 2</u></p>	
		<p><b>Chapter Five</b> Action Research</p>	<p><u>Concept 3</u></p>	
		<p><b>Chapter Six</b> Survey results</p>	<p><u>Concept 4</u></p>	
			<p><b>Chapter Seven</b> Final design rules</p>	<p><b>Chapter Eight</b> Conclusions</p>
				<p><b>Chapter Nine</b> Reflections</p>

## Chapter 2 Research Design

### 2.1 Introduction

In the previous chapter, it was concluded that creating corporate advantage in purchasing is a research field worthy of study. We will analyse corporate purchasing strategies and their implementation in relation to the specific company context. We want to identify the contingencies between the corporate strategies and the context. In this chapter, we describe in more detail the research plan and the research methodology used to answer our research questions. According to Ramsey (1998: 428) the academic purchasing world stands at “the threshold of *an enormous increase* in empirical work intended to improve our understanding of what purchasing functions are doing, why they do the things they do, and how that activity might be improved”. Ramsey argues that it is essential that this increase is guided by a coherent grasp of the methodological issues that underlie empirical research, especially when applied in social systems like companies. Ramsey does not suggest that researchers must all become expert methodologists, but they ought to be aware of the way in which their chosen methodology (choice of data collection methods and analysis techniques) affects the nature of any conclusions that they can draw from their research. This statement makes this chapter also an important one, as it explains how the gathered data should and/or can be interpreted, and it explains the value of the data.

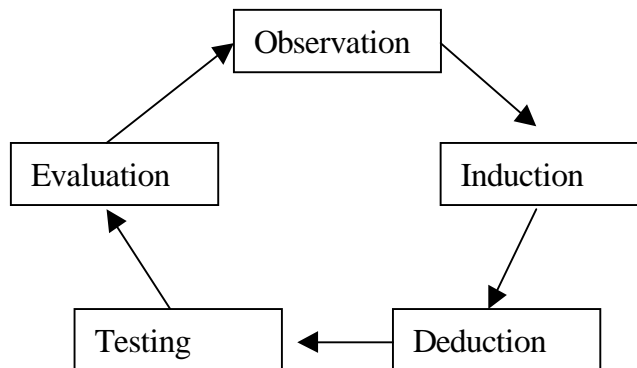
### 2.2 Methodological points of departure

To understand our research design, it is important to know something about our points of departure: our view on organisations, our view on empirical versus design research, and our view on the relevance and rigour dilemma. The first point of departure is related to the way we look at organisations. In his classic book “*Images of Organisation*”, Morgan (1986) describes eight different ways in which organisations can be ‘read’ and understood. In his view, organisations can be looked at as machines, living organisms, brains, cultures, political systems, psychic prisons, systems in

continuous state of flux and transformation, and instruments of domination. Traditionally, researchers in management sciences often regard organisations as machines (i.e. rational systems) aimed at achieving certain overall goals. Recently, there is some renewed attention among management authors for looking at organisations in other ways than the classic machine-metaphor. For example, Scott-Morgan (1995) states that organisations act more like living organisms and/or social and political systems, often driven by all kinds of hidden internal and external forces. Also in our view, an organisation is not just a rational system aimed at achieving a certain overall goal, but also a group of people aimed at achieving their own goals and, while doing that, showing all kinds of irrational behaviour (Daft, 1992; Van Oijen, 1997). For this reason, we prefer to carry out our research, at least for a large part, through studying real life cases. This will enable us to understand the real complexity of the problems related to realising corporate advantage in purchasing, will allow us to better recognise all the issues to be considered, and help us to develop directions for improvement<sup>23</sup>.

The second point of departure is related to the two alternative approaches of research in Organisational Sciences, as indicated by Van Aken (1994:18). The first research approach is the empirical approach, with the central question: '*How do organisations work in practice*'. The research based on this paradigm often follows the steps of the '*empirical cycle*': observation, induction, deduction, testing and evaluation (see Figure 2.1).

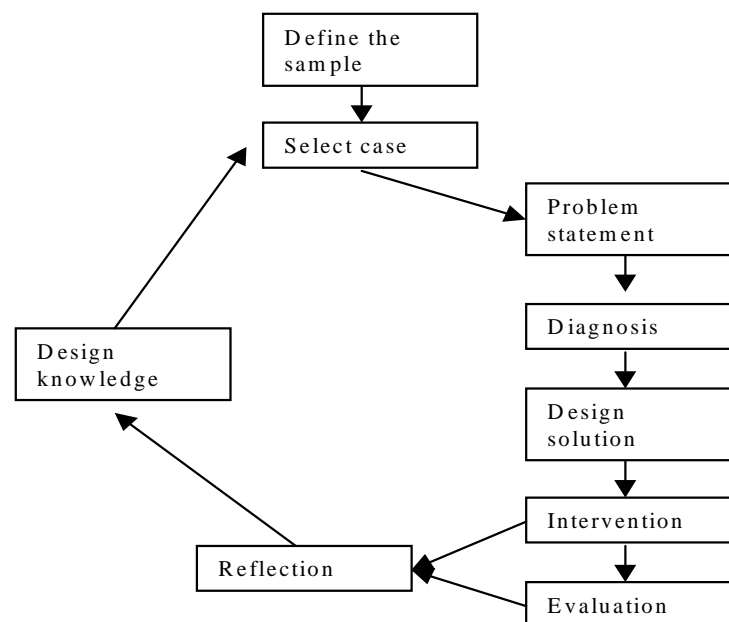
Figure 2.1 Empirical cycle



<sup>23</sup> Van der Zwaan (1989:71-72) refers to this as *unfolding*.

The second approach is the design approach, which is aimed at answering the central question: *'How should organisations work'*. Research that is based on this design-paradigm often follows the steps of the *'regulative cycle'* (Van Strien, 1986) or the *'reflective cycle'* (van Aken, 1994). The regulative cycle has a normative character, is basically aimed at solving a certain problem, and involves the following steps: problem statement, diagnosis (observation and analysis), planning (the design of an intervention), intervention and evaluation. The reflective cycle goes further than the regulative cycle and is also aimed at developing (scientific) knowledge. The characteristic steps of this cycle are: determining a set of relevant cases for the study, selection of one case, applying the *'regulative cycle'* to solve the problem for that specific case, reflection on the results, documentation of the applied (design) knowledge, and selection of a new case from the set of relevant cases for the study (see figure 2.2).

Figure 2.2 The reflective cycle



Many researchers choose explicitly for one research approach; *'empirical'* or *'design'*. As recommended by Den Hertog and Van Sluijs (1995:5), we will combine these two approaches. Our research questions aimed at finding out how corporations work in practice, how they create corporate advantage in purchasing, what organisational

mechanisms they use, can be regarded as empirical. However, this research has also a design side. Based on the insights drawn from the empirical data, we will formulate design rules for creating corporate advantage in purchasing.

The third point of departure is related to the relevance and rigour of the research. According to Kurt Lewin “*Nothing is quite so practical as a good theory*” (in van Aken, 1999). A practical theory is one that can be and is actually used by the practitioners in the relevant field. This poses the ‘rigour- relevance’ dilemma, which states that management theory is either scientifically proven, but then too broad or too trivial to be of much practical relevance, or relevant to practice but then usually lacking sufficient rigorous proof (van Aken, 1999). There is no real solution to this dilemma, management research and theory has to achieve both scholarly quality and managerial relevance. Pettigrew (1996) refer to this as the ‘*double hurdle*’<sup>24</sup>.

Today, in the field of purchasing there are many publications, based predominately on authors' own experience<sup>25</sup>, for which there is a generalisation problem: what do we learn from this experience for other situations? There is also an increasing number of publications by consultants<sup>26</sup>, for which there is often a justification problem: on which observations and which logical reasoning are the recommendations based? These publications are perhaps very relevant, but are not of high academic quality. In this research we try to succeed in taking Pettigrew’s ‘*double hurdle*’. To achieve the required scholarly quality we deliberately study the phenomenon of corporate advantage in purchasing by using different research approaches, data collection methods or methodologies. To control for the managerial relevance of our research we continuously consult practitioners through roundtables, write articles for practitioner journals, and discuss progress with the Dutch Association of Purchasing Management (NEVI)<sup>27</sup>.

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<sup>24</sup> For a discussion about relevance versus reliability of research see also De Leeuw (1996: 22).

<sup>25</sup> E.g.: purchasing directors describing their own purchasing successes in practitioner oriented magazines like ‘Purchasing’, ‘Beschaffung Aktuell’, ‘Praxis’ and ‘Tijdschrift voor Inkoop en Logistiek’.

<sup>26</sup> Some recent examples are Boodie and Andriess, 1999; Laseter, 1998; Hughes et.al.; 1998; Russil, 1997.

<sup>27</sup> Through annual meetings with the research council of the NEVI (NRS).

### 2.3 Combining different research instruments

According to Ramsey (1998), combining different research instruments is perhaps the most powerful method of testing the reliability and (internal and external) validity of research findings on open social systems like purchasing organisations. Combining different methodologies in research is defined as *triangulation*. It originates from navigation, where it is used to determine the precise position of a ship by using several orientation points at the same time, instead of just one fixed point on the shore. In the same way, using several cases, more than one interviewee, and more than one data-gathering technique at the same time, can increase the reliability of the research results (Den Hertog and Van Sluijs, 1995:185; Wester, 1991:109). According to Verschuren and Doorewaard (1995:155) triangulation also exists within the context of one case study. They distinguish *method triangulation* (combining face-to-face interviews with document analysis and direct observation) and *source triangulation* (combining several different sources of information and combining more than one interviewee per case study). Hutjes and van Buuren (1992:97) speak of *data-triangulation*: collecting and analysing a large amount of information from different angles and with several different questions (also Wester, 1991:82). Finally, there is *research-triangulation* where individual observations from different researchers are combined and compared to filter out subjective distortions (Den Hertog and Van Sluijs, 1995:185; Hutjes and Van Buuren, 1992:95). According to Wester (1991:124) there are no general rules on how to apply triangulation in scientific research. It depends to a large extent on the research experience and the functional knowledge of the researcher conducting the research.

In this research we combine literature study, case studies, roundtables, action research, peer-group discussions and a survey. To control the quality of the data from the cases (internal validity) we combine several interviews with document analysis and direct observation (triangulation) and we repeat the process across five different cases (replication). The quality of our interpretations of the data (internal and external validity) is mainly controlled through roundtables<sup>28</sup>, and consultation of other researchers<sup>29</sup>. To increase the possibilities for generalisation of our findings from the cases, we consulted the practitioners involved in the research for feedback, we stayed

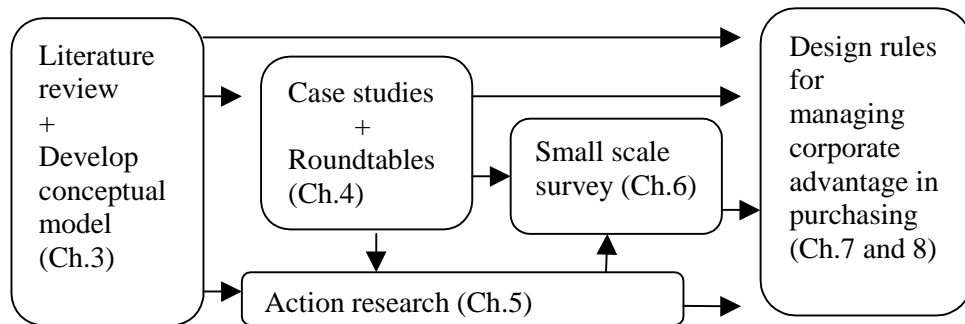
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<sup>28</sup> Wester (1991:186) speaks of ‘*member-checks*’



closely connected with state-of-the-art literature, we consulted other researchers, we tested our hypotheses through a survey among 46 large corporations, and we presented and discussed our findings during several international research conferences<sup>30</sup>. Finally, it is important to control the reliability, or in other words the quality of the research procedure itself (Wester, 1991; Yin, 1994:90-99). A reliable research procedure enables other researchers to repeat the research and generate comparable results. This is mainly done by carefully writing out all the steps taken in this research project: determination of the research questions, data collection and the deriving conclusions. In Figure 2.3, we give an overview of the major elements of our research design and indicate how these elements are related to each other. Below we will describe the different methods in more detail.

Figure 2.3 Overview major elements research design



Ad) Literature review

We follow Eisenhardt's (1989:536) advice to formulate a research problem and specify the central constructs a priori and to use them to build a preliminary model<sup>31</sup>. In contrast to Yin (1994) we did not formulate explicit hypotheses on the (causal) relationships between the central constructs at the outset of the research project. Based on the three central research questions and the literature review, a preliminary model will be presented which draws on Purchasing theory, Management theory and Organization theory. As Glaser and Strauss (in Eisenhardt, 1989:532) argue, it is the intimate connection with empirical reality that permits the development of a testable,

<sup>29</sup> Wester (1991:186) speaks of 'peer debriefing' and 'consensual validation'.

<sup>30</sup> See Rozemeijer (1998, 1999, 2000b).

<sup>31</sup> Eisenhardt (1989) speaks of a 'tentative framework'.

relevant, and valid theory. To establish the connection with the empirical reality we will use case studies, action research and a survey.

#### *Ad) Case studies*

We will use case studies to explore the preliminary model in practice. This research approach is especially appropriate in new topic areas (Yin, 1994; Eisenhardt, 1989). Qualitative methods can be used to uncover and understand what lies behind phenomena about which little is known yet (De Leeuw, 1996). As stated by Yin (1989), explorative research with many unknown elements is best performed by means of a case study research design, using either a single case study or multiple case studies. For this study, a single case study is judged to be too limited due to the complexity of the central problem. A multiple case study design will therefore be used. There are two potential approaches to multiple case study design: performing similar types of case studies (i.e. performing multiple case studies in one particular environment) and performing different types of case studies (i.e. performing different case studies in multiple environments). Researching similar types of case studies is necessary to filter out chance in the design theory, and generate as much information and knowledge as possible on one specific environment to enable the building of a design theory for that specific environment. The use of different types of cases facilitates the exploration of phenomena in different settings. Furthermore, the established theory can be expanded with the insights from the different cases. Careful case study selection is required to ascertain the validity of the conclusions from the studies (Yin, 1989). That is the reason why we have formulated a number of requirements for potential cases:

- 1) *Large multi-business company*; the use of company size as a criteria is commonly used. Several authors (a/o. Daft, 1992; Van Oijen, 1997:172) conclude that there is a strong correlation between company size and the number of divisions and/or business units. To be sure synergy is a relevant issue for that company, we will only select a company with more than one division/business unit, and more than one purchasing department.
- 2) *Headquarters based in the Netherlands*; for practical reasons (travel, language, etc.) we will only select cases in the Netherlands. Firstly, these companies are relatively easy to contact for the research team. Secondly, we will be better able to

- generalise the results from the cases, because the companies are all based in The Netherlands. The effect of cultural factors is not our primary interest in this study.
- 3) *Companies from different industries*; it is suggested by Keough (1993) that there is strong link between the type of industry a company is in and the role and position of the purchasing function in that company. Therefore we will select companies from different types of industry.
  - 4) *Ongoing corporate synergy initiatives*: to be selected as a case, a company should currently work on initiatives to create corporate advantage in purchasing. If there are no initiatives going on we will not be able to study them.
  - 5) *Willingness to be involved in this research project*; to be selected a company should show a great willingness to disclose all the necessary information, and to allow researchers access to employees at various levels over a longer period of time.

On the basis of informal contacts, information from business journals and useful hints from some experts in the field, a limited list of companies, which were potentially interesting, was drawn up. Through a letter, with an enclosure explaining the aims of the research project, the purchasing director was contacted. Next, a meeting was scheduled to discuss the project. Some respondents confirmed that they had started initiatives to realise purchasing synergy, but preferred not to co-operate because of the strategic nature of the topic. Finally, we selected a sample of five large companies, based in the Netherlands, in such way that the spectre of potential types of industry sector and organisational context were covered as good as possible. We selected companies from the Financial services, Electronics, Pharmaceutical, Oil, and the Food industry, and also with different organisational structures and backgrounds. These five cases were all studied with a structured approach. To analyse the data from the cases we used a structured format (our conceptual model as described in Chapter Three). In terms of Yin (1994), this format provides results that can be compared across the cases, and provides a means to generalise towards the research questions. Commonalties and differences between cases can thus be analysed. From this analysis we will derive the first modifications of our preliminary model describing the five relevant constructs and the relationships between them. Semi-structured interviews are chosen as the main technique for collecting primary data for this research (see also Chapter Four).

*Ad) Roundtables*

Furthermore, over a period of two years, we organised four roundtables to test whether our ideas and first generalisations from the cases were of any practical use to the purchasing directors and managers of the participating companies. Also, in these roundtables we compared the different cases with each other, and discussed the differences, similarities and relationships between different design-parameters. The use of these '*member checks*' (Wester, 1991) or '*focus groups*' (Morgan, 1988; Krueger, 1988) can be valuable to control the quality of our interpretations of the data from the case studies (internal and external validity). Also, discussing the findings with members of the different respondents can increase the possibilities for generalisation of our findings from the cases.

*Ad) Action research*

Even if a study's findings are 'valid' and transferable, we still need to know what the study does for its participants, both researchers and practitioners. We simply cannot avoid the question of '*pragmatic validity*' (Kvale, 1989). To explore the process of formulating a corporate purchasing strategy and designing a corporate purchasing structure in real time we conducted an action research project (Miles and Huberman, 1994). The project can be more specifically characterised as a '*collaborative action research*' model (Schensul and Schensul, 1992), in which researchers join forces with practitioners facing a problem to help them study and resolve it. In the project we evaluated the insights drawn from the five cases and the roundtables, and tested whether these insights helped practitioners to come up with a corporate purchasing strategy that fits with their specific corporate context. Verschuren (1994) distinguishes two basic types of practical evaluations: *process evaluations* and *product evaluations*. Product evaluations address the results of a certain intervention and are mainly focused on legitimising the effect of an intervention. Process evaluations address the intervention itself, and pursue improvement of an intervention. In the action research we concentrated on evaluating the result of using our guidelines and models (product evaluation). Two major prerequisites for a product evaluation are (1) that the participants understand the accomplishment of the project results, and (2) that the action research presents integral knowledge of the case (Verschuren, 1994). We followed a qualitative approach, using interviews, workshops and observation, to determine improvements for our models and design rules. In general terms, criteria for

this evaluation are the acceptance of the results by the organisation and the decision on implementing the suggested improvements (see also Chapter Five).

#### *Ad) Survey*

Based on the insights drawn from the cases, the roundtables and the action research, we formulated six hypotheses. To test these hypotheses concerning corporate advantage in purchasing, we conduct a survey. This survey uses data collected from high level purchasing executives at the director/VP level representing a cross industry sample of 46 Dutch corporations. Scales are developed to measure each construct and are tested on their reliability. Using data from the 46 corporations, correlation analysis is performed to test the relationships. For a more detailed description of the methodology used, see Chapter Six.

## **2.4 Conclusions**

This research is aimed at generating knowledge on creating corporate advantage in purchasing in large corporations. This problem area asks for a specific methodology for several reasons. Firstly, the research topic is relatively new. There is scientific literature available on purchasing and also on the role of synergy in corporate strategy. However, the combination of the two is rare. Consequently, there is not much academic research available to build on. Secondly, the problem area is very difficult to observe in practice. The realisation of purchasing synergy is highly interconnected with the messy company context, which makes it difficult to isolate from this context. Thirdly, the problem area has interfaces with several academic disciplines (e.g. Purchasing, Strategy, Management and Organisation theory). Therefore, it seems wise to combine different methodologies. It is expected that combining these different methodological instruments will result in knowledge that is highly valid and relevant at the same time.

## Chapter 3 Literature review

### 3.1 Introduction

Over the past decade many corporations preferred to trade off company synergy in order to give their business units greater independence<sup>32</sup>. Through decentralisation of line responsibilities, business unit managers were given exclusive authority and responsibility for creating value for their sub-set of customers. The downside is that economies of scale and synergies across the organisation are often difficult to achieve, and inefficiencies and duplications are created. According to Wissema (1992:166) business units could start acting like unguided missiles when top management focus only on decentralisation and does not pay attention to company cohesion. Collins and Montgomery (1998:71) state that most multi business firms are the sum of their parts and nothing more. Functional synergies, excluding finance and administration, are seldom realised beyond the boundaries of independent business units. According to Vizjak (1994:25), this failure to realise corporate synergy stems from the inability of companies to understand the benefits of interrelationships and the way to implement them systematically<sup>33</sup>. Wissema (1992:169) claims that unit management is only successful if decentralisation of powers and responsibilities and corporate cohesion are met simultaneously. Other authors claim more or less the same (see Table 3.1).

*Table 3.1 Successful corporations keep the balance between...*

Author		
Lawrence and Lorsch (1969)	Differentiation	Integration
Van Londen (1992)	Decentralisation	Synergy
Wissema (1992)	Unit management	Co-ordination
Mastenbroek (1997)	Autonomy	Interdependence

If no cohesion is created in a decentralised corporation, 'centrifugal forces' can start to grow. Eventually, this could result in a fragmented corporation in which no one is

<sup>32</sup> Some examples in The Netherlands are Stork, Akzo-Nobel, DSM, Philips (De Vaan and Maas, 1998).

trusting anyone else and a total lack of cross-unit communication. It appears that only when this proved to be harmful in the competitive sense, management decides to intervene. However, often they do not know how (Wissema, 1992:169).

Based on our three research questions (see Chapter One) we will review several sources of literature to explore the definitions of synergy, the mechanisms to capture it and to which specific contextual factors they are linked. Further, we will present a preliminary model, which we will use for the case studies.

### **3.2 Exploration of the concept of synergy**

Based on empirical research in the late 1980s, Mahajan and Wind (1988:64) come to the conclusion that despite its tremendous intuitive appeal, synergy is one of the most ignored strategic management concepts. Porter (1985:317-318) notes that the concept of synergy has become widely regarded as passé, and speaks about ‘a nice idea but one that rarely occurs in practice’. Deploring that conclusion, Porter devoted three chapters of his 1985 book to ‘horizontal strategy’.<sup>34</sup> In strategic management literature, synergy is often used to legitimise mergers and acquisitions (Sirower, 1997), and all kinds of other corporate interventions (e.g. corporate cost reduction programs, corporate restructuring programs). However, synergy is a rather vague term, and often ill defined in management literature and in practice. In this paragraph, we will explore synergy in more detail. Is synergy only used in management science, or also in other scientific disciplines?

The word synergy comes from two Greek words: ‘*Ergon*’ (meaning ‘work’) and ‘*Syn*’ (meaning ‘together’), meaning working together to form a greater whole (Geneen, 1997b:5; Bosman, 1993:14-15). In general, synergy is derived from the holistic conviction that the whole (in Greek ‘*holos*’) is more than the sum of its parts. Holism focuses attention directly on the whole and its characteristics as a whole, without any consideration of its parts. It is a philosophical position claiming (a) that wholes cannot be taken apart, and (b) that every apparent whole can be understood only in the

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<sup>33</sup> See also Porter (1985:318).

<sup>34</sup> Mintzberg and Quinn (1991:81-82) refer to this as *business recombination strategies* – efforts to recombine different businesses in some way, at the limit to reconceive various businesses as one.

context of the larger whole containing it. This belief is epitomised in the statement that "*the whole is more than the sum of its parts*". If the whole is qualitatively different from a mere aggregate of its parts, the difference lies in its structure or organisation. Thus any whole may be understood as, described in terms of, and considered equal to a structure, or an organisation of component parts (Krippendorff, 1986). Synergy can also be related to the concept of *symbiosis*. This concept originates from the field of Biology, but is also used in other disciplines to indicate mutually advantageous relationships (Essig, 1999a:101).

In physics the concept of synergy is also used, more specifically in the field of thermodynamics, which is concerned with the storage, transformation and dissipation of energy. The first law of thermodynamics (*the conservation law*) states that the energy in a whole cannot exceed the sum of the energies invested in each of its parts, that there must therefore be some quantity with respect to which the whole differs from the mere aggregate. This quantity is called *synergy* (Krippendorff, 1986).

Sociology is another field of study using the concept of synergy. Ruth Benedict (Maslow, 1970:320-333) discussed the correlation between social structure and aggressiveness<sup>35</sup>. Benedict stated that "...societies where non-aggression is conspicuous, have social orders in which the individual by the same act and at the same time serves his own advantage and that of the group". The importance of this thought, based on empirical observation in different cultures, lies in the fact that it shows aggressiveness to be largely the product, not of '*human nature*', but of '*social structure*', and depends on upon how large the areas of mutual advantage are in any society (or company). Non-aggression occurs not because people are unselfish and put social obligations above personal desires, but because *social arrangements* make these two identical. Benedict needed a term for this phenomenon that runs from one pole, where any act or skill that advantages the individual at the same time advantages the group, to the other pole, where every act that advantages the individual is at the expense of others. She called this phenomenon *synergy*.

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<sup>35</sup> 'Aggressiveness' can be read as the degree to which one defends its own interests relatively to the interest of the whole.



In his book '*Corporate Strategy*', Ansoff (1968:72-93) introduced the term *synergy* into management science. He stated that synergy is the effect that can produce a combined return on the firm's product-market posture and resources, greater than the sum of its parts. According to '*The handbook of strategic expertise*' (Hayden, 1986:325), synergy occurs when two or more businesses are combined in a company's portfolio so as to make the effect of their joint strategy more beneficial than the sum of their individual strategies. According to Goold and Campbell (1998) in business usage, synergy refers to 'the ability of two or more units to generate greater value working together than each of them could by working apart'. Van Londen (1998:156) describes synergy as the advantages that the corporation can offer to the operating companies belonging to the corporation and thereby profiting from each other's presence in the corporation. Sometimes synergy is indicated with the formula:  $1 + 1 = 3$ . Because in practice often both parties win, but often one more than the other, Wijers (1994) suggests a slightly different formula to illustrate synergy:  $1+1=1.6 +1.1$ .

De Sitter (1994) states that synergy is all the new value that you add through organisation; the structure of interrelationships between independent units. According to Porter (1985), synergy is based on (potential) interrelationships that exist across independent business activities. These interrelationships fall into two main categories. Firstly, *tangible* interrelationships that arise largely from linkages in the areas of production, marketing, procurement, technology and infrastructure. Secondly, the *intangible* interrelationships related to management skills, knowledge, or experience in implementing a particular generic strategy<sup>36</sup>. According to Ansoff (1968) the potential interrelationships can take the form of: joint use of plant, common inventories, common tooling and machinery (*investment synergy*), product-market combinations using common distribution channels, common marketing and advertising (*sales synergy*), higher utilisation of facilities and personnel, spreading of overheads, advantages of common learning curves, and large-lot purchasing (*operating synergy*), transfer of common management skills and functional competencies to other business activities (*management synergy*). One of the most

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<sup>36</sup> See also Wijers (1994).

recent studies on corporate synergy is from Goold and Campbell (1998). They state that most business synergies take one of six following forms:

- *Pooled negotiation power* ('buying together'): by combining their purchases, different units can gain greater leverage over suppliers, reducing the cost or even improving the quality of the goods they buy. A number of companies have identified large benefits through common purchasing of inputs used by several of their businesses. Companies can also gain similar benefits by negotiating jointly with other parties, such as competitors, customers, governments, universities or other non-competitors. A lot of references of pooled negotiation power with other stakeholders can be found (Essig, 1998). The terms used for these kinds of co-operation differ with the business sector: co-operative purchasing (public sector), consortium purchasing (industrial companies), group purchasing (health care) and buying office (Retail).
- *Sharing intangible resources*; units can improve their results by sharing of best practice in certain business processes, or leveraging expertise in functional areas, or pooling knowledge about how to succeed in specific geographical regions. Maybe written up in manuals, policies and procedures, but very often it is less formally documented. Value can be created, simply by exposing one set of people to another. The emphasis that many companies now give to leveraging core competencies and sharing best practices reflects the increased importance of this form of synergy.
- *Shared tangible resources*: business units can gain economies of scale and avoid duplicated effort when physical assets and resources are shared or by pooling investments in information and communication systems, or corporate specialists and overhead. Companies often justify acquisitions of related businesses by the synergies and cost reductions that are anticipated from the sharing of resources.
- *Vertical integration*: co-ordinating the flow of products or services from one unit to another can reduce inventory, speed product development, or increase capacity utilisation. By integrating and co-ordinating the total chain from suppliers to customers (supply chain management) significant synergies can be captured. An example of this synergy is Renault's '*Synergy 500 programme*'. The initial idea behind it was to generate ideas from suppliers for a FF 500 million cost reduction,

but today it has become the core of the company's relationship with suppliers (Larkin, 1996)<sup>37</sup>.

- *Co-ordinated strategies*; by reducing competition between units (e.g. by allocating markets) or co-ordinating reactions to shared competitors, customers or suppliers. Aligning the strategies of two or more business units can be an important source of synergy, but tough to achieve. Striking the right balance between corporate intervention and business unit autonomy is not easy.
- *Combined business creation*; the creation of new businesses by combining know-how from different units, by extracting activities from different units to put into a new unit, and by internal joint ventures or alliances between units. With the increased concern for corporate regeneration and growth, several companies have placed added emphasis on this type of synergy.

It should be noted that all these authors describe potential rather than actual synergy. The potential synergy is the expectation that integrated corporations can achieve the same sales figures with lower operating costs and investments, or with the same amount of investment reach higher sales and lower operational costs (Ansoff, 1968). Synergy does not come automatically for everything that co-operates, it should be managed. If there is no potential synergy at all, there is no point trying to force co-operation: conglomerates should be managed like conglomerates (Wissema, 1992). Only when one entity (e.g. corporation) puts the *right parties* together and let them co-operate on the *right issues*, in the *right way* and on the *right time*, then potential synergy might materialise (Bosman, 1993: 15). If corporate management does a poor job, the combined actions can lead to antagonism (= negative synergy) resulting in an unsuccessful merger, poor implementation of corporate strategies, or too high co-ordination costs. In that case the whole will become less than the sum of its parts. In other words, whether the potential joint effects will, in fact, materialise depends on the manner in which the new acquisition is integrated into the parent organisation, or in which two business units are stimulated to work together, or on the way in which they work together (Ansoff, 1968:71).

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<sup>37</sup> Other examples of synergy through (quasi) vertical integration are: Chrysler's 'SCORE-program' and 'Extended Enterprise' concept, and Honda of America's 'BP-program' (Van Weele and Rozemeijer, 1996).

This is in line with the hypothesis of sociologist Benedict, who states that synergy is more dependent on the organisational structure than on the individual human nature (Maslow and Honigman, 1970). Geneen (1997b) puts these management theories in perspective by stating that synergy is ‘the most screwball buzzword of the past decade’. He states that when managers say synergy, they usually mean ‘studying the situation – looking at all steps in a process and either improving them, eliminating them productive use of assets’, or ‘efficient allocation of manpower and resources’. And that requires hard work, determination, and strategic thinking; in a word strong management (Geneen, 1997b).

### **3.3 Exploration of synergy in Purchasing**

As mentioned above, pursuing synergy is often motivated by the expectations of improved efficiency and better effectiveness due to economies of scale and economies of scope at the corporate level. These expectations are also a key consideration in many co-operative arrangements in the area of purchasing (Faes and Matthyssens, 1998). We distinguish between ‘intra’ and inter’ firm, co-operation arrangements. Co-operative purchasing among independent organisations is not a new idea. According to Essig (1999a:117), the first sources referring to inter firm co-operative purchasing are Mitchell (1927) and Gushee and Boffey (1928). A distinction can be made between co-operatives and consortia. Co-operatives have a long history, and have been formed by farmers, non-profit organisations and the public sector to maximise their buying power. In Fenwick (United Kingdom) already in 1769 a purchasing co-operative was established by the labour movement, aimed at reducing the price of living for workers, through large scale buying (Encarta, 1999). Since the late 19th century farmers also have formed co-operatives, or "co-ops," with the goal of combining their individual needs to gain purchasing power vis-à-vis capital providers and equipment suppliers<sup>5</sup>. Also independent grocers, retail hardware stores, and college bookstores, to name a few, have established co-operatives. The US based E&I Co-operative Service, closely linked with the National Association of Educational Buyers (NAEB), goes for the oldest and largest co-operative in the public sector. E&I

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<sup>5</sup> In 1864 the first ‘farmer co-op’ was established in Germany, few years later in 1877 the first one was established in the Netherlands (Encarta, 1999).

comprehend more than 2000 universities, high schools, and hospitals as members (Essig, 1999:247).

The other inter firm co-operation arrangement many Anglo-Saxon textbooks on purchasing deal with, is the 'purchasing consortium'. According to Hendrick (1997:7) a purchasing consortium "*consists of two or more independent organisations that join together, either formally or informally, or through an independent third party, for the purpose of combining their individual requirements for purchased materials, services, and capital goods to leverage more value-added pricing, service and technology from their external suppliers than could be obtained if each firm purchased goods and services alone*". In the retailing sector these consortia are often named 'buying offices'. To be sure, many of these organisations have been formed to enable them to survive against the powerful purchasing and marketing power of large food chains and general merchandise stores. In addition, a large number of hospitals in the United States and other healthcare providers have enjoyed favourable pricing and service for many years for medical-surgical-laboratory supplies, pharmaceuticals, laundry, food, maintenance services, and medical equipment. This has been facilitated through the "group purchasing organisations" (GPOs) that serve as independent third parties to negotiate with large suppliers to the healthcare industry. In recent years, these GPOs have become an important mechanism for independent hospitals to compete with the dynamic growth national for-profit hospital chains. Among Fortune 500 firms, however, the incidence of the formation and use of purchasing consortiums, as defined above, is an activity that did not begin, to any great extent, until early in the 1990s. Monczka et al. (1998:699ff) identifies purchasing consortia as a key trend for purchasing in the next century, and forecasts a growing number of firms will become members of consortia as means to realise lower purchase costs. Becoming a member of a purchasing consortium, or even forming a consortium, is becoming increasingly easy due to the fast developments in internet technology (Corsten, 1999)<sup>38</sup>.

In Europe, Arnold (1982) was one of the first academics pointing out the potential strategic benefits of intra-company purchasing co-operation, or 'collective

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<sup>38</sup> Not only for companies (see [www.buy2gether.com](http://www.buy2gether.com)) but also for consumers (see [www.letsbuyit.com](http://www.letsbuyit.com)).

transaction'<sup>39</sup>. Co-operative purchasing is regarded as a strategic task of purchasing management by Arnold (in: Essig, 1999:114), and should be firmly rooted in the purchasing processes, procedures and policies of the corporation. In the USA, economist Sheperd (1985:176 ff.) claimed that 'Purchasing in bulk'<sup>40</sup> may achieve *technical economies*, as well as *pecuniary economies*. The first one, *technical economies*, arises from changes in the actual physical organisation of purchasing activities making purchasing being more efficient (e.g. by avoiding duplication of efforts) in obtaining and managing suppliers, by dealing with large batches at a highly sophisticated level. In addition, Essig (1999:86) claims that co-operation in purchasing not only enables a more efficient use (economies of scale) of the human and technical resources, but also a more effective use (economies of scope). This is supported by Kauffman (1993:108), who states that through co-operation across business units purchasers can learn from each other. Kauffman uses the terms 'economies of mental work' or 'economies of team' to indicate these benefits<sup>41</sup>.

Based on case research in a small number of large German companies, Arnold (1997) distinguishes three potential benefits of intra-firm co-operation in purchasing:

- *Economies of Information*: existence of (valuable) purchasing information in only a few (or even one) (corporate) intelligence centres, and made available for all units by an advanced information system. It is expected that this sharing of purchasing information on suppliers, new technologies, market developments, internal users and historical spending behaviour, avoids redundancy and reduces transaction costs of the participating units.
- *Economies of Process*; existence of state-of-the-art purchasing process knowledge in all steps of the purchasing process, in all parts of the company. This can be established by one common way of working (e.g. one line of conduct shown to suppliers), uniform purchasing procedures, sharing 'best-practices' across the corporation, and common training and education.
- *Economies of Scale*; bundling demands to increase the company's *buying power* ("Pile it higher, buy it cheaper"). This can be established by standardisation of

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<sup>39</sup> Later Arnold speaks of this in terms of 'Strategic purchasing alliances' (1990), 'Einkaufskooperationen' (1994), 'Collective sourcing' (1996), 'Cooperative purchasing' (1996) 'Intra-company purchasing consortia' (1997) (see Essig (1999:115).

<sup>40</sup> Meaning: co-operating in purchasing, business units buying together, pooling negotiating power, etc.

requirements, synchronising specifications, but also by sharing suppliers across business units.

The second benefit of ‘purchasing in bulk’ according to Sheperd (1985:176 ff), pecuniary economies, is a matter of money, not real efficiency, and occurs mainly from lower input prices paid by the buying firm. That reduces costs, but not from any change in the real methods or use of purchasing resources of the buying firm. For example, merged firms may be able to enforce lower prices for the inputs it buys (Sheperd, 1985). Pecuniary economies might reflect: 1) Technical economies realised by suppliers (real cost reductions): ordering in large batches leading to volume price discounts, through the larger volume the supplier can grow and capture pure scale economies (Essig, 1999:86; Vizjak, 1990:108), or 2) Reduced price discrimination by the supplier through favourable connections and close relationships (e.g. partnerships, supply chain management). These closer relationships may lead to lower risks for the supplier, and by that, to willingness to lower prices and improve delivery conditions.

Pecuniary economies are especially likely at the corporate level. Large corporations can often exert bargaining power on behalf of its many business units and plants to force its suppliers to accept lower prices than any single plant or business unit could obtain. That is true for many input-resources. According to Sheperd (1985) price discounts are possible and common on nearly every type of input: Capital (lower interest rates), Utility services (lower rates), Advertising services (large discounts and advantages like access to prime time and favoured pages), Raw materials and Semi-finished inputs (great variation in patterns but some degree of large order discounting is common). The net gains of size appear to be more than trivial (Sheperd, 1985:192).

Based on results of in-depth case studies at four large German corporations, Arnold (1997) claims that the benefits of intra-company purchasing consortia are significant and can be realised without higher co-ordination costs. Based on a research project in Germany, Essig (1999:183) reports an average volume increase ranging between 800% and 1200% for the 13 companies participating in co-operative sourcing arrangement. This volume increase resulted in savings ranging from 1% to 15% for

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<sup>41</sup> Penrose (1972:92-95) would call these economies ‘Managerial economies’.

the thirteen participating companies<sup>42</sup>. Vizjak (1994:30) estimates that unit cost reductions of up to 10% are achievable as a result of co-ordination of activities, exchange of information and concentration of buying power.

Matthyssens and Faes (1997b) described, based on some European case observations the usefulness of a co-ordinated purchasing approach as a strategic weapon. It can be used not only to reach a stronger negotiation position by pooling the volumes purchased in the various units, but also to prevent mutually incompatible negotiating strategies. Faes and Matthyssens (1998) summarise, based on a survey, the top five of perceived benefits of a co-ordinated purchasing approach. Co-ordination leads in the first place to better internal exchange of information across business units and purchasing departments. Secondly, it leads to improved market negotiation strategy development. In the third place it leads to significant cost savings. Fourthly, more impact on monopolistic supply markets. Finally, it leads to an improved insight in supply market and supplier cost structures. For this reason, large corporations like IBM, Chrysler, Philips, Xerox and Alcatel-Bell co-ordinate their purchasing activities like selecting suppliers, negotiating and contracting globally and on a corporate scale (Van Weele and Rozemeijer, 1996).

Given the insights presented above, purchasing synergy can be defined as: the increase in purchasing performance (efficiencies and effectiveness) that is realised when two or more business units join their forces and/or share functional resources, information and knowledge.

### **3.4 Mechanisms to create corporate advantage**

What brings a group of business units to meaningful co-operation and exchange of information and knowledge? Why do business units, functional departments or other groups work together? Basically, there are two answers to this question: because a central power forces them to co-operate with each other (*mandatory basis*), or because they want to co-operate (*voluntary basis*). Other factors explaining successful co-operation include: because they trust each other, because they have common and/or

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<sup>42</sup> In his study Essig (1999:179) also reports a correlation-coefficient of 0,7546 between 'volume increase' and 'purchasing savings', which indicates the potential value of increasing buying power.



congruent interests, because they are complementary to each other in reaching a 'stretched goal' that each independent business unit cannot reach itself, because if the co-operation is successful it leads to personal success in terms of career opportunities or financial rewards (Asseldonk and Blom, 1997:60). Wissema (1992:169) states that cohesion<sup>43</sup> has two sides, a 'hard' side and a behavioural, 'soft' side. The former comprises making plans together, designing a structure which encourages communication and solves its own conflicts, a good information and communication system, ranging from electronic mail, by way of working sessions in cross-connections, to office parties, as well as corporate identity, expressed in a house style, a published mission statement, corporate advertising, and so on. These are all components that can be 'arranged'. The behavioural side comprises what is usually termed the 'corporate culture' or 'management style'.<sup>44</sup> A set of shared values and dominant beliefs provides an important key to implementation of synergetic co-operation because it is a powerful force for providing focus, motivation, and norms (e.g. informal rules) (Schein, 1992).

Porter (1985) describes the following three mechanisms to co-ordinate and integrate activities across different units. Firstly, top management should stimulate and support co-operation between business unit (e.g. they should identify potential interrelationships between business units, organise forums or annual events, and they can establish a corporate platform for co-operation across business units). Secondly, a horizontal strategy should be formulated adjusting the different business unit strategies. Thirdly, to implement this strategy a horizontal structure should be designed; e.g. grouping of divisions and business units under one manager, centralising some function at headquarters, permanent corporate boards, temporary taskforces, and integrating roles. Galbraith (1995) describes three types of lateral processes to achieve the integration across business units a corporate strategy requires. Firstly, informal, voluntary co-ordination that occurs naturally and spontaneously (minimal or extensive). Secondly, formal groups, teams and/or task forces (simple, multi-dimensional, hierarchical). Finally, integrators (roles, managers, departments).

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<sup>43</sup> High cohesion indicates that opportunities for synergy are utilised (Wissema, 1992:166).

Mintzberg and Quinn (1991:334) states that there are six basic co-ordinating mechanisms: 1) *Direct mutual adjustment* achieves co-ordination of work by the simple process of informal communication. The people who do the work interact with one another to co-ordinate. Mechanisms used to encourage mutual adjustment within and between units are referred to as liaison devices; liaison positions (jobs created to co-ordinate the work of two units directly without passing through management channels), temporary task forces and standing committees, integrating managers with formal authority, and the matrix structure. 2) *Direct supervision* in which one person co-ordinates by giving orders to others, tends to come into play after a certain number of people must work together. Fifteen people cannot co-ordinate by mutual adjustment; they need a leader who, by virtue of instructions, co-ordinates their work. According to Mintzberg and Quinn, co-ordination can also be achieved by *Standardisation* – in effect, automatically, by virtue of standards that predetermine what people do and so ensure that their work is co-ordinated. Mintzberg and Quinn consider four forms of standardisation.

3. *Standardisation of work processes*: the programming of the content of the work, procedures to be followed (e.g. assembly instructions that come with many IKEA products).
4. *Standardisation of output of the work*: specification of the results of the work (e.g. a division manager is told to achieve a sales growth of 10% so that the corporation can meet some overall sales target).
5. *Standardisation of knowledge and skills* that serve as inputs to the work: here it is the worker rather than the work or the output that is standardised. Co-ordination is then achieved by virtue of various employees having learned what to expect from each other and each knows exactly what the other will do and can co-ordinate accordingly.
6. *Standardisation of norms* that more generally guide the work: workers share a set of common beliefs and can achieve co-ordination based on it (e.g. if every member of a corporation shares a belief in the importance of improving quality, then all will work together to achieve this aim).

These co-ordinating mechanisms can be considered the most basic elements of structure, the glue that holds organisations together. They seem to fall into a rough

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<sup>44</sup> Weggeman (1997b:66) speaks of a 'synergy-searching and cooperative culture'.

order: as organisational work becomes more complicated, the favoured means of co-ordination seems to shift from mutual adjustment (the simplest mechanism) to direct supervision, then to standardisation, preferably of work processes or norms, otherwise of outputs or of skills, finally reverting back to mutual adjustment.

Mintzberg and Quinn (1991:334) state that no organisation can rely on a single one of those mechanisms; all will typically be found in every reasonably developed organisation. However, according to Mintzberg and Quinn, many organisations do favour one mechanism over the others, at least at certain stages of their lives. In other words the mechanisms used are contingent with the organisation of the corporation. Asseldonk and Blom (1997:60) state that the mechanisms used to realise synergy in advanced network organisations (e.g. decentral self-organisation) should be different from traditional large-scale organisations (e.g. central procedures and control). In other words, when applied in a network organisation, centrally controlled mechanisms to realise synergy will strand in very high complexity and co-ordination costs (Asseldonk and Blom,1997:60). Organisations that favour none seem most prone to becoming politicised, simply because of the conflicts that naturally arise when people have to vie for influence in a relative vacuum of power (Mintzberg and Quinn, 1991:335).

Although most corporations use structures and procedures, such as described above, it could be that strategic initiatives tend to be uncoordinated or even never realised. This may not cause a problem if the organisation is adopting an 'incremental' approach to strategy formulation and implementation, as described with the concept of 'logical incrementalism' by Quinn (1980). A lack of formal strategy formulation, planning and implementation is 'normal' if strategy should and does emerge in an unplanned manner as the organisation responds instinctively, to its environment as suggested by Mintzberg and Quinn (1991).

### 3.5 Mechanisms to create corporate advantage in purchasing

It may appear strange that, though it is argued by several researchers<sup>45</sup> that intra-company co-operation can produce significant savings in purchasing, it has received only limited attention in purchasing, (industrial) marketing and general management literature. Conceptual and empirical articles, to our knowledge, are scarce. Most purchasing text books focus on both the organisation of purchasing in multi-plant, and on the motives supporting the usefulness of centralised or decentralised purchasing (Dobler and Burt, 1996; Lysons, 1996; Van Weele, 1994; Baily, 1994; Fearon et al. 1993; Heinritz et.al., 1991; Corey, 1978). Many authors agree on the strategic value of co-ordination within and between the purchasing functions of different operational units. Faes and Matthyssens (1998:205) argue that there are conflicting opinions about the tendency of centralisation versus decentralisation in current business. Some researchers report a shift towards increased decentralisation of purchasing activities, for reasons of having problem solving capabilities close to where the problems occur (Gadde and Hakansson, 1994). Others describe the centralisation and/or consolidation of purchasing activities as one of the key purchasing trends, enhancing and building critical competencies in purchasing (market knowledge, cost modelling, etc). Also, consolidation of purchasing requirements across worldwide business units is regarded as a prerequisite for a global sourcing strategy (Dobler and Burt, 1996).

According to Faes and Matthyssens (1998) two conflicting pressures can be identified. Globalisation, standardisation and efficiency pressures are pushing towards greater centralisation. Customisation, differentiation and responsiveness pressures push towards greater decentralisation. In other words, both decentralisation and increased centralisation are forces simultaneously shaping future purchasing strategy (see also Brandes, 1994). Eventually, different types of co-ordination might be the resulting mid-range positions. There are five basic organisational models for managing purchasing synergy that can be found in purchasing literature; Decentralised informal and voluntary co-ordination, Co-ordination, Centralised purchasing, Centre-led action network, and the Federal organisation of Purchasing.

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<sup>45</sup> Essig, 1999; Faes and Matthyssens, 1998; Arnold, 1997; Vizjak, 1994; Sheperd, 1985.

*1) Decentralised with some informal and voluntary co-ordination*

In this approach, each business unit has its own autonomous purchasing function. Cross business unit co-ordination, if any, is voluntary, ad-hoc and informal. There is no centralised co-ordination or development of policies other than what might appear through financial or other operating policies of the firm. This organisation places all responsibility for purchasing activities at the field locations, and it serves to minimise corporate overhead. A disadvantage of this model is that the local purchasing units lack managerial or operating strength to provide the group with the economies, synergies, and buying power that is often found in companies with centralised groups. One variation on the decentralised form consists of voluntary purchasing councils that are based at field locations. A council consists of local purchasing personnel with similar product and service needs. They meet voluntarily and co-ordinate a single source and acquisition (negotiation, contracting, and ordering) as though they were one group. In many firms, however, voluntary purchasing councils often disband due to lack of leadership or top management support and commitment (Cavinato, 1991).

*2) Decentralised with central co-ordination*

This model consists of decentralised purchasing units reporting to a business unit manager combined with a centralised purchasing co-ordinating group (or individual) at corporate headquarters. This central group oversees matters and issues of concern for the entire firm, and it seeks opportunities for the firm as a whole, where individual plant site personnel may not have a macro-view. The central groups often exist and operate through a consulting role whereby they must liquidate their annual costs through sales of purchasing consulting services to the business units. The advantage of this model is that the firm attains the central group scope as well as the authority in dealing with suppliers, but it does not carry the full overhead cost often found with fully centralised groups (Cavinato, 1991).

*3) Centralised*

In this approach, a central purchasing group buys for all operating units, while the operating units are consulted but are not responsible for their own buying. Centralised purchasing provides the firm with a single, collective sourcing and buying power. This model captures a large part of the potential corporate purchasing synergies, but there is little user control and responsiveness to local needs. Historically, the primary

advantage of centralised purchasing has been to realise a favourable price due to accumulated volumes. Unfortunately, when firms pursued centralised purchasing, they not only centralised the sourcing of parts with suppliers, but also the actual ordering process.

Recently, a number of 'new' purchasing structures are introduced in literature and practice: Centre Led Action Network (CLAN) (Cammish and Keough, 1991; Russil, 1997), and Federal Organisation Purchasing (FOP) (Akbar and Lamming, 1996). Centralised functions have often been associated with large, unresponsive and bureaucratic traits, whilst decentralised functions have been shown to exhibit low critical mass, low skill levels and poor communication across units. The advantages of centralised structures are often the disadvantages of decentralised structures, and vice versa. CLAN and FOP are considered to be ways of organising the purchasing function, that avoid both the rigidity of centralised structures and the fragmentation traits of decentralised structures. The main difference between the two is that CLAN is centre-led ('the centre makes it happen') and FOP is locally led ('centre supports and facilitates').

#### *4) Centre-Led Action Network (CLAN)*

A CLAN structure consists of a network in which purchasing action (actual buying) takes place in fully empowered decentral purchasing units, but purchasing accountability and functional excellence is led from the corporate centre (Russill, 1997: 315). This organisational form tries to draw benefits from creating a large critical mass, whilst maintaining flexibility and diversity. CLAN combines user control and responsiveness to local needs with the ability to capture corporate purchasing synergies by using formal cross-unit co-ordination and integrating mechanisms (e.g. corporate group). Apart from providing leadership to the purchasing function, the primary interest of the corporate centre is to make networking happen between the independent business units (networking of this scale fails if it is not driven) (Russill, 1997:73). The purchasing teams in the business units each report to its own business manager and board, and are able to handle all the supply market issues necessary for that business to operate. In a CLAN, co-ordinated action is achieved (when needed) by temporarily bringing together buyers from the relevant business units who then together devise and execute the purchasing strategy. Any full

member of a purchasing team, whether from purchasing or other departments, is at the same time a member of the functional purchasing family. Prerequisites of CLAN-success are: belief in the need, active support and a champion of change at the top of the company, buyers are enabled by best-practice policies and techniques, effective systems infrastructure, and buyers able to perform, and receptive internal users wanting to collaborate (Russill, 1997:75).

#### *5) Federal Organisation of Purchasing (FOP)<sup>46</sup>*

Akbar and Lamming (1996) applied a number of federal principles to the purchasing environment to design a new structural form: Federal Organisation of Purchasing (FOP). The FOP consists of a small central core, flat in structure, supporting and coordinating a number of autonomous purchasing units. These units are interrelated in some way due to shared facilities or services. The power of the purchasing function resides equally with these units, instead of being delegated downwards by the centre. The units have a reporting line to the business unit heads, not to the central core. There is only a professional relationship between the federal purchasing unit and the central core.

The five federal principles underlying the FOP are: 1) *Subsidiarity*: power resides in the BU's, not with the central core. Decisions can be made quickly (without bureaucratic procedures) by people with expertise and knowledge of the local environment, they are accountable. 2) *Interdependence*: management of the interrelationships between business units and in particular between purchasing units is important to sustain the FOP. If relationships are not developed and maintained, the FOP risks fragmentation. The purchasing units have to feel they are gaining some sort of benefit from being a member of the FOP, otherwise they will break away from it. 3) *Common law and language*: real time data, information and intelligence via global IT system, common source of information, in order that decision points can be identified. Access to information on the breakdown of corporate spend by supplier, business group, or classification of goods and services purchased, supplier information and appraisal systems, contract details, code of ethics etc. Policies and procedures provide the common law and basic guidelines to procurement areas. 4)

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<sup>46</sup> FOP can be regarded as a 'self-organising network'.

*Separation of power*: central involvement is limited to the requirements identified by the BU's. Power resides with the BU's, the formulation of strategy is the responsibility of the units and the role of the centre is essentially one of monitoring purchasing best-practice, co-ordination and the provision of resources when required. balance. 5) *Twin citizenship* (dual citizenship): FOP requires employees to be members of the local BU as well as the whole company. Success of the FOP is dependent on employees considering themselves as one common body, having higher priority than the individual business units or their self-interest. This gives employees both a corporate identity, and the ability to work in a smaller local group with its own unity. A strong local identity and purchasing skill-base is fostered under strong leadership, which in turn ensures that local purchasing managers are able to express the views on behalf of their purchasing units and act as their agent when involved with corporate purchasing matters.

The type of environment required in order to sustain the FOP can be described as federal spirit (federal loyalty and federal commitment to fair play). Based on a survey, Akbar (1996) defined some basic conditions underlying the FOP. First condition, the appropriate 'federal' corporate management style (as expressed in corporate strategy, structure, culture and management styles) should be present. If not present, BU's will become too focused on local needs, and possibly even are stimulated to compete with each other. Secondly, effective ICT support is important in a decentralised and fragmented FOP. Dispersed information should be readily available. Thirdly, effective communication means are especially critical at the managerial level. Means for formally co-ordinating different purchasing departments can be: introduction of focus groups, project teams, steering groups and sub-groups, annual conferences, video conferences. Fourthly, full ownership should be in place of the units involved. If the parent company not totally owns the BU (shared ownership, alliances, joint ventures, etc), implementation of FOP will become more difficult.

### **3.6 Preliminary conceptual model**

The 'one best way' approach that has dominated thinking about organisational structure since the turn of the century is recently replaced by the contingency theory (Mintzberg and Quinn, 1991:330). In this way of thinking, structure should reflect the

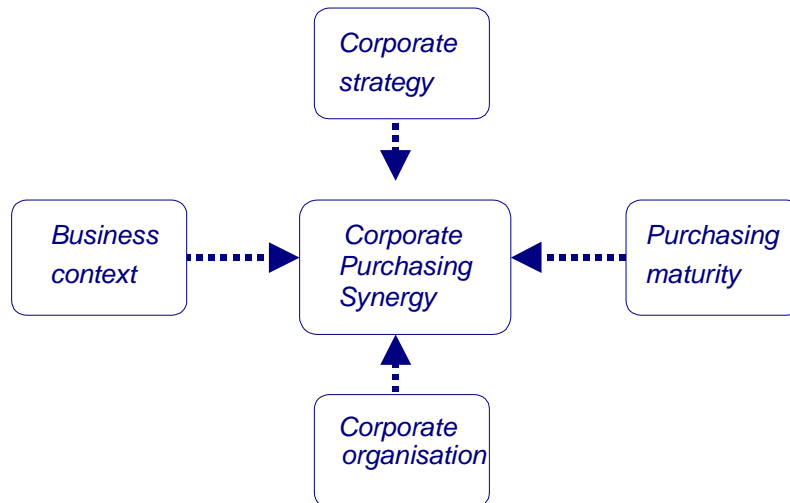


organisation's situation – for example, its size, type of production, the extent to which its environment is complex and dynamic. According to Corey (1978), a number of contingency or situational factors influence the choice of the mechanisms to manage and organise purchasing. Based on research at some large US companies, Corey (1978) summarised four situational factors that drive companies to establish stronger corporate purchasing functions:

1. Supply shortages or scarcity and the need for assuring long term availability of the (critical or strategic) materials needed
2. Changing business context (internationalisation, developments in information and communication technology, government (de)regulation, and public attention to the way companies do business (ethics, environmental issues))
3. Need for improved corporate profit performance through reduced costs of supply
4. Need for increased professional development in the purchasing function, and for more efficient use of scarce human resources in its several functions and business units.

More than twenty years later, these factors still seem relevant. However, based on our literature review, we think that we are not able to solve the research problem with purchasing theory alone. Given the insights described in the previous sections, knowledge of strategic management and organisation theory also seems necessary to solve the research problem. Therefore, we regard corporate strategy and -organisation also as important situational factors for the design of corporate purchasing organisations. Modern research on corporate organisations probably started with Chandler's *Strategy and structure* (1962). Subsequent research has been aimed at expanding the number of attributes of an organisation beyond that of just structure (e.g. systems, people, reward systems, culture, and processes). The idea behind it is that an effective organisation is one that has blended its structure, culture, and people into an internal consistent package, that in turn is consistent with the corporate strategy (Collins, 1997). Also other authors (a/o. Galbraith, 1995; Mintzberg and Quinn, 1991; Daft, 1992) regard the nature of an organisation as an important situational factor for the design of co-ordinating mechanisms. In our view mechanisms used to create corporate advantage in purchasing are influenced by four situational factors: business context (i.e. external environment), corporate strategy, corporate organisation, and purchasing maturity (see figure 3.1).

Figure 3.1 Preliminary conceptual model



Our basic objective for our case study research is to obtain a good understanding of how these four constructs are related with the different mechanisms to create corporate advantage in Purchasing. First, we will explore them in further detail based on literature review.

### 3.6.1 Business context

What are the different strategic and structural responses of companies in different business sectors (or external environments), and what is the role of corporate purchasing in those business strategies? This can best be illustrated by using the findings of Birou et al., (1997). They investigated the relation between stages in the business life cycle and purchasing strategies (see Table 3.1).

Table 3.1 Purchasing strategies and the business life cycle (adapted from Birou et al., 1997 and Van Weele and Rozemeijer, 1996)

Stage	Focus of management	Purchasing strategies
Design	Research & Development, Product technology	Early supplier involvement, single sourcing, make-or-buy, decentralised purchasing
Introduction	Product creation and development process, increasing variety in product features to meet customer demands	Supplier development, TQM, certification, purchase of subassemblies
Growth	Knowledge of production processes, to be able to quickly response to customer needs with emphasis also placed on product quality and process innovation	Supplier lead-time reduction, JIT, performance evaluation, large volume suppliers, strategic alliances
Maturity	Competing on low cost production, customer focus, service, and by concentrating on core activities	Cost reduction, supply base reduction, blanket ordering, bundling service contracts, LT contracts, global sourcing
Decline	Flexible manufacturing systems to accommodate rapid changes in market demands, product reengineering and product substitution	Decentralised purchasing, part number reduction
Renewal	Clear vision, people orientation, embedded management style, core competencies	Extensive outsourcing and co-operation with best-in-class suppliers

A business system develops in five distinct stages: Pre-commercialisation (design), birth (introduction), expansion (growth), leadership (saturation), and self-renewal or, if not self-renewal, death (decline) (Moore, 1993; Van Weele, 1994). There are apparent differences in competitive strategy, management style and purchasing importance depending on the stage in the industry life cycle (Van Weele and Rozemeijer, 1996; Birou et al., 1997). During maturation of the company along the business life cycle, the competitive edge changes from technology and product features to management style. Companies that are not able to meet these requirements are eliminated.

As described in the table, the business context has a major impact on corporate and purchasing strategies and organisations. However, these changes have a different effect on different industries, and on the companies inside that industry. This means that one cannot make general recommendations across industries, instead one should adjust its strategy and organisation to the business environment.

### **3.6.2 Corporate strategy**

Ideas on how to sustain competitive advantage at business and corporate levels, have implications for functional contributions (Saunders, 1994). In chapter One we described the developments in various strategic schools. Here we want to extract some relevant points for purchasing management. The early groundwork in establishing a strategic view of purchasing was carried out mainly in the 1970s, when corporate and strategic planning was popular. Purchasing theorists like David Farmer (1974) stated that purchasing was a significant function, which need to be considered as part of the corporate planning process to ensure that supply conditions are reflected in it. However, the strategic management authors of the 1970s did not share this meaning.

As the 1980s proceeded, further developments in strategic purchasing tended to stress the theme of competitive advantage. As a function, purchasing was claimed to be capable of being a source of competitive advantage, according to Porter (1985). The tasks of managing suppliers and supplier relationships, to ensure external resource availability, started to come to the forefront. Moss-Kanter (1989) linked competitive advantage to external co-operation, by describing that it may not be feasible for individual firms to develop resources as a basis of competitive advantage on a 'go it alone' basis. Rather than relying on a competitive, adversarial mode with external firms (e.g. suppliers, customers) gains are to be made through co-operation. Moss-Kanter stated that closer relationships with suppliers in new product development could improve innovativeness. As a function, it was seen to be in competition with the same purchasing function in competing companies. Late 1980s, Monczka (1998) stressed the pursuit of 'world class manufacturing' and the need for continuous improvement. Also the need to work in cross-functional teams was noted and increasing attention was paid to the make or buy decisions in relation to design, build and sourcing capabilities. In the eighties increasing emphasis is given to upstream activities in meeting customer wants and maintaining a competitive advantage.

Only in the late 1980s and early 1990s a number of frameworks were proposed to make the link between specific business competitive strategies and the contribution of strategic purchasing more explicit (Reck and Long, 1988; Freeman and Cavinato, 1990, 1992). Before that, purchasing was not regarded as a strategic business function (see Box 3.1).

*Box 3.1 Purchasing related articles in the Harvard Business Review*

Toyota implemented their Lean Production strategy late 1970s, but it took ten years before the rest of the world could take notice of 'Lean-Manufacturing' and 'Just-In-Time' via articles in HBR. In 1990 the article of Prahalad and Hamel about 'Core competencies', urged companies to focus on capabilities that are hard to copy. After that it took three years before issues like outsourcing, supply chain management, vertical de-integration, strategic alliances, virtual organisation and flexible organisations came into fashion as topics for articles. These are all topics related to purchasing in one way or another, indicating the fact that Purchasing, or related activities, are regarded as more important for the readers of HBR; top managers (Sibbet, 1997).

According to Wissema et al. (1989), the purchasing function can increase its strategic importance especially in the stage of 'knowledge and resource management'<sup>47</sup>. Companies that follow a strategy aimed at developing their core competencies, or at creating an 'Intelligent Enterprise' (Quinn, 1992), are more or less forced to develop their purchasing organisations in order to succeed. Growing strategic recognition that firms do not exist in isolation, but are part of value chains, also give greater strategic recognition to purchasing. Purchasing is no longer viewed as an area concerned with making relatively low-level administrative decisions, as depicted by well-known strategist Ansoff (1968) at one time. With the evolution of strategic thinking in mind, we now better understand why since the 1960's very little attention is given to purchasing as an important element to support business strategy. It is remarkable that the attention for purchasing and supply related topics like core/non-core, outsourcing and managing supplier networks remained unexplored until recently. Very few of the early business strategists included corporate purchasing in their concepts, or were explicit about the role of corporate purchasing. Purchasing primarily was considered in isolation, as not necessary to be structured effectively on a corporate level. Modern business strategists, however, stress resource management aimed at internal and external integration of disciplines and suppliers. In these concepts, purchasing is included as an important enabler for implementing business strategies successfully. Therefore, in order to understand and explain corporate purchasing strategies and structures, a thorough understanding of the strategic approach of a corporation and its stage of development is required.

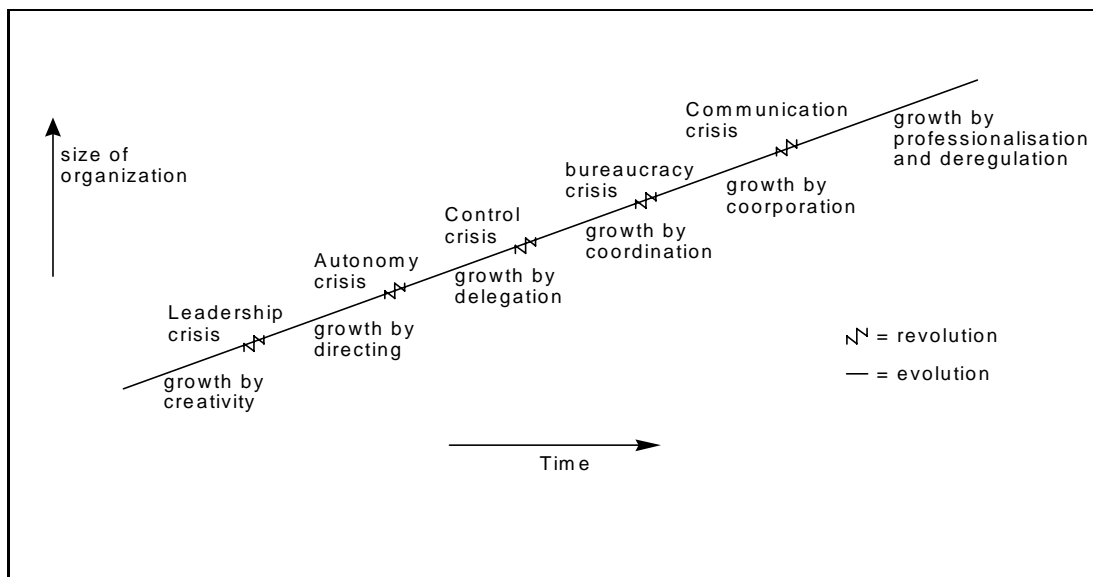
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<sup>47</sup> In Chapter One we discuss the different stages of development of strategic management in more detail.

### 3.6.3 Corporate organisation

In this section, we will describe the impact of corporate organisation on the role and position of the corporate purchasing function. A useful way to think about corporate organisations is provided by the concept of a life cycle, which suggests that organisations are born, grow older, and eventually die, or revitalise (Greiner, 1972; Lievegoed, 1993). In this organisational life cycle model organisation structure, leadership style, and systems follow a fairly predictable pattern through different sequential stages. Growth is not easy; it is associated with a series of crisis that must be solved for the organisation to progress through each stage of the life cycle (Daft, 1992). Greiner (1972) originally defined the first four stages. Recent work on organisational life cycles suggest that already eight major stages in organisational development can be identified (Keuning and Eppink, 1993, 1996) These eight stages are illustrated below, along with the problems associated with transition to each stage. The extra four stages are externally orientated, and not only depending on size and age of the company, as in Greiner's model. An integrated strategy that is focused on the internal organisation and externally on society and the market, poses new demands on management. For example, continuous evaluation of the fit between "what is possible given the maturity of the organisation", and "what is needed by the environment".

Figure 3.2 Organizational Life Cycle Model (adapted from Greiner, 1972)



The last two stages of Keuning and Eppink (1993;1996) are still not defined as clearly as the four previous ones, but can be characterised as follows. In stage seven, companies work hard to become more people and environmentally oriented in order to realise growth, by emphasising the fact that the different business units together form one corporation. Issues that are important in this stage are: corporate mission statement, shared values, human resources management, public affairs and environmental issues. In stage eight, organisational growth is expected to come from co-operative strategy in intelligent enterprises in network structures (Quinn, 1992). The next crisis could be that there is too much trust in the external partners, who tend to act primarily on the basis of their self interest rather than in the interest of the whole.

Growth creates crisis and revolutions along the way toward mature companies. This concept is a powerful concept that can be used to understand the problems facing organisations and how managers can respond in a positive way to move the organisation to the next stage. Empirical research shows that organisations are often 'stuck' in one stage and are unable to reach the next stage without major problems (Daft, 1992). Greiner's model indicates that a development never proceeds gradually. It advocates that a crisis, a revolution or breakthrough, is needed to reach the next stage. Apart from this, the model shows that each stage is characterised by different distinctive organisational aspects. The most important aspect for this research is organisational structure. For this reason, we will describe the impact on the corporate structure in more detail. Growing organisations move through stages of a life cycle, over time corporate structures change from functional to centre-led (Daft, 1992).

*1) Functional structure:* This structure was the first to be used by large firms and eventually became associated with bureaucracy. Activities are grouped together by common function from bottom to the top. The organisation can be controlled and co-ordinated primarily through vertical hierarchy, because there is a low need for horizontal co-ordination. The corporate centre formulates the strategy and is responsible for its implementation. As the organisation grows larger or needs to adapt quickly to a changing environment or to co-ordinate non-routine technology, it may compensate for the shortcomings of the functional structure by installing horizontal linkages; project managers, task forces or teams. However, at a certain moment the

costs of co-ordination will grow too high, and the company will be split up in independent divisions.

2) *Divisional structure*: The divisional (or product) structure was the next innovation in structure and provided a way to subdivide huge firms like General Motors into separate and more manageable profit centres, although each division was still relatively large and could be bureaucratic. The corporate centre reduced its activities to mainly financial management. Eventually this decentralised structure will lead to a strong need for co-ordination because economies of scale are missed.

3) *Hybrid/matrix structure*: An organisation's structure may be multi focused in that both product and function, or product and geography must be emphasised at the same time. In this structure, cross-functional teams work horizontally to break down barriers and co-ordinate across departments. Over time, a hybrid structure will evolve into a matrix structure that has two hierarchies simultaneously. This is a very complex structure, with very high co-ordination costs.

4) *Business unit structure*: This structure resembles the divisional structure, but takes it one step further down the operational line. The company is viewed as a portfolio of (un) related businesses. Operational responsibilities are placed as low as possible in the organisation. Corporate officers have no particular responsibilities other than investor relations, acquisitions and disposal, and resource allocation across independent business units. In such organisations one has to question just what the value added of the top team is anyway. There is no vision needed, only tight financial control. Sub optimisation, from a corporate point of view, is almost inevitable.

5) *Centre-led structure*: This is a flexible co-ordination structure aimed at achieving results, by strong involvement of top management. Senior managers must seek to identify and exploit the linkages across business units that could potentially add value to the corporate whole (=synergy). This structure is not a matter of absolute decentralisation, nor centralisation, but what might be described as something in between; a centre-led structure.



Corporate management has to deal with the continuous conflict between realising synergy across business units and maintaining autonomy for the business units in order to stimulate entrepreneurship. As a result, corporate structures are continuously changing (see Table 3.2). Do corporate purchasing structures follow these changes or do they follow their own track? Given the fact that purchasing is a support function, it is hypothesised that the purchasing function follows the changes in corporate structure. Therefore, to understand and explain the role and position of corporate purchasing in a corporation, a thorough understanding of the corporate organisational structure is required.

*Table 3.2 Different corporate structures and their development over time*

Period	Corporate structure	Corporate management focus	Crisis	Purchasing function
1950's	Functional	Vertical synergy	Co-ordination overload and bureaucracy	Centralised?
1960's	Divisional	Financial control	No co-ordination	Decentralised?
1970's	Hybrid/Matrix	Horizontal synergy	Too much co-ordination too little results	Centralised?
1980's	Business unit	Financial control	Focus too much on BU results, too little synergy	Decentralised?
1990's	Centre-led	Synergy and financial control	??	Centre-led? (cross functional and cross business

### **3.6.4 Purchasing maturity**

So far, an account has been given of the developments in the business context, corporate strategic thinking, and organisational structures. We will now describe the purchasing function, its developments over time and the effect on managing corporate purchasing synergy. The professional development of the purchasing function in organisations can be analysed from different angles and/or aspects. Over the past years many authors have suggested conceptual models on this subject. A large number of these models have been analysed. Summary information about the successive stages in several development models is shown in Table 3.3 in historical order.

Table 3.3 Overview purchasing development models<sup>48</sup>

Author	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	
Reck and Long (1988)	Passive	Independent	Supportive	Integrative	--	
Syson (1989)	Clerical (transactional)	Commercial	Strategic (proactive focus)	--	--	
Bhote (1989)	Confrontation	Arms length	Goal congruence	Full Partnership	--	
Freeman and Cavinato (1990)	Buying (at low prices)	Purchasing	Procurement	Supply acquisition	Facilitate networks	
Cammish and Keough (1991)	Serve the factory	Lowest unit cost	Co-ordinated purchasing	Strategic procurement	--	
Van Weele (1992)	Operational / administrative orientation	Commercial orientation	Logistic orientation	Strategic orientation	--	
Burt and Doyle (1993)	Reactive	Mechanical	Pro-active	Strategic supply management	--	
Keough (1993)	Serve the factory	Lowest unit cost	Co-ordinated purchasing	Cross functional purchasing	World class supply management	
Monczka and Trent (1995)	Manufacturing support	Price buying	Consolidation	Integrated strategic sourcing and supply chain management	--	
Chadwick and Rajagopal (1995)	Clerical	Commercial	Supportive	Strategic	--	
Van Weele et al. (1998)	Transactional orientation	Commercial orientation	Purchasing Co-ordination	Process orientation	Supply Chain orientation	Value Chain orientation

Since 1988 there has been a steady flow of ideas regarding the development of purchasing. Reflecting the fact that purchasing is becoming maturer as a business function, and more and more integrated into the broader framework of business and corporate strategic plans. Most authors assume a stage-wise or step-wise development of the purchasing function. A number of similarities can be found, which will be summarised below:

- 1) *Integrated final stage*: Most authors assume the existence of a final stage of excellence towards which all improvement efforts should be directed. Almost all models show a final phase where purchasing is integrated in the major lines of the business. At this stage, line management is actively involved in purchasing strategies and tactics. Also at this stage, it is assumed, purchasing processes are organised around multi-disciplinary team-based structures.

<sup>48</sup> Some stages overlap each other to a certain extent, however this is not visible in the Table.

- 2) *Purchasing's organisation status*: Most models point out that purchasing, at first, reports rather low in the organisational hierarchy. Next there may be some degree of centralisation, which in a business unit structure will turn to some form of co-ordinated purchasing (where purchasing responsibility resides within the individual business units).
- 3) *Supplier management*: The development of supplier management is another similarity in the different development models. In the first stage, supplier management seems to be reactive ('opportunity driven'). In the next phase, it becomes more proactive, and the last phase it becomes relationship management ('partnership').
- 4) *Supplier relationships* Most authors assume that, as purchasing moves through the different stages of development, relationships with suppliers will change. Starting with a purchasing department handling many suppliers at 'arms length'. In the next stage, purchasing has reduced its number of suppliers considerably so that closer relationships with a smaller number of (preferred) suppliers are capable to develop. In the final stage is partner-suppliers can be regard as 'integrated suppliers'.

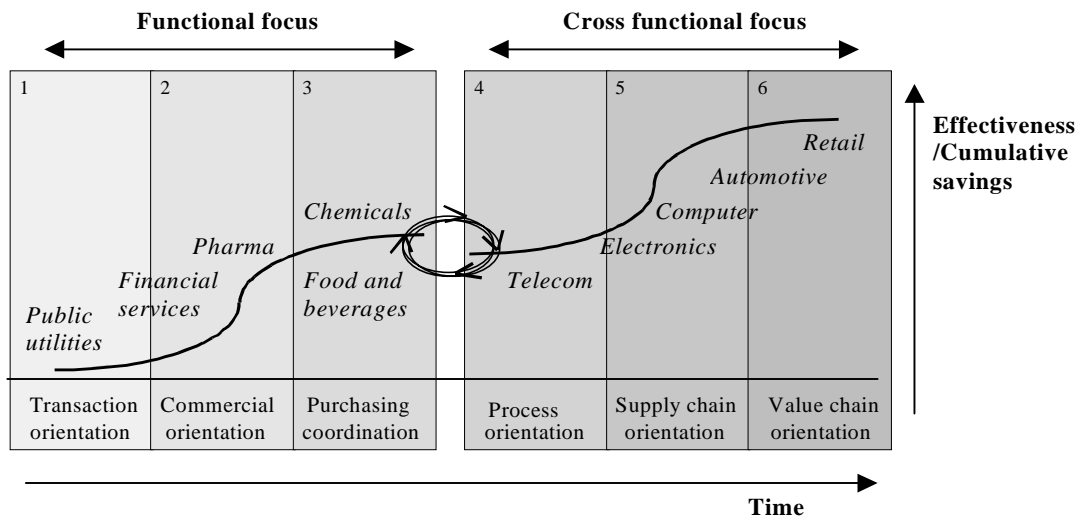
Most development models distinguish their stages with help of a large number of sub-dimensions. Most of the dimensions below are used in almost all models:

- *Top management commitment* (e.g. degree to which top management shows active interest in, and is actively involved in, purchasing strategy and supply issues)
- *Functional leadership* (e.g. personality of the purchasing director, his management style, change management skills and prominence)
- *Purchasing strategy* (e.g. nature of planning, primary focus, concept of strategy)
- *Purchasing activities* (e.g. expedite orders, negotiating, cost analysis)
- *Supply management* (e.g. supplier management, relationship management )
- *Organisational issues* (e.g. reporting relationships, organisational visibility, organisational form, role and position, strategic positioning in the organisation, horizontal integration over business units, management
- *People issues* (e.g. career advancement, key personal skills, education of staff)

- *Performance measurements* (e.g. quality, cost savings, delivery, cycle time, vendor rating)
- *Information Systems* (e.g. information and communication technology, data availability)

The approach that has been described by Keough (1993) is one of the most interesting ones. It is very detailed, it identifies five stages of development and assumes a direct causal relationship between the industry a company is in, and the stage of development in purchasing. This model is taken as the point of departure for the model we have developed ourselves (Van Weele et al., 1998). In developing this model, we have tried to integrate and combine the most valuable insights from other models in order to arrive at a six-stage integrated purchasing development model (see Figure 3.5).

Figure 3.5 Purchasing development model (Van Weele, 2000; Van Weele et.al., 1998)



In the first stage the primary task of purchasing is to find appropriate suppliers and ensure that the plant does not run out of raw materials and supplied components. There is no explicit purchasing strategy in place. At the second stage a pro-active type of purchasing manager is recruited who can negotiate credibly with suppliers for lower prices. The purchasing function has its own department at plant level, reporting directly to the plant manager, who is interested in the savings purchasing adds to the bottom-line. In stage three, the emphasis lies on cross unit co-ordination and compliance with nationally negotiated contracts. At this stage, a strong central

purchasing department formulates the strategy aimed at implementing uniform buying policies and systems, and capturing the benefits from internal co-ordination. At the fourth stage, the emphasis is on cross-functional problem solving with the objective of reducing total systems cost and not just the unit cost of purchased components. Until this stage, the purchasing function was very much functionally oriented and trying to organise the company around the purchasing function. In this stage, purchasing is becoming more process oriented, trying to organise the purchasing function around the internal customers. The strategic importance of the purchasing function comes to full recognition, and purchasing is involved in strategic issues like core / non-core and make-or-buy. Stage five is characterised by an outspoken outsourcing strategy combined with extra attention to co-operation with supply partners on new product development. The purchasing function concentrates on the effects the supply chain has on the resources of the company. In the final stage, the 'purchasing' strategy will be based on the recognition that most important for success is delivering value to the end customer. Suppliers are consistently challenged to support their customer's product/market strategies and to actively participate in product / business development. The goal is to design the most efficient and effective value chain possible to serve the end customer. Purchasing strategy is dissolved into the total business strategy.

According to the development model, the degree and the effectiveness of corporate purchasing co-ordination seems to be related to a large degree with the stage of development of the purchasing function. If purchasing is still working in the transactional stage, little can be done to co-ordinate purchasing synergies at a corporate level. However, if purchasing reached the supply chain management stage, there are many opportunities to co-ordinate purchasing synergies. We hypothesise that effective purchasing co-ordination requires a minimal level of development. In other words, co-ordination occurs, provided that purchasing is developed in some degree. In order to understand corporate purchasing co-ordination, a thoroughly understanding of the development of the purchasing function is required.

### **3.7 Conclusions**

To prepare ourselves for the case studies, we conducted a literature study to investigate what is written about creating corporate advantage in general and in purchasing more particular. In this chapter, we successively looked at the concept of synergy, organisational mechanisms to realise synergy and at the contingency factors related to the use of these organisational mechanisms. We have studied strategic management and organisation (SMO) literature, as well as purchasing literature. It appeared that within SMO literature, little attention is being paid to understand purchasing phenomena like realising purchasing synergy. Furthermore, it appeared that within purchasing literature little attention is being paid to typical SMO topics (e.g. strategic management, organisational development). However, over the last few years, things are changing in both disciplines. Within purchasing literature, we observe an increased attention for subjects like strategy, organisation, and change management. Within SMO literature, we observe a growing attention for subjects like purchasing, supplier relations and supply chain management. Nevertheless, we can still state that there is a gap in knowledge on our subject of study: realising corporate purchasing synergy. This lack of literature and research available on the topic has probably not been beneficial, neither for practice nor for academia. Our observations indicate that a number of companies are still struggling with question how to realise purchasing synergy. Our current preliminary ideas on realising purchasing synergy, as expressed in our conceptual model, are based on literature study only and still purely hypothetical. In order to be able to validate these preliminary ideas, it is necessary to develop them in more detail. For this reason, we will explore the topic in practice at five different companies. These five case studies are described in the next chapter.



## Chapter 4 Purchasing synergy explored in practice

### 4.1 Introduction

Armed with the insights from Chapter Three, we have explored purchasing synergy in practice at five large companies, each with a different industry background. In this chapter we will describe the way in which these five companies try to create corporate advantage in purchasing, which problems they encounter, what they indicate as key success factors, and what contextual factors determined the approach used.

### 4.2 Methodology

Case studies are one of the many methods, which you can use to study a particular phenomenon (see Chapter Two). According to Yin (1989) case studies are especially well equipped to deal with ‘how’ and ‘why’ questions, and for questions for which no clear theories or hypothesis are formulated yet. As discussed earlier, there are only a few authors that address corporate purchasing management. Therefore, there is still much to be explored in this field. A series of case studies was conducted to obtain an in-depth understanding of how corporate advantage in purchasing is created in practice. The selection of cases was made on a pragmatic basis. An important reason for including these five cases was that it was expected that the characteristics of the respective corporations would differ considerably (see Chapter Two). The case studies are structured according to our conceptual framework (see Chapter Three). The framework was translated into a preliminary set of questions and topics to be covered in the interviews (see appendix 4.0). In each interview, respondents were asked to describe the general developments on each of the dimensions of the conceptual framework. The results obtained in the five cases are discussed in sections 4.2 to 4.6<sup>49</sup>.

The cases have been studied mainly through semi-structured interviews, and through document analysis. For the first case the questions were less structured than for the



latter cases. The analysis of the cases has been structured in accordance with the preliminary conceptual framework presented in Chapter Three. The different cases were studied sequentially, one after another. The respondents consisted of purchasing managers, and managers of other functional areas. In total, we conducted more than 60 deep personal interviews<sup>50</sup>. The major part of the interviews were recorded on tape and then typed out. These interview reports were sent to the respondents for final reviewing and correction. To complete the interview reports, and to clarify certain matters we also did, in some occasions, a number of telephone calls with the respondents. Information has also been gathered from secondary sources. One important source of information has been various internal (reports, presentation material, internal magazines) and external (printed material, magazines, newspapers, annual reports) company documents. A major aim of this thorough data-collection was to get the best possible insight into all aspects of creating corporate advantage in purchasing, both formal aspects (written data) and informal aspects (personal interviews, observation).

Table 4.1 Overview characteristics case studies

	Financial Corp.	Electronics Corp.	Pharma Corp.	Oil Corp.	Dairy Food Corp.
Period of interviewing	12/'97-3/'98	4/'98-5/'98	6/'98-9/'98	9/'98-1/'99	2/'99-3/'99
Number of respondents*	15	12	18	8	5
Document analysis	Extensive	Extensive	Limited	Extensive	Limited
% of respondents Purchasing **	40%	60%	70%	75%	80%
Main unit of analysis	Corporate / Divisional	Divisional / BU	Divisional / BU	Divisional / BU	Corporate / BU
Case protocol	Unstructured	Unstructured	Unstructured	Structured	Structured
Analysis of mechanisms	Exploratory	Exploratory	Exploratory	Testing	Testing

\* Note: with some respondents we conduct more than one interview, so the actual number of interviews is higher.

\*\* Note: Other functions include general management and managers from functions like Development, Production, Finance & Accounting, Human resources, Information Technology and Facility Management.

It is important that the result of a study is as accurate and credible as possible. The accuracy of a study is dependent on a number of factors, which commonly is divided in two groups: validity and reliability (see also Chapter Two). What coloured the data from the cases? Firstly, the list of respondents was put together with the help of the

<sup>49</sup> Firm names in these sections are fictive to ensure the confidentiality of participating firms.

<sup>50</sup> Interviews lasted for about 1,5 – 3 hours each.

corporate purchasing director. This has the potential danger that he only suggests respondents that agree with him or do no harm to his position. Secondly, the researcher is able to influence the respondents in a particular direction because of own experience and bias. We were very aware of this fact, and by letting the respondents be fairly free in the interviews we have tried to avoid this. Thirdly, for the document analysis we were fully dependent on the material presented to us by the corporate purchasing director. In some case we had unlimited access to documents, in other cases we only were allowed to study a small piece of the available documents. To compensate for these three issues and to increase the validity and reliability of the data from the cases, the following measures have been taken:

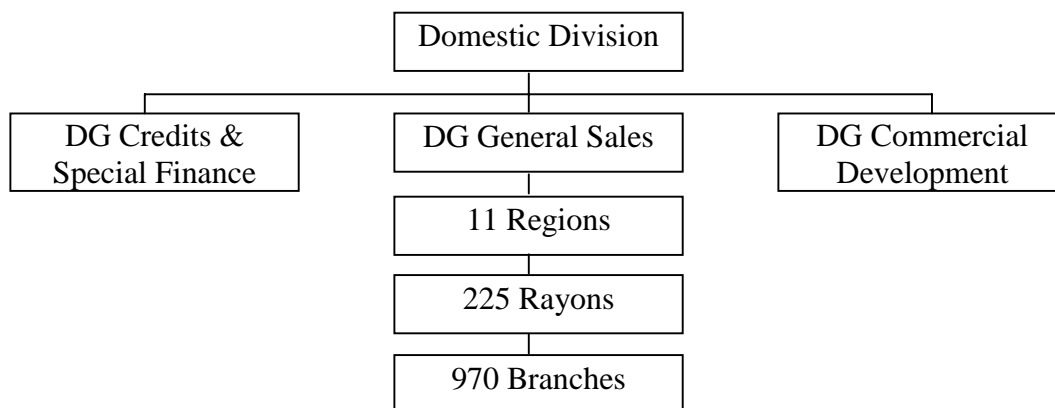
- We used a case protocol (see Appendix 2.2)
- We have interviewed several respondents with different backgrounds in each company (see Appendix 4.2)
- We have adjusted the interview guide and technique, as the study progressed
- We recorded all interviews on tape
- We have sent the written interview reports to the respondents for revision and control of misconceptions
- We have used secondary sources of information
- We have sought regular feedback from relative outsiders (roundtables, academics)

### **4.3 Financial Corporation**

FINANCE is a large financial services provider to wholesale and retail markets, based in The Netherlands. It was created in 1990 through a merger between the *Alpha* Bank and the *Beta* Bank (both Dutch). FINANCE is one of the market leaders in the Netherlands. In 1997 total revenue amounted 19 billion guilders and net profit exceeded 3.8 billion guilders. Early 1998 the bank employed approximately 73.000 employees spread over 1880 branches all over the world. FINANCE has three main operating areas: *Dutch branch network* (commercial banking in the Netherlands), *International branch network* (commercial banking in the rest of the world), and *Investment banking business* (e.g. treasury, capital markets, advisory services and asset management). These three operating areas are supported by the *Resource management division* (incl. HRM, IT, Corporate purchasing) and several *Corporate staff groups* (e.g. planning & control, legal services, accountancy). We focussed our

research on the Dutch Sales branch network in the Domestic Division. This is the largest division (about 30.000 employees) contributing approximately 50% of the total corporate profit. The structure of the Domestic Division is presented below.

Figure 4.2.1 Organisation Domestic Division



The organisation of the Domestic Division (the Dutch branch network) consists of three Directorates General (DG): Commercial Development, Credits & Special Finance, and General Sales. The DG *Commercial Development* is responsible for the development of products, services concepts and commercial campaigns and, in addition, lends adequate marketing and product support to the sales organisation. The DG *Credits & Special Finance* is responsible for adequately organising the process of accepting, managing and monitoring credit risks, and the sales of sophisticated finance products and investment banking activities (e.g. cash-flow finance, corporate finance advisory services). The DG *General Sales* is responsible for providing clients in the Netherlands, with banking and insurance products and services. The services are provided through a market-oriented network of about 970 branches. The branches are divided over 225 ‘Rayons’, and 11 ‘Regions’. Additional distribution channels are Electronic Banking and a 24\*7 call centre, which permits around-the-clock banking.

#### 4.3.1 Observations regarding the business context

In the Dutch financial services market there are only a few large competitors with strong market positions. Also, the growth rate has slowed down, and profit margins are relatively small. Especially in the retail market competition is very intense, and focused on cost efficiency, quality of service, product innovation and close customer

relationships. Early 90's FINANCE lost market-share in the Netherlands, mainly due to slow response to new products of the competitors. Management changed the market positioning in the Netherlands and initiated a large advertising campaign, which enabled the bank to capture some of the lost market-share back. Early 1998 the bank's market-share was again under pressure. However, this time new entrants from unexpected sides: insurance companies, retailers, and even oil companies and logistical service providers<sup>51</sup>. It is expected that through the introduction of the European currency competition will intensify on a European scale. However, in the Netherlands, prices are already at a minimum level, relatively to other European countries<sup>52</sup>. Today, the demand side of the market is more dynamic than it used to be some years ago. Every customer has its specific requirements and is becoming increasingly critical and less loyal to the bank. In addition, an increasingly number of financial services can be described as commodities or 'me-too' products. Therefore it may be expected that, for these commodity type services, prices will become more important in the near future. This will make continuous cost control as one of the main contributors to a further increase in net-profit. *Operating Expenses* (includes purchasing spend, personnel costs, and other administrative costs) have grown over the last six years. Apart from the fact that staff costs rose, this increase was mainly due to non-recurring expenses associated with a number of special projects including the introduction of the Euro-currency, the Y2K-problem and the nation-wide launch of the multifunctional 'smartcard'. These projects increased IT-costs, such as maintenance and rental of computer hardware and software, rental of datalines, and external automation staff. The pressure to reduce these operating costs is, however, not very high. Despite the increased competition and more demanding customers, overall (after tax) profits have grown over recent years. The domestic network's share of pre-tax profit in 1996 was 2,703 million, or 56% of the total pre-tax profit, a 19,5% increase relatively to 1995.

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<sup>51</sup> One logistics providers started to provide the management of cash flows that are connected with the logistical transactions they facilitate.

<sup>52</sup> Consequently, the only way to increase profits in the Netherlands is by reducing costs and improving efficiency.

### **4.3.2 Observations regarding the corporate strategy**

The merger was needed to keep up with the increasing (inter) national competition, and it was expected that the merger could bring several economies of scale, especially in the Netherlands. After the merger, gradually the two firms integrated their organisations and took on a new corporate identity. The next move was to find new administrative efficiencies beyond simply integrating and/or centralisation of functions. In 1996 the Domestic Division formulated a new strategy called '*Vision 2000*'. Top management recognised that in a rapidly changing business where each client has its own specific needs, the key to successful banking is a trustful and lasting relationship with the client. Therefore, the following strategic goals were defined:

- More emphasis on customer preferences (tailor-made services) and customer-relationship
- Faster development of new products: a short time-to-market is necessary to attract customers and to stay competitive
- Integration of banking and insurance products to facilitate 'one-stop-banking'.
- Local bankers should become more result-driven entrepreneurs, able to make their own decisions about products, market approach and prices (within some corporate guidelines).

### **4.3.3 Observations regarding the corporate organisation**

The Domestic division has a long history of central control. This evolved in a large number of hierarchical layers and central staff groups. Today, as a part of the strategic reorientation '*Vision 2000*', FINANCE is changing from a centralised ('head-office controlled') bureaucratic organisation to a more decentralised organisation. The Domestic Division used to have a structure with 10 Regions, 30 District offices, 150 Rayon offices and a large number of Branches. Today the District management layer is removed to make the organisation more transparent and to stimulate local entrepreneurship. The local banker will play a key role, and is regarded as a 'result-driven entrepreneur', with more commercial autonomy, permitting a quick response to individual needs identified in direct contacts between client and local bank. The 225 Rayon managers are hold accountable for the performance of their Rayon. They are encouraged to make their own commercial decisions, however, still within some guidelines of the corporate head-office. The 11 Regional directors hold the responsibility for large clients and co-ordinate and deliver support functions like

P&O, Marketing, Facility Management and Information Technology to the Rayons. As one interviewee stated, “the corporate centre changes from ‘*head-office*’ (directing the local units) to ‘*help-office*’ (supporting the ‘Rayon’ units)”. However, according to the CEO of the Domestic Division, FINANCE will stay a ‘top down’ organisation, despite ‘Vision 2000’. By centralising functions, FINANCE is able to capture significant *economies of scale* in the areas of financial resources, human resources, commercial activities and IT resources. These four areas are all regarded as very critical for company success by the board of management.

- Potential economies of scale exist in the procurement of financial resources. Because of the stronger bargaining position, FINANCE can play a major role on global financial markets and realise economies of scale. Therefore, it is centrally organised, very professionally managed, and tightly monitored by the board of management.
- The DG Human Resource Management looks for potential economies of scale in human resources. It co-ordinates and monitors management development programs, training and education, reward structures and recruitment of new employees.
- Commercial activities are also closely monitored and co-ordinated at the corporate level. The DG *Commercial Development* serves as a ‘think tank’ for new products and marketing techniques, which can be used by the local bankers. The transactions and contacts with the client are decentralised to the local level, but product development is centralised. This is necessary to speed up implementation of new products. A potential advantage is also created through the corporate image.
- The DG Information Technology is looking for potential economies of scale in IT. The investments in IT will be huge in the forthcoming years. FINANCE is a large bank with many branches, through standardisation IT-investments can be spread over a larger client base, and fixed costs can be earned back sooner.

#### **4.3.4 Observations regarding purchasing maturity**

In a financial services company, Purchasing activities are predominantly aimed at support activities (e.g. Marketing, Legal services, IT, Facility Management). A respondent estimates that only 33% of the total cost of FINANCE is related to purchasing. Purchasing savings therefore will have only a limited effect on the

company's overall return on net assets. Consequently, as one of the respondents stated: "Today, Purchasing is a real profession, but it is not yet handled like that within our bank. Purchasing does not have the same status as Marketing, or other corporate staff groups". There are many groups in the Domestic Division spending money at suppliers. It is estimated that the total spending of the company in the Netherlands (Domestic Division and Headquarters) is almost 2 billion guilders. Only a small part of this total spend is controlled by the corporate purchasing department. Most employees have a large degree of freedom in dealing with suppliers, because managers do not give much attention to purchasing decisions. In some occasions a functional department head is responsible for managing a large part of the spending in a certain area. For example, the head of the Legal Services Department monitors about 50% of the total spend on legal services in the Netherlands. Fortunately, the head feels a responsibility to manage it professionally (he makes a shortlist, he negotiates before signing a contract and makes agreements with only a limited number of suppliers). In other spending areas, purchasing management is less developed, and spending is poorly (or even not) managed.

Table 4.3.1 Overview of the total spend of 'the company in the Netherlands'

Spend category	Percentage of total spend in 1995	Central / De-central purchasing
<b>Information technology</b> Mainframes, hardware and software, support services, data vendors	35%	77% is bought by the division IT purchasing (=ITP)
<b>Central Services/Support</b> Office supplies, cleaning, catering, security, postal costs, education and training	24%	65% is bought by Corporate Purchasing (=CP).
<b>Buildings, installation and infrastructure</b> Building & construction, maintenance, gas & electricity, housekeeping	18%	89% is bought by the division Housing & Real Estate (=REH)
<b>Others</b> Consultants, Insurance, Legal services, BGC, 'overige posten'	8,5%	100% is bought by internal users
<b>Small cost centres</b>	8,5%	100% is bought by internal users
<b>Marketing</b> Advertisements, brochures, mailings, commercials	5%	81% is bought by the corporate Marketing and Communication (=MC) group
<b>Personnel related</b> Temporary labour / Outsourced work	1%	100% is bought by Corporate Purchasing (=CP)
Total	100%	

Source: Consultancy report (1995)

All the spending groups are operating at different locations, different hierarchical levels, and at different levels of purchasing professionalism, making FINANCE's purchasing function very fragmented and diverse.

#### *Corporate purchasing department*

The corporate purchasing (CP) department provides purchasing support to internal customers of the corporate offices and the sales branches network in the Netherlands. The operational ordering and logistics activities are decentralised. CP mainly concentrates on initial purchasing activities (e.g. specifying goods and services, selecting suppliers and negotiating contracts). The head of CP (Senior Vice President) is reporting to both the director-general of the DG Personnel and the director of the Central Services department. The CP department consists of 12 employees, and is organised along two broad product groups: 1a) *Transaction traffic* (ATM's, chipcards, pincards) and 1b) *Logistics* (airline tickets, hotels, money transport), and 2) *Others* (e.g. maintenance, cleaning, copiers, energy, direct marketing, copiers, promotionals). The market share of CP is growing over the last years. Today, CP is involved in almost 40% of the spending in The Netherlands. Not so long ago, that figure was less than 25%. However, it still indicates that CP is not involved in most of the purchasing. Apart from corporate purchasing (CP), there are two main spending groups at the bank: the division IT Solutions, and the department of Real Estate & Housing. The first one resides in the support division *Resource Management*. Real Estate & Housing resides in the Directorate General Sales.

#### *Real Estate & Housing (REH)*

The REH group is responsible for construction, maintenance and technical management of all company buildings. The internal customers are the Regional directors and Regional facility managers, and in case of corporate headquarters, the Central Services department. These internal customers (as the 'users' of the buildings) are responsible for the purchasing of their office equipment and simple building maintenance. REH acts as the 'owner' of the buildings and focuses on contracting engineers and building constructors, and on project-management of large (new) building projects. The total (world-wide) spend of this group amounts approximately 1.2 billion guilders, of which 50% are investments, and 50% is spend on maintenance, electricity, cleaning, etc. Project managers, who report to the Senior VP, do the actual



purchasing. There are standardised procedures and guidelines for selection and contracting of suppliers. For every new project they make a supplier short-list, based on the following criteria: the supplier is a customer of FINANCE (i.e. reciprocity principle) and a project should not be more than 25% of the supplier's annual sales. Systems and tools are predominantly aimed at facilitating supplier selection, project management and supplier evaluation. Currently, the quality of the housing is regarded as more important than the lowest costs, because a building has a strong impact on the corporate identity of the bank. However, some interviewees state that it should be possible to reduce costs significantly at REH.

#### *Division IT Solutions*

The division IT Solutions is responsible for buying, installing and maintaining the IT infrastructure of the bank. The division has an IT-Purchasing department (ITP) consisting of 3 employees. However, this department is not involved in all the steps of the purchasing process. The 'IT solution integrators' translate the functional specifications of the internal users into technical specifications. They also request quotations from suppliers in order to be able to estimate a total budget of a project for the internal user. Only after the technical specifications are set, ITP is asked to negotiate the price and the contract with the supplier. Information technology is very critical for the continuity of the bank and necessary to remain competitive. Consequently, the internal users regard product quality as more important than lowest cost. There is not much room for ITP to negotiate. A recent study ('Athena') showed divisional management that significant savings are possible through professionalising the IT purchasing process. Current problems that were mentioned in the study are: lack pro-active supplier management, ITP is almost not involved in the initial purchasing, and current purchasing procedures are slow and bureaucratic. Early 1998, ITP started a reorganisation. A new purchasing manager was assigned, savings targets were determined and three new purchasers will be recruited in short term. Issues that will play a major role in the near future are multi-vendor sourcing, total-cost-of-ownership, global deals, and performance measurement. Complicating purchasing factors are the fast changing technology and the fluctuating prices and high price erosion. The buying of IT has never been decentralised, neither will it in the future. Decentralisation of IT purchasing will decrease the transparency and hinder standardisation and the realisation of significant economies of scale.

#### 4.3.5 Observations regarding purchasing synergy

In general, FINANCE uses mandatory central purchasing to co-ordinate and control purchasing synergy in IT and Real Estate & Housing. No single office director can buy or rent an office building or Computer without first consulting the central Real Estate & Housing or IT Solution group. The 'local users' are only allowed to order from the central contracts. Purchasing decisions in the Facility area are made by Corporate Purchasing in co-operation with the regional Facility Management Directors (DFM's). For some products and services there are corporate contracts in place, for the rest the purchasing decisions are made at the regional level. However, 'local users' can purchase independently, despite the corporate contracts, without the risk of being punished by higher management. Some years ago there were corporate contracts for buying temporary labour, however the local users preferred to buy their temporary labour at local suppliers that were customers of the bank (*reciprocity principle*). Management tolerated this behaviour.

##### *Co-ordinated direction Facility Management*

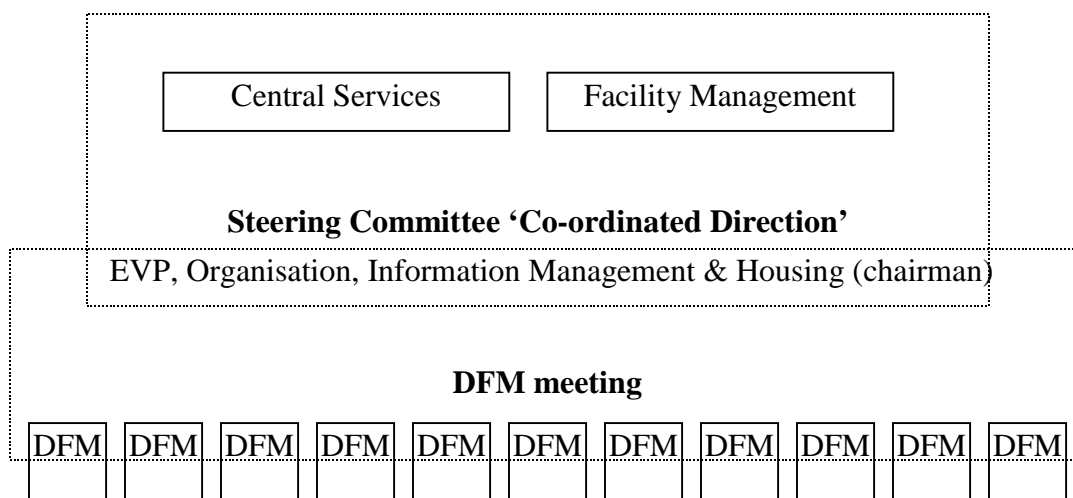
The co-ordination across the 11 DFM's<sup>53</sup> started a few years ago with a project of the department Central Services called 'Co-ordinated Direction'. The Central Services department used to purchase only for the head-office, but they tried to find opportunities to also co-ordinate the purchasing in the 11 regions. To accomplish this they started to work with a 'lead-buyer' system. In this system one of the DFM's (in tight co-operation with a purchaser from Central Services and a corporate FM director) was appointed as responsible for purchasing a specific product or service for all 11 DFM's. However, it failed to work, because the DFM's followed their interests and did not discuss specific contract-issue with the other DFM's. This situation was, as stated by one of the respondents, probably related to the top-down implementation approach used at that moment. This approach created a lot of resistance among the DFM's to commit to it. The DFM's were used to their autonomy and responsibility and to do their own purchasing. Now they became dependent of the other DFM's for certain contracts.

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<sup>53</sup> DFM stands for Director Facility Management.

This situation has changed now. Today, the DFM's are more involved in the co-ordination decision-making process. A steering committee, consisting of directors from Central Services and Facility Management, discusses potential and promising purchasing projects. After that, the steering committee suggests these projects to the DFM group meeting. This is a monthly meeting with all 11 Regional Facility Management directors and discusses general facility management issues. Chairman of this meeting is the Executive Vice President, Organisation, Information Management & Housing of the Domestic Division. Together, the DFM's discuss the projects as suggested by the steering committee, define the approach and decide who will become the lead buyer.

Figure 4.3.2 Organisation Co-ordinated Direction



*Corporate 'Competitive Sourcing' platform*

The merger between *Alpha* and *Beta* (1990) gave the opportunity to look critical at both purchasing department's 'best practices' and combine the best of both to create a new and smaller purchasing department. In 1994 the Corporate Purchasing department decentralised the operational ordering-function to the internal users, and started focussing on initial purchasing activities. This paved the way to change from a 'Transactional orientation' to a 'Commercial orientation', and can be regarded as a major step forward in the development of the purchasing function. In 1995 a consulting firm did a project to implement 'competitive sourcing' at the bank. Together with the head of corporate purchasing, they defined three pilot projects for

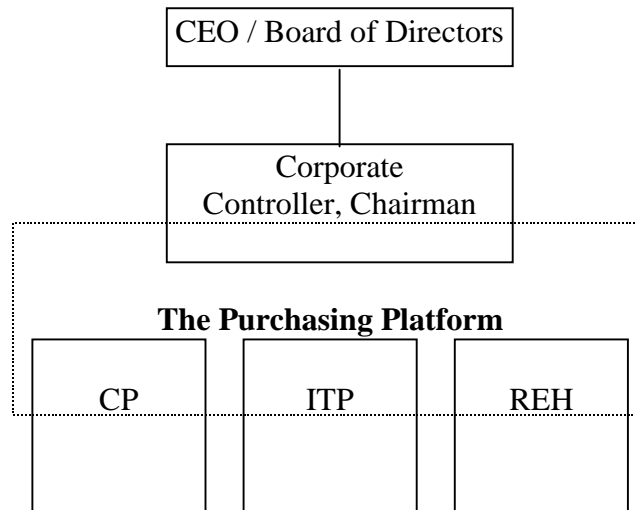
Corporate Purchasing (CP), IT Purchasing (ITP) and Real Estate & Housing (REH). Only the pilot within CP (negotiating a new data-vendor contract) delivered the potential savings. The pilots at ITP and REH failed to deliver the targeted savings, due to great resistance in both departments to change purchasing practices. In 1996 a consultancy firm did an Added-Value-Analysis (AVA) of the corporate staff departments. In the review board of this AVA-project it is decided to start up a 'Competitive Sourcing' committee to follow up the successful CP pilot and to work out proposals to anchor 'competitive sourcing' in other parts of the company. According to this committee the company was 'lacking top management support for a structured improvement of purchasing function'. Also, they indicate that purchasing was very fragmented and that there was almost no transfer of information and knowledge across divisions and regions. Therefore, they suggested forming a corporate platform for 'competitive sourcing'. This platform was formed in December 1996, with permission of the CEO and the board of management.

The platform consists of the Executive vice president Management Accounting (chairman of the platform), the senior vice president Corporate Purchasing; the Executive vice president Operations IT Solutions; and the senior vice president, Real Estate & Housing. The chairman resides in the corporate staff group, reports directly to the board of management, and is responsible for Accounting, Planning, Operations research, and for supporting the board of management in Strategy development and Internal consultancy. All three main spending groups are represented in this platform. The senior vice president Corporate Purchasing is the only one with actual Purchasing responsibility and experience. The other two are general managers of the REH and IT departments in which other people execute purchasing activities. Together they decided on the main objective of the platform: realising cost-reductions and development of the purchasing function across the company. More specific, the following objectives were formulated by the members of the platform:

- minimise expenses and professionalise purchasing throughout the divisional buying groups;
- look at different spend areas and formulate a specific strategies for these areas;
- stimulate the exchange of information, expertise and 'best practices' over the different divisional buying groups.

The platform is a corporate steering committee and does not have any formal relations with the line-organisation (see figure 4.3.3).

Figure 4.3.3 Organisation Purchasing Platform



In the first year (1997) the platform started slowly; small number of meetings, no notes, no actions, lot of discussion. Early 1998, meetings were held almost (every) two months and action points were being noted. Activities were aimed at the company in the Netherlands, however there were some contacts with the Purchasing Group in the USA. However, still there is little actual progress is made on the objectives of the platform.

#### 4.3.6 Reflections on the case

At FINANCE, top management reveals little interest in the purchasing operations of their company. The respondents indicate different reasons for this. Firstly, due to the low purchasing-to-sales ratio, managers consider Purchasing primarily as a support activity. Purchasing savings have only a limited effect on the company's return on net assets. Secondly, Purchasing expenditure is related to a large variety of activities that are scattered throughout the corporation, through the absence of a professional purchasing department. In other words, the purchasing function is hardly visible to management on a corporate level. Thirdly, Purchasing activities traditionally had an operational character and were limited to placing orders, expediting and invoice checking. Because these activities have only a minor effect on the company's return

on net assets, management was not interested. From the data some additional observations can be made.

- Cost considerations are not priority number one to internal customers, i.e. departments. They often feel it is more important for suppliers to deliver on time and in the right quantity, than to pursue the lowest purchasing price. As soon as internal users become satisfied with their present suppliers, they will tend to neglect competitive bidding, giving the supplier ample room for commercial tactics.
- Given the specialised nature of most investment buying (e.g. information technology, construction, building maintenance) the internal users play a dominant role in decision making (developing specifications, supplier selection, negotiation), leaving administrative matters, at best, to the purchasing department. This situation develops when purchasing does not possess sufficient knowledge in the appropriate specialist areas to enable it to act as a valuable partner to the internal customers. As a result, strong relationships can develop between internal users and suppliers, which are very difficult to change.
- The purchasing department concentrates on what is left, the general, routine and low-cost items, which are ordered through fixed order routines from traditional sources of supply.

These considerations suggest that, probably, an impressive potential for improvements in purchasing exist. However, as became clear from the case, improving purchasing professionalism is not a simple matter. Top management will often (because of the relatively low purchasing spend) fail to provide sufficient support to purchasing procedures, and buyers will get recognition only by providing superior service to their internal customers. Purchasing should be 'service driven' rather than 'cost driven'.

#### **4.4 Electronics corporation**

ELECTRO was founded as a lamp company in 1891 in Eindhoven, the Netherlands. Between 1920 and 1960, ELECTRO diversified into consumer Electro and electronic components and expanded further into Medical Electro, Telecommunications, Computers, Industrial and Military Electronics between 1950 – 1980. Today, ELECTRO is a manufacturer of products, systems and services in the fields of

Lighting, Medical equipment, Consumer- and Business-Electro. Its businesses are managed through a number of product divisions and business groups. Their end products are sold in over 150 countries. We focussed our research on the Business Group Lighting Electronics & Gear (LE&G). This business group (BG) within the Product Division Lighting is the world’s largest supplier of Electronic and Electromagnetic control gear for all types of Fluorescent and High Intensity Discharge (HID) lamps, and is regarded as one of the ‘best-in-class’ Purchasing examples within Philips. LE&G is active in four different market segments (Fluorescent, Compact Fluorescent, HID and New Business) with two main technologies (Electromagnetics (EM) and Electro (E)). Today, the BG LE&G employs approximately 7000 people and its headquarters is located in Rosemont, USA. The LE&G Europe organisation is headquartered in Oss, The Netherlands.

#### 4.4.1 Observations regarding the business context

LE&G is the youngest Business Group (BG) in the Lighting Division. LE&G’s origin lies in the EM technology. The Lighting Electro business started on a very small scale early eighties, when the Lighting Development Department developed new electronic control gear for TL and saving lamps. At that time the dominant technology was Electromagnetic, and not many people believed in this new electronic technology. Only in 1988 Lighting Electro became an International Production and Supply Center (ELECTRO terminology for a start-up business). From that time on the business really started to grow significantly, due to the growing sales numbers of the TL and saving lamps. An overview of the characteristic of the different market segments can be found in table 4.4.1.

Table 4.4.1 Characteristics of the four business lines

Business	Volume	Characteristics
HF = high frequency TL lamps	Medium volume, E+EM technology	OEM market, professional indoor market
FL (energy saving lamps)	High volume market, E+EM technology	Internal customers ELECTRO Lamps, consumer driven, lowest price, extra features don’t result in higher sales
HID = high inductive discharge	Small volume	Complete sales to ELECTRO Luminaires, professional outdoor market (street lamps and stadium lamps)
New business	Small volume, E technology	Projects, small quantities, external customers (Automotive, Traffic lighting)

Our first observation regarding the lighting Electro market is that ELECTRO LE&G is by far the largest supplier<sup>54</sup>, and has relatively few large competitors. In the late 1990's LE&G has grown significantly, not only in sales but also in volume. This attracted other companies to the lighting Electro market. Relatively, electromagnetic products have to deal with more competitors and competition on costs, than electronic products. The innovative features of the LE&G products (especially the electronic products) serve as an important competitive advantage.

Our second observation is that the market is gradually shifting from conventional electromagnetic technology to sophisticated Electro technology. Consequently, the sophisticated electronic products more and more replace conventional products.

A third observation is that the two largest customers are both internal ELECTRO companies and make up for almost 60% of the LE&G sales volume. Though, more and more products are sold top external customers. The relationship with the different customers is well defined and most customer relations are predominantly with partners and key customers. The end-user markets differ from quick changing consumer markets to conservative business-to-business markets. Key issues in this latter market are quality, logistics, price and support.

A fourth observation is that suppliers become more and more important for LE&G. LE&G buys a large share of components and raw materials in a supply market that is dominated by a few large players. It is only with large volumes that LE&G can get these suppliers interested in supplying the specific lighting Electro business, because of the high investments needed for product development. Partnership relations are formed with suppliers to speed up innovation and reduce costs at the same time.

The final observation is that LE&G shows positive financial figures over the period between 1991 and 1995. Sales have increased every year and cash flow and return on net assets were on average positive.

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<sup>54</sup> ELECTRO LE&G is more than two times larger than the second largest supplier. Numbers three and four have sales figures that are about 25% of the sales of ELECTRO LE&G.

<sup>55</sup> Only for this period the figures were available for us.



#### **4.4.2 Observations regarding the corporate strategy**

When the demand for Lighting Electro increased late eighties / early nineties, LE&G followed a two-track growth strategy. On the one hand they invested heavily in the automation and expansion of their own production capacity<sup>56</sup>. Also, two large acquisitions were done in the United States. In the late eighties LE&G took over ALPHA, a large manufacturer of conventional products. ALPHA had a large number of factories and high revenues. Early nineties ELECTRO took over BETA, a manufacturer of electronic products. The founder of BETA stipulated that he would agree with the take over, only if he would become the new CEO of the BG LE&G. ELECTRO agreed with that condition. In 1994 the BG LE&G was consolidated into one group comprised of three companies: ELECTRO Lighting Electro (Oss, the Netherlands), ALPHA (Rosemont, USA) and BETA (Torrance, USA). It was expected that ALPHA would be integrated in the BETA organisation. However, reality was exactly the reverse. Probably because ALPHA was a very big player in the USA and generated a lot of money for LE&G. Apart from that the Electro market was still small in the USA. BETA's headoffice was closed and moved to the ALPHA headoffice, which is also LE&G headquarters.

The main business objectives, as defined in the strategic business plan for the period 1997-2001, are: opening up the global Lighting market for Electronics, expand market share in Western and Eastern Europe, create new businesses (a/o. automotive- and traffic-lighting, projection TV) and obtain a profitable contribution margin on sales. Further, LE&G wants to become a global company focussing on improving cost, productivity, quality and innovation at the same time. Production activities are allocated globally: low-tech activities in Eastern Europe and China, high-tech activities in Western Europe and the United States. LE&G also globally allocates its resources for Research & Development and Purchasing. LE&G Europe is the competence centre for Electronic technology and for Supply Base Management. LE&G North America is the global competence centre for electromagnetic technology. LE&G pushes innovation and miniaturisation, improves quality and reduces cost price all at the same time, to open up new market niches and expand market shares in existing markets. Because of the high speed of innovation, price

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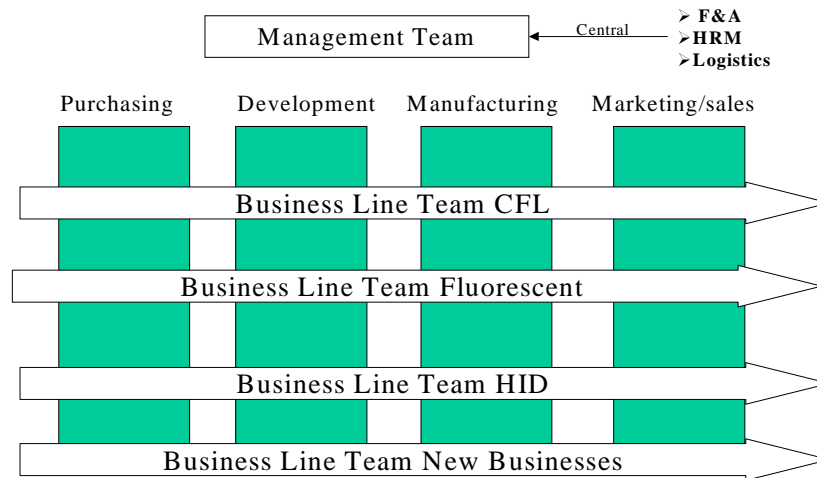
<sup>56</sup> The plant capacity in Oss (The Netherlands) increased from 10.000 to 300.000 pieces a week.

erosion is high (more than 10% annually!) making the earn back period for new products very short. Because one of the key objectives for LE&G is to obtain a profitable contribution margin on sales, cost price reduction is an important strategic issue.

### 4.4.3 Observations regarding the corporate organisation

Since mid 1996 LE&G Europe works with a new business model that is structured around four business lines. The organisation can be considered as a matrix structure with cross-functional teams (see Figure 4.4.1).

Figure 4.4.1 Organisation of LE&G Europe



Each business line is managed by a Business Line Team (BLT), which has almost full business responsibility (not profit & loss responsible). In the BLT all key functions are represented. Each BLT is chaired by a Business Line Manager. Every month, the Business Line Managers report to the Commercial Manager Europe, who will consolidate the results and report it further to the BG general management. The Resource departments are Purchasing, Development, Manufacturing, Marketing / Sales, F&A, HRM and Logistics. The members of the LE&G Europe Management Team consist of all the Resource managers and the General Manager. The Resource manager is accountable to the General Manager for performing the "contracts" made with the Business Line Managers.

#### 4.4.4 Observations regarding purchasing maturity

At LE&G, suppliers play an important role, as can be read in an internal document: “In a business environment competing on product quality, cost, technology, time, flexibility and services, and where over 65% of sales value is purchased (in the BOM area sometimes more than 75% of the production value) our suppliers must play a substantially increased role in ensuring the continued and improved competitive position of our business”. To ensure that maximum benefit, both short term and structural, is obtained from the supply market, LE&G has designed a company wide process called Supply Base Management (SBM). Supply Base Management is a cross-functional process that is much broader defined than purchasing, involving Purchasing, Product engineering, Component engineering, Advanced engineering, Procurement, Production, and Quality. It is not only the responsibility of the Purchasing department, but of everybody in the company. Table 4.4.2 shows the main differences between SBM and traditional purchasing.

Table 4.4.2 SBM versus traditional purchasing

	Traditional purchasing	Supply Base Management
Selection criteria	Purchasing costs	Total costs
Sourcing	Multiple	Single or dual
Contracts	Short term	Life of product
Lead time	Long	Reduced
Logistics	Uncoordinated	Precise, co-ordinated
Product design	No co-ordination	Early involvement
Communication	Problem oriented	Process oriented
Review process	Informal	Formal

The business objectives described earlier are translated into the following SBM objectives:

- Achieve an annual integral BOM cost reduction, that equals or exceeds the average market price erosion through purchasing / design efficiency
- Find, develop and timely release components / suppliers that are needed in the Product Creation Process for new or modified end-products
- Optimise the supplier component database
- Safeguard the inherent quality of components and suppliers
- Maximise the logistic flexibility of the supply base

A two-track strategy should LE&G enable to achieve these objectives. Firstly, LE&G wants to purchase components at the lowest integral costs by concentrating buying power for global leverage<sup>57</sup>. Secondly, LE&G works on intensifying co-operation with their partners and preferred suppliers (e.g. early supplier involvement) at the expense of commercial suppliers.

#### *Differentiated supplier relationships*

Potential suppliers are assessed on many different aspects before selection<sup>58</sup>. The type of supplier relationship is based on the component technology segment and the importance of the supplier in the process chain. The component technologies used in the business lines are subdivided into four categories according to the Kraljic's purchasing portfolio. The relationship with suppliers is differentiated as follows: Partner suppliers deliver strategic components, preferred suppliers deliver leverage and bottleneck components and commercial suppliers deliver routine components. Partner suppliers participate in the product creation process and exchange business plans and technology roadmaps with LE&G. With Preferred suppliers mutual improvement objectives are formulated. All other suppliers are classified as Commercial Suppliers, for which traditional purchasing is used. Approximately one third of the supplier population are preferred suppliers or partners, accounting for 86% of the total BOM spend.

#### *The Supply Base Management Organisation*

To implement the SBM strategy, LE&G put up a well-defined meeting structure between various cross-functional teams, with supervision of the Supply Base Management Team.

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<sup>57</sup> This is done by shrinking the supply base (supplier reduction) and pursuing component commonality across the various product groups (standardisation).

<sup>58</sup> Some of the tools used are Questionnaire Company Profile, Supplier Quality System, and the Supplier Product – Process Audit.

Figure 4.4.2 Supply Base Management organisation Region Europe

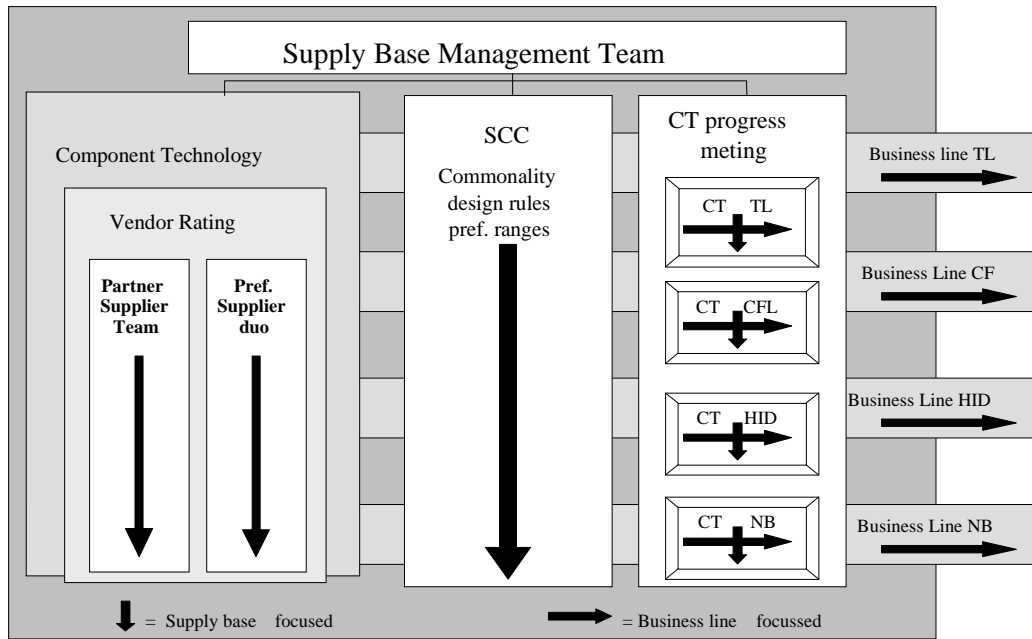


Figure 4.4.2 shows the organisational structure of the SBM organisation. It consists of the following cross-functional teams:

*Supply Base Management Team:* This team meets at least once a month and consists of the Purchasing manager, Product development manager, Manufacturing manager and the Logistics Manager. The main task of the SBMT is to develop the supply base objectives and to co-ordinate and control all the actions that are needed to realise them. The final responsibility for SBM rests with the Purchasing manager, who reports to the general manager.

*Partner Supplier Team:* This multi-functional team with representatives from both LE&G and the partner supplier meets at least once every two weeks. Main task is, in close co-operation with the partner supplier, to identify and pursue all possible improvements in products, quality, logistics and costs. This way it is possible to involve the strategic partner supplier at an early stage in the Product Creation Process. A team consists of a directly involved representative of the following disciplines: Purchasing (team captain), Component Engineering, Advanced development, Manufacturing engineering, Quality, Procurement and Logistic innovation. The final responsibility of the team lies with the team captain, who reports regularly to the SBMT on the progress made.

*Preferred supplier duos:* These duo's enable intensive co-operation with preferred suppliers as well, dedicated duo teams are in place in order to create and optimise preferred component base. The duo consists of a directly involved representative of Purchasing (team captain) and a Component Engineer from Development (responsible for one of the four component technologies). When needed, participants of other disciplines will be involved in the supplier relation. The main task of the duo is, in close co-operation with the preferred supplier, to identify and pursue mutual improvements in areas of quality, logistics and costs. The final responsibility for the duo lies with the team captain, who reports to the SBMT on the progress made. Besides this, LE&G organises an annual Preferred Suppliers Day to intensify contact and ensure that both parties have a clear understanding of the expectations.

*Steering team Component Commonality (SCC):* The SCC forms the bridge between product- and production process development in the area of components and consists of a representative of the component team chairmen (chairman), Manufacturing engineering manager, Component engineering manager, Purchasing representative, Logistic co-ordinator for new products and the Quality manager. The SCC team meets every two months. Their main task is to set standards and design rules for components and component placement processes, with the specific intention to continuously improve commonality. Before components are allowed to be used in the product creation process, the Component Release Procedure (CRP) has to be applied indicating the preference indicator (PI) for every component<sup>59</sup>. The various stages of the CRP and their outcome are documented in the Product Engineering Component Database (called HEIN). The responsibility for this database lies with the SCC and Component Engineering. Further to this, SCC monitors global market trends for components, component packaging and component placement methods.

*Component Teams:* Per business line there is a component team in place, with a focus on the specific products for that business line<sup>60</sup>. A Component Team consists of representatives from Development (chairman) Manufacturing engineering, Purchasing, Logistics, Quality and Component Engineering. The main task is to

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<sup>59</sup> The preference indicator (PI) is based on the combined effect of component aspects like technology, functionality, quality, logistics, manufacturability, and environmental issues.

<sup>60</sup> There are CT's for Active components, Passive components, Wire wound, Mechanical and PCB's.

provide the 'one face' approach to the suppliers and to achieve technology linkage with the suppliers, sustained quality improvements, lead time reductions and meaningful cost reductions in the BOM area for the specific business lines. Final responsibility for CT actions and results rests with the chairman, who reports once every five weeks in the CT progress meeting to the Management Team.

Performance of the partner and preferred suppliers is closely measured by means of the vendor rating system. Performance is also benchmarked against other best-in-class suppliers. As a result of all the SBM efforts with partner and preferred suppliers, LE&G decreased incoming good inspections, introduced ship to stock agreements and was able to lower material prices at the same rate of end product price erosion. However, there is still room for improvement. The coming years LE&G aims at improving the following aspects of the SBM process: assessing and evaluating suppliers, measuring suppliers performance, optimising supplier and component base, installing regional and global competence teams, looking at total costs, and implementing early supplier involvement.

*Some remarks regarding Non-Bom purchasing*

Being an Electro assembly company, traditionally there was little attention for non-BOM related purchases<sup>61</sup>. Through the corporate OCOO program, aimed at reducing the other costs of organisation, management attention increased for this spend area, that contains 20% of the purchasing spend and has over 500 suppliers. LE&G Europe is now trying to copy the SBM approach to this area. Spend clusters are defined, which are managed by a cluster team consisting of a purchaser and a cluster owner. At this moment the different processes and tools are defined. During the coming years they have plans to implement the Purchasing portfolio, formalise supplier selection using the Total Cost of Ownership approach, and implement a vendor rating system. The non-BOM group consists of two purchasers and a purchasing assistant.

#### **4.4.5 Observations regarding purchasing synergy**

Says the CEO of LE&G Europe: "*LE&G Europe's main competitive advantage is synergy in the area of purchasing and development. We have four independent*

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<sup>61</sup> Or 'Other Costs of Organization' (OCOO) as ELECTRO calls this spend category.

*business lines with differentiated logistics and sales channels, but purchasing and development are highly co-ordinated and integrated at the European level”.*

Other respondents indicate that the realisation of purchasing synergy, driven by the SBM process, makes it possible to develop application specific IC's together with partner suppliers, against low prices. Because of the high volumes (four business lines together) suppliers can reach economies of scale otherwise not possible. This makes the customer specific IC a commodity for the supplier, with all the commercial and technical advantages that come with it for both supplier and LE&G. Today, LE&G takes the SBM approach one step further, to the global level. This complies with the overall SBM objective to *"Purchase components at the lowest integral costs by concentrating the buying power for global leverage.* First, the business model of LE&G Europe will be implemented in the other regions. After that the SBM model will be implemented, supported and directed by LE&G Europe as the Competence Centre for SBM. For the global role out of the SBM process they have defined a highly authorised BU Steering Committee Supply Base (SCSB). This SCSB supervises the global SBM process and has defined the following objectives:

- Ensure continuous cost reduction on purchasing components BG wide
- Ensure continuous improvement of the BG component and supplier database
- Set uniform rules and procedures for the way of working, design, release and global component database
- Agree on longer term global commitments / contracts with supplier partners on new technology development
- Take care of BG Component Teams staffing, target setting and performance / progress measurement

Acceptance and implementation of the results and decisions of the BU Steering Committee Supply Base, after consulting the relevant regions, by all factories and disciplines is mandatory.

At this moment, there are four global component working groups: WWC (Wire Wound components), ASIC (applied specific IC's), Active components and Passive components. These working groups consist of members from Purchasing, Component engineering and additional specialists. The chairman of the working group is always



from Purchasing and reports to the Strategic Engineering Meeting (SEM). These working groups map component technology together with supplier partner teams. Further, they explore market trends and new technologies to develop a global supply market / BG component requirement understanding. Finally, they optimise the BU supplier and component database on a global scale and concentrate buying power to achieve global leverage.

During the case research (1998) commitment of BU management was present to proceed with global SBM. The BU Steering Committee Supply Base was operational, four global working groups were appointed, the selection of partner suppliers at the BU level was partly done, the global database was under construction, the partner team working groups were operational in Europe and the supply base working groups were operational both in Europe and Asian-Pacific. Issues that still had to be worked on were: the organisation of international purchasing meetings, the appointment of leadbuyers per technology package, standardisation of BU supplier/component release procedures, supplier assessment and rating systems, and the investigation of sourcing opportunities in China and Eastern Europe. Apart from the internal initiatives to realise purchasing synergies with the SBM approach, there are interactions with many other ELECTRO organisations. We will discuss only the interactions with Product Divisional Purchasing and Corporate Purchasing.

#### *Interaction with ELECTRO Lighting Purchasing*

At the Product Division Lighting there is also a Purchasing management group. The Director of this group is responsible for the development of the Purchasing function within Lighting, and reporting directly to the CEO of Lighting. Besides formulating the Lighting purchasing vision and aligning the BG strategies, most important issues for the Director are: finding possibilities for improvement in purchasing, initiate projects, motivate and stimulate the people involved, measure the results and adjust where needed. Purchasing is regarded as an important business process within Lighting and the CEO is heavily involved in it<sup>62</sup>. To identify potential (intra PD) synergies, Lighting uses multi-functional competence teams for several different

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<sup>62</sup> The Lighting CEO is chairing the Purchasing Steering Committee of the PD Lighting, and member of the ELECTRO corporate OCOO Steering Board.

products and materials<sup>63</sup>. These teams consist of eight people, all coming from different business groups, regions and/or countries and are chaired by a senior line manager. During the formulation process, BG's can influence the purchasing strategy. However, once the team has made a decision, the strategy is mandatory. The competence teams also develop purchasing tools, facilitate pooled buying, exchange know-how, share best practices and implement ICT systems. The Director and his group facilitate the implementation of this competence team structure through workshops, training sessions, etc. From the perspective of the BG LE&G, there is little potential synergy in the BOM area with the other BG's of the Lighting Division. LE&G is an Electro assembly company and has more in common with some of the businesses of the PD Sound & Vision.

#### *Interaction with ELECTRO Corporate Purchasing*

At the corporate level, ELECTRO has a Corporate Purchasing group (CPG). The Director of CPG reports directly to the corporate CFO at the Board of Management. The CPG is responsible for the development of the Purchasing function within total Philips, and for identifying potential purchasing synergies in the BOM and non-BOM area. CPG gathers purchasing information from the different PD's (numbers, specifications, prices, suppliers, etc) on the basis of which they identify opportunities for synergy over different Product Divisions. Also negotiations are initiated with large global suppliers, mainly in the area of standard components (those of which a large number of suppliers are available). Since 1996, LE&G participates in some inter-PD initiatives for bill-of-material-items (e.g. electronic components). Especially, LE&G and Sound & Vision have a large number of suppliers in common, often only detailed specifications differ. In addition to this formal co-operation, respondents indicated there is also ad-hoc, informal and non-structured co-operation between local purchasers from LE&G and S&V (e.g. exchanging information about suppliers). In 1996 the Corporate Purchasing Group started with the company wide 'OCCO program', aimed at reducing the Other Costs Of Organisation (non-BOM) with 1.3 billion guilders annually. LE&G makes use of the corporate contracts for non-strategic goods and services like Catering, which saves them a significant amount of money.

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<sup>63</sup> Examples are Packaging, Glass products and materials, Metal, Mechanical components.

#### **4.4.6 Reflections on the case**

At ELECTRO LE&G, the single most important driver underlying the strategy aimed at realising purchasing synergy through the SBM process, is the need to battle the annual price erosion of more than 10%. To reduce costs in this business, economies of scale are very important. By increasing commonality of components LE&G is able to leverage volume, and with that it becomes possible to get customised components from suppliers for lower prices. Within LE&G Europe, the approach used to realise purchasing synergy is centre-led, team based and highly formalised. The potential value of working together (cross-functional and cross-business line) is clear to everyone involved in this process. Also, top management is convinced and heavily involved. LE&G Europe is selected as the global competence centre for SBM. The purchasing manager of LE&G Europe is appointed as the CPO of the BG and is responsible for rolling SBM out globally and for managing purchasing synergy across the different regions. Respondents indicate that this is a big challenge because the four regional purchasing organisations differ a lot and the regional organisations still have a large degree of autonomy with regard to their product policy. Other main barriers mentioned by the respondents are:

- Differences in business model, management and organisation.
- Differences in maturity of the purchasing organisations. Professional buying and managerial skills are needed for the SBM approach, however these are not yet in place in every region.
- Resistance of LE&G USA due to fear of losing jobs and the fear of losing profitability when implementing the new business model and the SBM approach. Further, LE&G USA has difficulties accepting LE&G Europe's role of global leader for the Purchasing function and the SBM process.
- Lack of sufficient resources to manage SBM globally (most people are only involved part-time).
- Incompatibility of information and purchasing systems over the regions.

Finally, this case illustrates that managing corporate purchasing synergy requires CEO support, line management involvement, clear and uniform business goals, mature purchasing organisation, and an organisation that is used to work in teams.

## 4.5 Pharmaceutical corporation

*KAPPA-GAMMA Corporation*, headquartered in the Netherlands, is serving customers throughout the world with healthcare products, coatings, and chemicals. Consolidated sales for 1999 (excluding the former fiber division, which was divested late 1999) totalled EUR 12 billion. Excluding the Fibers division, the company employed 68000 people in 75 countries at the end of 1999. A number of specific business units (*Pharma* cluster) are responsible for *KAPPA-GAMMA Corporation's* worldwide activities in the field of modern healthcare. They each carry out research, development, manufacturing, sales and services in specific areas of human or animal healthcare. These areas include prescription medicines (*Octapharm*), systems and products for hospitals, laboratories and blood banks (*Octapharm TK*), veterinary products (*Pharmavet*), non-prescription medicines and home diagnostics (*Pharchem*) as well as active pharmaceutical ingredients (*Deltapharm*). In 1999 the *Pharma* cluster had a sales turnover of EUR 2,865 billion, and a return on net assets of 20,8% (see Table 4.5.1).

Table 4.5.1 Return on net sales of the *KAPPA-GAMMA Corporation* clusters

Cluster	1999	1998	1997	1996	1995
Pharma	20.8	20.7	20.2	20.1	19.9
Coatings	8.5	8.4	9.0	8.0	6.9
Chemicals	9.6	9.4	9.6	7.5	8.3
Fibers	(2.8)	3.3	2.6	2.4	4.4
Total	9.5	10.0	10.3	9.1	9.2

Source: annual reports 1999, 1998, 1997, 1996 and 1995)

*Deltapharm* is a leading global supplier of specific active pharmaceutical ingredients, with production facilities in several countries. In addition to its three production centers in the Netherlands, *Deltapharm* has factories in Brazil, France, Mexico and the USA. Sales offices are maintained in France, UK, Japan, Mexico and the USA. The company is active in biochemical extraction and purification, fermentation, industrial cell culture, and organic synthesis. *Deltapharm's* main products are heparin, insulin, gonadotropic hormones, steroids, synthetic peptides, carbohydrates, and opiate

analogs. Deltapharm has over 2000 employees, of which 1400 are working in The Netherlands. The consolidated sales aggregated EUR 337 million in 1999.

Until the early 1970s, Deltapharm was an internal supplier and part of Octapharm. Today, Deltapharm is an independent business unit selling products to a large number of pharmaceutical companies throughout the world (e.g. Hoechst and Bayer). However, Octapharm still makes up 40% to 50% of Deltapharm's sales.

#### **4.5.1 Observations regarding the business context**

The size of the world market for active pharmaceutical ingredients is estimated by the respondents to be some USD 10 billion and is expected to grow at an annual rate of approximately 5 percent. The market consists of many small segments with more than 2,000 different ingredients. Attracted by the high earnings potential of this market (high margins combined with low price erosion), many newcomers have entered the market. In the near future, however, consolidation, if not reconfiguration, within the industry could well materialise. Since the main issues today are c-GMP<sup>64</sup> and HSE<sup>65</sup>, customers will increasingly look for reliability, support and commitment of their suppliers to minimize risks. Therefore, the long-established suppliers could have a benefit over the smaller newcomers, who might be eliminated as a result. In the pharmaceuticals industry, product life cycles and time-to-market are both very long. Arriving at a new medicine takes a lot of research (developing, patenting and testing) and development (developing the production process). It will take on average between 8-12 years to put a new medicine on the market. Government regulations are an important characteristic of the pharmaceuticals sector. In the '80's the FDA<sup>66</sup> changed its regulation. Until then, quality control and assurance was only the responsibility of the final producer of medicines (e.g. Octapharm), but now it is also required that suppliers of active ingredients (e.g. Deltapharm) have rigid production processes and quality control as approved by the FDA. This means that when the FDA retracts the approval to produce, Deltapharm has to stop production until the problem is solved.

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<sup>64</sup> C-GMP stands for current Good Manufacturing Practice.

<sup>65</sup> HSE stands for Human, Safety and Environment.

<sup>66</sup> FDA stands for 'Food and Drug Administration'. This US Government organization formulates internationally accepted regulation and (quality) procedures for the health care industry.

#### **4.5.2 Observations regarding the corporate strategy**

Deltapharm's strategy is to develop high quality active ingredients and produce them through complex biochemical and chemical production processes. Therefore Deltapharm is increasing its spending on R&D, Production processes and HRM. The respondents estimate that the total costs of raw materials make up only 10% of the cost price, the other 90% are related to R&D, Production, HRM and overhead. To be innovative in terms of new ingredients and processes, Deltapharm has a well-equipped R&D organisation with state-of-the-art laboratories and pilot plants. To be able to anticipate and respond customer needs, Deltapharm has production facilities in several countries. Due to these high quality assets and resources, Deltapharm is not able to compete with low cost suppliers from third world countries that concentrate on the relatively easy-to-make commodity type products. Therefore, Deltapharm concentrates on those active ingredients that require complex production processes and sound R&D. In other words the focus is on quality, not on lowest cost.

#### **4.5.3 Observations regarding the corporate organisation**

Early 1990s, KAPPA-GAMMA Corporation introduced the business unit structure as the new leading organisational principle: activities are executed decentral unless there is a good reason to do it central. Divisional organisations no longer exist, and are replaced by business units that are currently grouped in three clusters: Pharma, Coatings, and Chemicals. The business units CEO's are profit responsible, have a large degree of freedom and report directly to the board of management. However, there are some structures to co-ordinate cluster policy issues. Each corporate board member is responsible for co-ordinating policy setting in a cluster, and chairing a Cluster Management Committee. The so-called service units (SU) support the business units. SU's are no staff departments, but service providing units with BU characteristics. Service units are organised on site-level, country-level or even regional level. They fall under the supervision of the country organisations and report to one of the four cluster managers. An example of a service unit can be a purchasing department serving four different BU's that reside on the same production site, to maintain purchasing synergy. As a technology-based company, *KAPPA-GAMMA Corporation* regards research and development as essential to attaining its strategic objectives; therefore it spends about 1.3 billion guilders on R&D annually. Expressed as a percentage of sales, the Pharma cluster spends about 14% on R&D, which is far

more than the other clusters (they spend on average about 3% of their sales). Recently the corporate management board decided to delegate some central activities back to the BU's (e.g. R&D, Engineering and IT). The remaining departments at the corporate level are Finance & Control (with legal, tax, and patents), Corporate Purchasing, Technology management (incl. Health, Safety and Environment policy), Strategy planning and Human Resource Management.

Early 1970s, the Pharma Division was one of the first among *KAPPA-GAMMA Corporation* Divisions to implement a business unit structure. Today, the Pharma cluster consists of a group of five different business units, which all have mainly grown through autonomous growth instead of mergers and acquisitions. There are some significant cultural differences between the BU's. For example, Octapharm is regarded as a 'white-collar' organisation (R&D and marketing oriented) and Deltapharm is regarded as a 'blue-collar' organisation (production oriented). Deltapharm is an outsider in the Pharma cluster, because all the other business units produce end products, and Deltapharm does not. Given its characteristics, Deltapharm would also fit in the Chemicals group, however, due to the strong government regulations for producing pharmaceuticals that is not possible. The Deltapharm organisation can be characterised by being conservative, functionally structured, internally focussed, production oriented, informal and hierarchical. The government regulations have led to strict and rigid control procedures, and with that to a culture in which change is difficult. Also, employees tend to work in the same department for many years (we have found cases of 20 to 40 years). This makes it very hard for managers to implement revolutionary changes at Deltapharm. For long, every functional department (including purchasing) had its own information system. Autumn 1998, an integral business information system (MAS-project) was implemented at Deltapharm, making it easier to consolidate and exchange information. Over the last years Deltapharm is growing fast in terms of turnover, but also in number of employees. The turn over in 1998 was EUR 291 million, which rose to EUR 337 million in 1999 (of which 50% will be generated by sales to Octapharm and other BU's of the *Pharma* cluster).

#### 4.5.4 Observations regarding purchasing maturity

The purchasing department at the Oss-site, is responsible for managing Deltapharm's as well as Octapharm's purchasing function. The purchasing department exists since late 1950s, when a department was formed with two buyers at Octapharm. Before, the functional departments and the internal users did their own buying. After Deltapharm was split of Octapharm, the purchasing departments of Octapharm-Oss and Deltapharm-Oss were placed under the responsibility of Deltapharm-Oss. Over the last 40 years purchasing has developed to a well-accepted and appreciated profession within Deltapharm/Octapharm-Oss. Early 1990s the purchasing department was reorganized. The head of purchasing formed several commodity groups and defined different function profiles (e.g. assistant-buyer, buyer and senior-buyer). The Purchasing function can be characterised by using some of the remarks made by the respondents:

- 'purchasing is a profession that you learn in practice'
- 'we purchase to keep production process running'
- 'quality and reliability are priority over lowest costs'
- 'purchasing is procedural and strictly controlled, like all company activities'
- 'buyers spend a lot of time on operational activities (ordering, chasing suppliers)'
- 'the purchasing department is a conservative environment with few changes'
- 'there are many long term relationships with local suppliers'
- 'most of the senior buyers are working at the department for over 20 years'
- 'knowledge and information resides predominantly in the heads of the buyers and not in purchasing information systems'
- 'buyers are only limited involved in the specification of products and services'

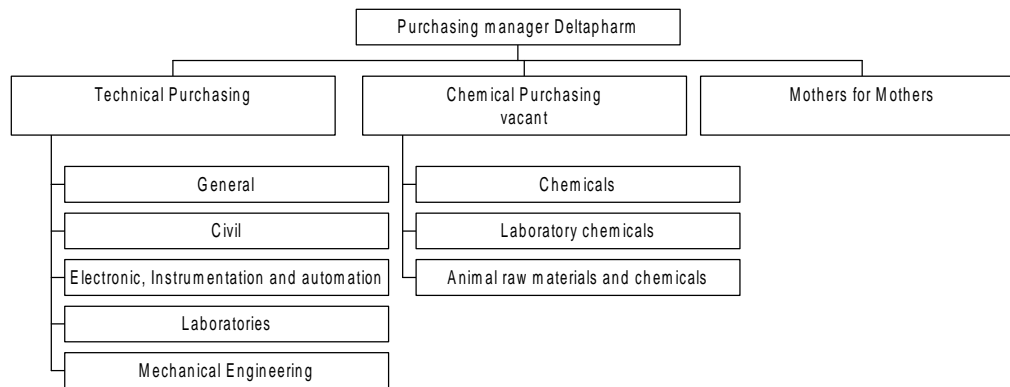
The purchasing department has three main areas: Technical purchasing, Chemical purchasing and '*Mothers for mothers*'<sup>67</sup>. Each area is again sub-divided in commodity groups with a senior buyer in charge (see also Figure 4.5.1).

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<sup>67</sup> '*Mothers-for-mothers*' is a special form of 'purchasing'; this department is responsible for collecting the urine of pregnant women, which is an important ingredient for some products.



Figure 4.5.1 Deltapharm's purchasing department in 1998



Compared with other *KAPPA-GAMMA* BU's, the level of outsourcing is relatively low at Deltapharm/Octapharm. One explanation could be that the strict regulation and quality controls in the pharmaceutical industry resulted in a strong preference to manage and control all activities in-house. Buyers are skeptic about outsourcing. In their opinion outsourcing lead to long communication lines, ineffective operations and higher costs because of the profit margins of contractors. Purchasing has long established relationships with a large number of local suppliers. For example, the commodity groups 'Mechanical engineering' and 'Civil' both have more than 300 suppliers, many of them situated close to the plant in Oss. Some supplier relationships last already for more than a decade, and close personal contacts have developed between buyers and suppliers. The large number of suppliers, the long lasting relationships and close personal contacts indicate that supplier management is only moderately developed (e.g. portfolio management is not yet widely used). Buyers challenge their suppliers mainly on their delivery, quality, health and safety working procedures, commercial conditions are of secondary importance.

Based on an internal benchmarking study, in 1994 a consultant concluded that Deltapharm's purchasing department could be regarded as 'best-practice' within Pharma Corporation. The availability of resources and processes was one of the key success factors of this department. Supported by the consultant, purchasing action plans were made for 1994 and 1995 based on purchasing portfolio analysis. It appeared that more than 50% of 'Chemicals' was situated in the strategic quadrant, 50% of 'Research Chemicals' was situated in the leverage-quadrant and more than

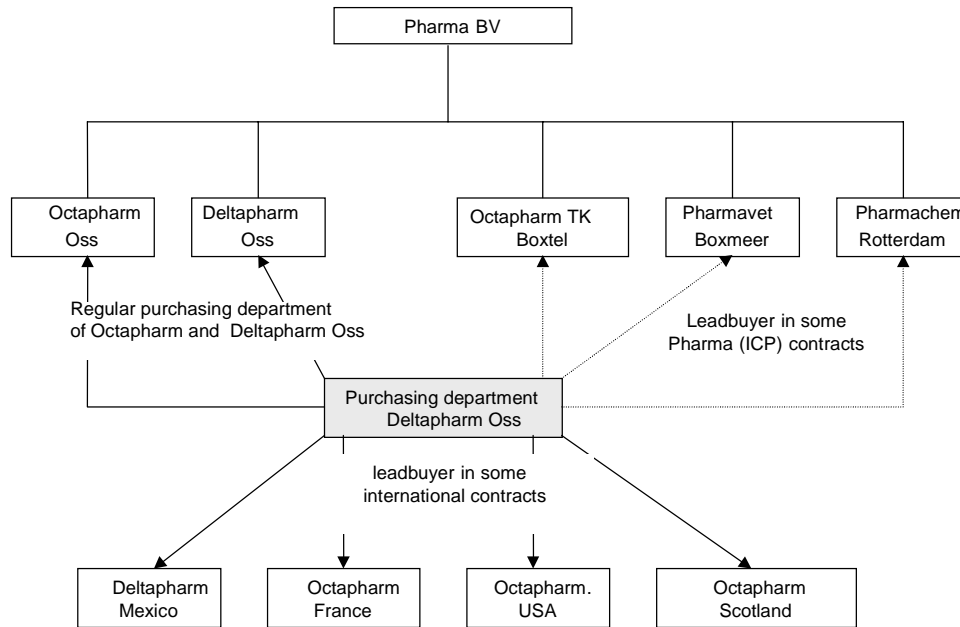
80% of 'Raw materials' was situated in the strategic quadrant. However, after the project was finished and the consultant left, buyers stopped using the purchasing-portfolio. It appeared to be too complicated and/or time-consuming for them to use in practice. Also, the discipline to make annual action plans and reports decreased. The annual purchasing reports of 1994 and 1995 contained targets and results, the report of 1996 contained only a short annual review, and the report of 1997 still had to be made during the period of research (1998). There is still room for improvement especially in the areas of supplier management, purchasing management and purchasing information systems.

#### **4.5.5 Observations regarding purchasing synergy**

The purchasing department in Oss is mainly responsible for purchases made for Deltapharm's largest production plant in Oss. In some occasions, however, it also acts as the leadbuyer for Octapharm and/or Deltapharm plants (e.g. Deltapharm Mexico, Octapharm France, Octapharm Inc, USA and Octapharm New House in Scotland). Deltapharm has 7 production plants worldwide, each having their own decentral purchasing department to buy the raw materials needed for production. There is almost no cooperation between these purchasing departments. Recently, BU management decided that all production facilities worldwide should be built according to the requirements of the largest production plant in Oss. It is expected that this harmonisation of production facilities will increase the opportunities for cooperation in purchasing across the 7 plants. The main function of the purchasing department is to be a knowledge center for all kinds of purchases. On an informal, accidental and ad-hoc basis, purchasing departments from other plants use this knowledge for their own benefit. As the biggest purchasing department of the Pharma cluster, the purchasing department in Oss plays an important role in the achievement of purchasing synergy in this cluster. All information about suppliers and purchasing spends are collected by this department. The Pharma BV, a legal entity that got empty after the elimination of the divisional organisation, is used as a legal entity to close frame contracts for Pharma BU's. These contracts are initiated by a special committee, called 'Purchasing Co-ordination Pharma' (ICP), that has about five meetings annually. This committee, consisting of BU purchasing managers and chaired by the general manager of Deltapharm, can ask purchasers (of different BU's) to negotiate a Pharma contract for a specific commodity for The Netherlands. The

first three to four years this concept has been successful, but the last two years only a few new contracts were closed. Slowly, the focus of ICP is shifting towards European purchasing coordination. For example, recently they negotiated a European contract for hard- and software. Similar platforms in North-America and Asia should be created in the near future.

Figure 4.5.2 Deltapharm's purchasing department in Oss



The Deltapharm/Octapharm purchasing department also plays a role in realising purchasing synergy at the corporate level. One of the respondents explained to us that he voluntarily initiated purchasing co-ordination meetings with other BU's early 1960s, driven by the idea that joint buying could save the company money. This initiative, however, did not deliver the potential results due to all kind of resistance in the BU's. Major roadblocks he experienced were the cultural differences with the other BU's and the undeveloped purchasing departments in the other BU's. Until the 1980s, little was done to formalise voluntary purchasing synergy initiatives. In 1981, Kappa Central Purchasing (KCP) was founded. Because ACP processed all payment transactions, they were able to collect valuable purchasing information from all BU's. This information served as an important tool for exploring opportunities for purchasing synergy. In the early years corporate contracts were not mandatory, which resulted in low use of these contracts by the BU's. Early 1994, driven by the merger

between Kappa and Gamma, a consultant was hired to help realising post-merger synergies in purchasing. The consultant proposed to define Homogenous Product Groups (HPG's), to work on uniform specifications across business units and to make corporate contracts mandatory. In 1996 this project has reached the consolidation phase with 40 mandatory frame contracts covering 150 million of spending and generating 8 million of savings<sup>68</sup>. Average utilization of these contracts has reached the 90% level. Today, about 40% of the total corporate purchasing spend is covered by contracts based on these HPG's. For each HPG a corporate account group has been formed, consisting of 3-5 interested BU purchasers (usually 1 purchaser per cluster) and 1 Central-purchaser. Often, a senior buyer from the Deltapharm purchasing department represents the Pharma cluster. The account groups meet 3-4 times per year discussing developments and exchange information. Once an account group negotiates a corporate contract, it is mandatory and managed by Central Purchasing (CP). This whole corporate purchasing process is coordinated by a Purchasing Board, consisting of 4 BU representatives (one BU manager from each cluster) and the Purchasing Director of CP. The Purchasing Board defines the corporate purchasing strategy and decides on the priorities. Respondents indicate that there are signals from certain account groups that the process is stagnating. Over the last years the role of CP has declined. There are still some working groups, however, meetings are informal (exchanging information on prices, conditions, regulations and experiences with suppliers) and on personal initiative. CP is not involved. Some respondents indicate that these informal meetings do not add much value, because of the voluntary character.

Recently, the board of management assigned a new director of CP. This director has a business background and reports directly to the CFO. It is expected by some of the respondents that he will take some initiatives to revitalise the purchasing synergy initiatives and will introduce less voluntary working methods. One of the objectives of the new purchasing director is to create more synergy between the national purchasing networks of the Netherlands, Sweden, Germany and the UK. The most important facilitator for building these international purchasing networks will be the new

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<sup>68</sup> Total spend in 1996 was 15 billion guilders (67% of the total sales). Raw materials, Energy and Packaging accounted for 9 billion, and Equipment, Technical materials and services accounted for 6 billion.

purchasing intranet system. Another objective is the set up of a purchasing HRM system, with job rotation and training and education for BU purchasers. April 1998, the CPO invited 125 buyers for a purchasing meeting, only 52 did show up. This indicates that there is (still) a lot of resistance among BU purchasers to be involved in corporate purchasing initiatives.

#### **4.5.6 Reflections on the case**

Purchasing synergy is a difficult issue within the specific corporate context of Pharma Corporation. Over the last two decades CP directors only moderately succeed in realising purchasing synergy across business units. The major reason behind this is that business unit purchasers, to a large extent, distrust central purchasing initiatives. The BU purchasers think that it is CP's aim to build a large central purchasing department and eventually take over their jobs. Because they are afraid to lose their jobs, BU Purchasers will come with all kind of (irrational) arguments to resist participating in corporate purchasing initiatives. Due to the restructuring of Pharma Corporation into a business unit organisation, CP was, and still is, in a difficult position. *"Synergy has a positive ring to it, but is often an illusion in a company like ours"*, says a BU purchasing manager.

We will summarise the five major lessons we draw from this case. Firstly, a central and directive top-down approach to purchasing synergy will not work in this specific context. As indicated by the respondents, business units should have the lead in realising purchasing synergies. It should be a voluntary and bottom-up process that starts with realising purchasing synergies on the BU level and the cluster level, and finally on the corporate level. Secondly, the units that plan to co-operate with each other should be more or less equal in terms of purchasing (i.e. quality of the purchasers, role and position of the purchasing function, size of the purchasing department). It will take a heterogeneous group a lot of time and effort to reach an understanding on how to realise purchasing synergy. Thirdly, the corporate purchasing group must be very sensitive to the independent position of the BU purchasers and their interests. The small and underdeveloped purchasing department will welcome corporate purchasing initiatives and probably use it to create purchasing awareness in their BU's. The large and developed purchasing departments already have created purchasing awareness in their BU and will resist too much corporate

interference. Fourthly, it should be demonstrated based on facts that working together will deliver significant savings. Once BU are working together progress should be monitored. As one respondent stated: “Nothing motivates more than measurable savings”. Finally, the success of purchasing synergy initiatives is determined too a large extent by the people that are involved. The people involved should have the skills and attitude to work in teams. The best candidates have working experience both at the corporate and at the BU level.

After the merger between Kappa and Gamma in 1994, the first post-merger savings came from a company-wide project aimed at realising purchasing synergy. However, few years later it appeared to be very difficult to continue the corporate effort in purchasing. Once the initial targets were reached in 1996, the people involved reduced their corporate efforts and shifted priorities to the BU. There was no reason to continue at the same intensity, for there was no new corporate target. One respondent explained it as the people involved being a little bit ‘synergy fatigue’ from all the extra meetings, communication, and travelling.

#### **4.6 Oil Corporation**

The Sigma Group is one of the top 3 oil companies in the world. The Sigma Group is a holding company, which holds directly or indirectly, investments in over 1700 active companies operating under various ownership arrangements. These operating companies are engaged worldwide (over 130 countries) in all the principal aspects of the oil and natural gas industry, chemicals, power generation, renewable resources (e.g. solar energy), coal and other businesses. Sigma controls almost every aspect of oil production from exploration to their 47000 gas stations. Sigma’s operating companies are divided in the following segments: Exploration and Production, Gas and Power Generation, Chemicals, Renewables, and Oil Products. The Sigma Oil Products (OP) businesses are involved in refining and processing of crude oil into end products, distribution and marketing and sales. Sigma Europe Oil Products (SEOP) is responsible for the manufacturing and sales of oil products in Europe and is divided in three parts: *Retail* (petrol stations and shops for consumers), *Commercial* (sales organisation for professional customers like airports) and *Manufacturing, Supply and Distribution* (Refinery and distribution). In 1998 Sigma Europe Oil Products operated

in 26 countries in Europe and had full or part share in 17 refineries. The refinery of Pernis in Rotterdam, The Netherlands, is the second largest Sigma refinery with a capacity of 374,000 barrels per day.

#### **4.6.1 Observations regarding the business context**

The Sigma group is strongly dependent on the world crude oil price. If the crude oil price raises US\$1 per barrel, Sigma’s bottom line increases with US\$450 million. 1998 was a difficult year for the oil industry because the Brent crude oil price averaged US\$12.75 per barrel, compared with US\$19.10 per barrel in 1997. Sigma’s profit margins were under severe pressures. Return on investments decreased to 3% (the lowest ROI of its seven largest competitors) while group management planned an increase to 15%.

*Table 4.6.1 Financial indicators of Sigma Group*

<b>Indicator</b>	<b>1998</b>	<b>1997</b>	<b>1996</b>
Turn over (in US\$ million)	93,692	128,155	128,313
Net Assets (in US\$ million)	350	7,753	8,886
RONA	0.4%	6.0%	6.9%
ROI	2.8%	12.0%	12.0%

To survive the low oil price, the seven largest oil companies tried to realise cost savings throughout their value chains and increase their market shares through mergers and acquisitions, joint ventures and strategic alliances. Today, the market shows more and more oligopolistic characteristics: few very large competitors, ‘low costs’ strategies, and little mutual competition. Trading margins in petrochemical products are expected to remain under severe pressure for much of 1999 because of the over capacity and surplus inventories, the diminishing growth in demand of end-customers and business-to-business customers (e.g. airlines) showing a critical behaviour towards prices and increasingly demand for global deals. Sigma’s current investment plans have been scaled back, but they nevertheless represent a substantial continuing commitment to growing the Exploration and Production Business.

### 4.6.2 Observations regarding the corporate strategy

Driven by the poor financial results (see table 4.4.1) and the pressures from the business context, Sigma introduced a new company strategy aimed at reducing costs and improving operational efficiency significantly. The new CEO has committed himself to increase profits by reducing costs, downsizing overheads<sup>69</sup>, scaling back investments and improve efficiency through reorganisation of the company.

### 4.6.3 Observations regarding the corporate organisation

To deliver the corporate objectives, a revised structure has been established that will provide the necessary direction, co-ordination and will work on a “*think Global/Europe act local*” basis. Sigma is expecting new efficiencies from looking at its business globally (or pan-European). Sigma’s decentralised corporate structure with autonomous country organisations managing several operating units, has long had been key to its success. However, the strong country CEO’s acted as if they were running independent local oil companies, only optimising on a national level and were not stimulated to look for synergies across borders. Today, the SEOP organisation (under a management services agreement) provides, in return for a fee, advice to European operating units (OU) primarily to assist them in the co-ordination of their activities and the development of strategies. The OU’s own the assets, are the employers and are responsible for sales, marketing and local issues. Refinery managers and local Distribution managers will report to the Country Chairman for local issues (e.g. HRM policy, HSE, operational interface with Chemicals), whereas for issues which require a European business focus (e.g. transport, procurement, manufacturing) they will have a functional reporting line to the vice president MSD of SEOP. To illustrate, at Pernis-Rotterdam structures and processes were in place to optimise the feedstock to maximise the bottom line of Sigma Nederland. In the new SEOP organisation the refinery feedstocks and programmes will be optimised within one of the three MSD-Clusters (or even on a broader pan-European scope) in order to maximise SEOP’s bottom-line. The Manufacturing, Supply and Distribution group (MSD), is responsible for managing the complete European hydrocarbon supply chain, from crude oil purchase to product delivery, for the purpose of optimising the

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<sup>69</sup> Today, Sigma employs 100.000 people, which is 21.000 more than Exxon, the largest oil company of the world.



supply chain cost structure, maximising return from assets and minimising inventory costs.

#### 4.6.4 Observations regarding purchasing maturity

Spending on procurement varies between each business sector and operating unit. Over 1996 the Sigma group's total spend on goods and services at third parties and suppliers was about 30 billion dollars. Of the group's total spend on procurement, Oil Products (OP) spends about 45% (11 billion dollars, of which 5,6 billion by SEOP), Exploration and Production 35%, Chemicals 18% and the remaining businesses just spend 2%. As proportion of total costs, procurement in most OP and Chemicals companies is about 40%, whereas in many E&P companies it is as high as 80%.

Table 4.6.2 Overview group spend (Source: Sigma World, April 1999, pp.28-30)

Sigma business groups	Procurement / total costs (purchasing quote)	Percentage of total Sigma spend
Oil Products	40%	45%
Exploration & Production(E&P)	80%	35%
Chemicals	40%	18%
Remaining businesses	N/A.	2%

#### *Purchasing at group level*

In the 1970s Sigma had a Group Materials department (see appendix) actually doing the operational buying and logistics for several operating companies. In the 1980s and early 1990s, Sigma had a Corporate Contracting & Procurement (CP) Group, aimed at negotiating group contracts, defining purchasing procedures and providing consulting services to operating units world wide. During the past years the focus of CP activities shifted more and more towards consulting and less to direct responsibility for Contracting & Procurement professionals<sup>70</sup>. Early 1990s CP was perceived as a 'cost center', not as a contributor to the ROACE. Only after Sigma USA<sup>71</sup> realised significant cost savings in 1993 through improved C&P, Sigma Europe became interested in the potential of the C&P function. The CMD appointed the manager who

<sup>70</sup> The internal market share of the central buying group diminished from 10% in the 1980s to 2% in 1992.

<sup>71</sup> In 1991 Sigma USA was in great financial difficulties and looked around for any way of saving money. A large amount of the cost savings resulted from Contracting & Procurement.

was responsible for the CP success in the USA, as the new head of the central CP Department<sup>72</sup>. In 1994 the new head of CP started a ‘revolution’ within Sigma. Firstly, based on valid information on total group spending on goods and services (\$30 billion), he set a group Procurement savings target of \$2 billion (7% of the total spend). Secondly, he travelled around the world to sell the new purchasing goal and strategy to top management in order to get their support and involvement. It took two years before the managers understood that the \$2 billion target was their target and not CP’s. Thirdly, he introduced the concept of ‘Supply chain management’ to shift the focus from reducing price towards reducing cycle time, capital employed and total cost of ownership. In addition, this new name also changed the status of the CP profession within Sigma. Finally, he replaced almost all ‘old and traditional buyers’ at CP with young graduated people with a business view and consulting skills.

Although good results have been achieved, in some areas Sigma had fallen short of its targets. Driven by the pressures from the business context, the Sigma Group urgently needed to improve its performance and do so more quickly. In December 1998 the Group Chairman set a target for reducing overall costs by \$2,5 billion a year in 2001, and stressed the important role for Procurement in realising this group target<sup>73</sup>. Recently (early 1998), Sigma reorganised the CP group. Firstly, the new position of Group Adviser Strategic Sourcing<sup>74</sup> (CA/SS) was created in the Corporate Advice Group (CA). The CA derives its mandate from being advisor to the CMD. The CA/SS is directly reporting to the Chairman of the Group Management Committee. The CA/SS is responsible for giving guidance on the strategic sourcing of goods and services across the Group, and for giving leadership to the C&P Community. Secondly, a new company, Sigma Services International (SSI), was formed. Apart from other services (e.g. HRM, IT), this company will provide the services that are essential to the successful operation of C&P at Sigma Companies. At SSI reside C&P consultants and commodity experts, who can help to improve C&P practices by giving them advice (e.g. global sourcing) or help negotiating corporate contracts (e.g. global contract for valves). SSI will operate by free market principles, which means

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<sup>72</sup> This was the first senior manager with significant C&P experience that became the head of CCP.

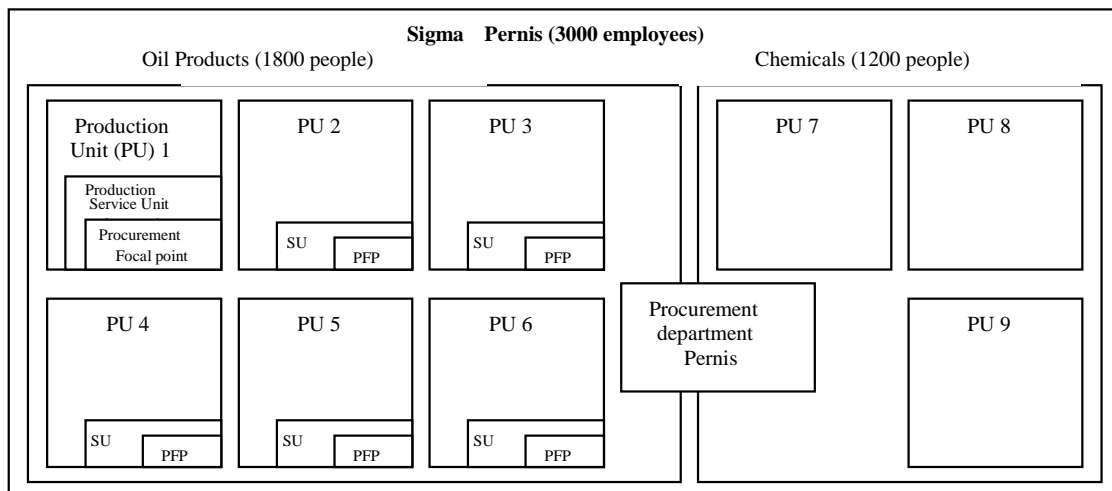
<sup>73</sup> It is estimated by CA/SS that every \$1 billion reduced in Procurement costs has the potential to increase ROACE by one percent if business have the discipline to ensure savings get to the bottom line.

that if it provides services at competitive prices it will have satisfied customers. If not, (internal) customers are free to look elsewhere for what they need.

*Procurement at the Production site Pernis*

The actual buying is predominantly done at the site level. Pernis is one of Sigma's largest production sites with over 3000 employees (1800 for Oil Products and 1200 for Chemicals). Because of the large size, the site of Pernis is sub-divided in six Oil Products production units and three Chemicals production units. The production units are each supported by a Service Unit (SU) that provides assistance in the areas of Maintenance, IT, Safety and Outsourcing. In addition to these SU's there is a central Procurement & Contracting department for Pernis, that buys materials, goods and services for both Chemicals and Oil Products production units at the Pernis site and the Moerdijk site<sup>75</sup>.

Figure 4.6.2. Overview Sigma Pernis site



Investments included the total spend amounts 1,5 billion guilders (without investments about 1 billion). In 1999 this central department consisted of 36 employees. A number of these employees are placed at the SU's as focal points for the central C&P department. These people do not buy themselves, but see to that

<sup>74</sup> Strategic Sourcing is the exploitation by Sigma of its position and size (e.g. through leverage) in the global, regional and local market places in which it sources goods and services.

<sup>75</sup> Crude oil and energy are bought through the Sigma Trading and Supply Company (STASCO).

contracts are negotiated according to the central commodity strategy. Almost 50% of the total spend is covered by these central agreements.

Over the last ten years C&P at Pernis has developed significantly. Ten years ago Pernis had an inward looking and reactive Materials Department buying the materials needed by the production units to keep the factory running. Today, this has changed into a pro-active Commercial Support group with contract engineers and consultants who are able to work in cross-functional teams (CFT's)<sup>76</sup> to investigate the main cost drivers in the supply chain and formulate strategies for key commodities. Based on this commodity strategy a frame contract will be negotiated by a commercial team. After the contract is closed, Sigma could decide to form a CFT consisting of both people from Sigma and the supplier, that will formulate a supply chain improvement plan to reduce cycle-time, working capital and/or total costs of ownership.

#### *FRD team on Procurement*

As part of the LEAP program<sup>77</sup> Focussed Results Delivery teams (FRD-teams) are initiated. These FRD-teams are special task forces aimed at generating a cost saving or value improvement within the scope of 90 days. Every 30 days the team reports directly to SEOP management committee. The first FRD-team got a target to save money on working capital. The second FRD-team was aimed at Procurement and also got an ambitious savings target. According to the team members, one advantage of this FRD approach is that the time period is fixed. However, these 90 days are very time consuming. Though, membership should be part-time, often team activities consume more than 50% of the available working hours. The fact that the every day job gets less attention is a disadvantage. Another advantage is the support and monitoring of top management. This stimulates the team to co-operate closely and achieve significant results at the end of the 90 days. A final advantage is the close personal network that will exist afterwards. This network can foster new initiatives and information and knowledge sharing.

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<sup>76</sup> A typical CFT consists of mechanical engineers, account managers, a sponsor (often a manager), C&P, Maintenance and Operations managers and a facilitator.

<sup>77</sup> LEAP (stands for Leadership and Performance Operations) is a group initiative aimed at improving performance through changing the leadership style, behaviour and mindset of Sigma employees. The former successful CCP director runs this initiative.

Further supplier management activities encompass a vendor management module in Sigma's core transaction processing system (SAP), regular vendor quality audits, portfolio management, and an account management structure for the most important vendors. To monitor progress towards achieving the SEOP C&P targets a Supply Chain Value Improvement Log is designed. Value improvement is defined as the saving between the 'would-have-been' costs of goods and services and 'new' costs that resulted as a consequence of a supply chain initiative being implemented. The value improvement may be taken anywhere along the supply chain, i.e. not only in the acquisition steps. It may also include improvements to working capital (e.g. from stock reduction) and by cost avoidance resulting from changes to scope and/or process. Each operating unit will maintain a detailed log of their value improvements.

#### 4.6.5 Observations regarding purchasing synergy

Within the Sigma Group there are many formal initiatives going on to realise cross business synergies (see Table 4.5.3). We will discuss four of them in more detail.

Table 4.5.3 Formal mechanisms for purchasing synergy (situation late 1998)

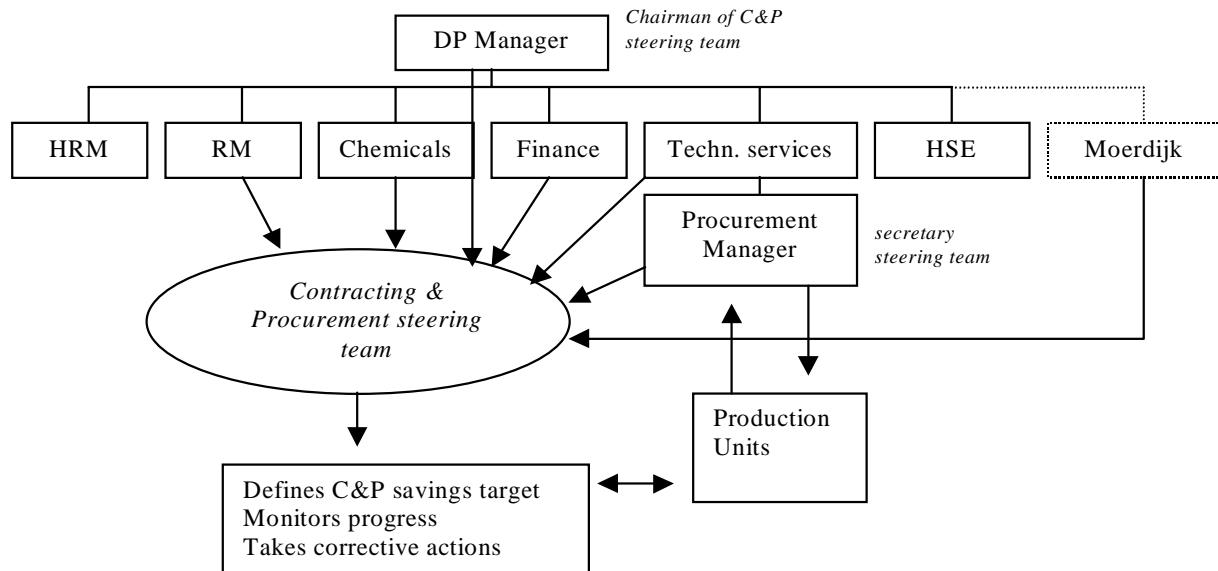
	Global	Europe	National	Site
<b>Group</b>	Group Procurement committee (GPC) chaired by Group adviser Strategic Sourcing		PAN-NAT Procurement steering group	N/A
<b>Oil Products</b>	N/A	SEOP C&P Committee	N/A	N/A
<b>MSD / EUAF (chemicals)</b>	Global Procurement Council (GPC)	European Procurement Council (EPC)	Optional	Site C&P Steering Committees

#### Ad) Site C&P Steering Committee

The Site Procurement manager and the Operating Unit Managers together review their business plans, investigate opportunities for improving supply chain value, and develop effective strategies in line with business plans. For this latter, often cross-functional teams are used including C&P specialists but not necessarily led by them. The C&P Steering Committee will validate strategies proposed to them by the cross-functional teams and/or the Site Procurement Manager. The Committee will set targets, measure progress, and take corrective actions when needed. The committee is

the intermediate between bottom-up initiatives (e.g. OU or Site teams) and top down targets (e.g. Group target, OP target, SEOP target).

Figure 4.5.4 C&P Steering Team Pernis



Apart from buying for one or more production units of the Pernis site, the central C&P Department is also involved in:

1. Buying for more than one site/company within one country (e.g. national contracts for car-leasing for several Sigma sites/companies in The Netherlands; SNR, SNC, SNV, SSI, NAM)
2. Buying Regional level (Europe or even Global) (e.g. Sigma Chemicals Global defined 40 commodities, for 12 of them, the Pernis C&P department is the commodity manager (or 'Lead buyer').

*Ad) European Procurement Council (Procurement at SEOP-MSD level)*

The MSD-Contracting & Procurement staff department, consisting of a Procurement Manager (member of the SEOP-MSD management team) and one staff employee, provides the VP MSD and MSD management team with advice and support on Contracting & Procurement issues and opportunities and approaches for Supply Chain and Value Chain improvements. Further responsibilities of this department are:

- Establish Supply Chain transparency within and across MSD-clusters
- Develop a C&P plan and manage the plan with the businesses

- Initiate, develop, agree and negotiate Pan-European supply contracts
- Promote, co-ordinate and integrate strategies and C&P improvement programs that maximise value and minimise costs within and across MSD-clusters
- Promote development, prioritisation and implementation of systems and tools for effective European knowledge transfer and optimisation of value chains (e.g. collecting Best-Practices (or ‘Success Stories’) and publish them on the Intranet)
- Oversee the C&P relationships with a/o. Sigma Chemicals and SSI, to provide a framework for co-operation and for sharing benefits and costs
- Liaise with SEOP Supply chain Director to enhance knowledge transfer and establishing joint contracting & Procurement improvement initiatives across Business units

The necessary resources will be drawn from the C&P units in the MSD-clusters and will maintain their direct line reporting there, but will be assigned to SEOP-MSD full time, for as long as needed.

*Ad) SEOP C&P Committee*

The SEOP VP’s for Commercial, MSD and Retail, Finance & Planning together with the respective C&P Managers are the SEOP Contracting & Procurement Council (CPC). Meetings twice a year they will review, discuss and endorse the contracting and procurement strategies and plans. Ensuring alignment with SEOP’s key messages and business objectives and that the financial benefits targeted meet the overall aspirations. The role of the SEOP Procurement Managers is to work with the managers of the Operating Units reviewing business objectives and goals, the implications for third party spend and seek to identify opportunities to maximise the impact of their C&P activities on their businesses by stretching targets. In addition the Procurement Managers co-ordinate the cross-business initiatives both within SEOP and across Sigma businesses (e.g. Chemicals). The latter activity will involve agreeing “Lead OU’s” and availability of multi disciplinary resources. Where the product or service to be procured is common between two or more OU’s and/or SEOP businesses, then additional benefits for SEOP (and other parts of the Sigma Group) can result from working together. Aggregating demand, sharing best practice and using a “Lead OU” collaborative approach to develop a shared strategy, will result in additional supply chain improvements.

*Ad) Group Procurement committee (GPC) chaired by Group adviser Strategic Sourcing*

The Group Adviser Strategic Sourcing has initiated a program to guide the global drive that should help Sigma saving the company US\$ 2.5 billion by 2001:

- Establishment of a global forum providing leadership on procurement initiatives across the Sigma group.
- This forum will be supported on a day-to-day level by a small team, led by the CA/SS, and based at the Sigma centre. This team will seek opportunities in the market, identify and share internal and external best practices, and benchmark the group's commercial performance.
- Supply managers will be appointed to work with each of Sigma's top 20 contractors and suppliers in terms of spend. They will maintain a worldwide overview of Sigma's total relationship with each supplier and take action to address disparities between what different Sigma companies are charged for the same product, which operating units will follow up.
- Sigma Services International group has established 'Global Sourcing' – a new organisation to forge global, inter-business and inter-regional contracts with suppliers. This organisation provides specialist resources to help the business meet their procurement targets through leveraged agreements.

**4.6.6 Reflections on the case**

Our first observation is that the increased pressure from the Business Context (e.g. globalisation of customers, economic crisis in Asia, and the low oil price) seems to stimulate management become more receptive for the contribution purchasing can make to the bottom line. This increased management attention paves the way for developing purchasing and starting initiatives to realise purchasing synergy.

Our second observation is that Corporate Management (e.g. the combined effect of corporate strategy and corporate organisation) seems to be an important factor. The corporate structure determines to a large extent the energy that is needed to realise purchasing synergy. In the decentral / federal Sigma structure with its powerful country organisations and refinery management, it was almost impossible to realise purchasing synergies due to diverging interests. Today, a new European organisation



(SEOP) is in place, with a single general manager responsible for profit and loss of the integrated entity. The refineries have less autonomy and have become profit centres aimed at reaching (group) targets (e.g. production optimisation, procurement savings). If they do not want to co-operate with other operating companies in realising the SEOP Procurement savings target, they will have to explain it to the SEOP director, who is accountable for this target. If needed, the director will take corrective actions.

Third observation is that, in general, Purchasing Maturity has reached the level of commercial orientation in most of the operating units. In some parts of the company, further progress is made in the areas of co-ordination, cross-functional process orientation and supply chain management. From the interviews it became clear that once Sigma is able to organise and manage purchasing at the operating level, it can negotiate corporate contracts that are really supported by the operating companies. For this reason Sigma builds purchasing departments, information systems, vendor rating systems, and catalogue systems at the operating level.

The fourth observation is that the success of Purchasing Synergy depends on the extent to which C&P is integrated in the business processes. It was for this reason, that the European C&P manager of SEOP-MSD insisted to report to the general manager instead of the financial Director. Further, C&P aligns strongly to the financial business targets (e.g. SEOP target is translated in a clear C&P target) and the C&P community participates in (and uses) business improvement initiatives (e.g. FRD, LEAP, Perfect'98).

The fifth observation is that Purchasing Synergy is more than just bundling volumes to reduce prices. From this case, it becomes clear that knowledge sharing and information sharing can also be viewed as important value creators. A final observation is that, frequent formal and informal interaction between all the people involved (general managers, purchasing managers, and the people at the operating companies) is a key element in realising purchasing synergy. For this reason, Sigma has implemented a number of formal C&P committees and councils. Sigma's network culture and job-rotation programs facilitate the informal communication.

## 4.7 Dairy Food Corporation

In December 1997, Delta Dairy Foods and Gamma Dairy Foods merged into a new dairy corporation named Dairy Foods Corporation (DFC). DFC is active in manufacturing and selling a large range of dairy products (e.g. milk, cheese and butter, but also in fruit drinks). The assortment consists of a large number of well-known brands. Besides this, DFC also has a wide product range for the catering industry and the fast food sector as well as industrial buyers of semi-finished products. DFC has a turnover of approx. 9 billion guilders, making it a the fifth largest dairy company in the world, just after Nestlé, Philip Morris, Dairy Farmers of America and Danone. Further, DFC has 16.000 member-dairy farmers supplying milk, and 12.000 employees, of which 6.000 abroad. More than two thirds of the turnover is realised outside the Netherlands. The subsidiary Food International (FINT) accounts for 1.5 billion guilders with its local production- and sales activities abroad (besides EEG). The Operating Company (OC) Cheese is responsible for the largest part of the turnover, yields one third of the entire corporate turnover (approx. 3 billion guilders) and contributes substantially to the abroad sales.

### 4.7.1 Observations regarding the business context

The Dutch dairy market can be characterised as oligopolistic and is dominated by two large co-operations (DFC and competitor). However, since the introduction of the single European market, these Dutch companies are confronted with increasing competition from European co-operations (e.g. Danone). Further developments on the dairy market are increasing concentration on supply and customer markets (especially retailers), continuing merging between dairy businesses, and diminishing government support for the farmers. On the customer side, DFC is confronted with increasing demands from powerful retailers to participate in their supply chain improvement and category management programs. On the supplier side DFC is confronted with limited pressures. The most important ingredient of dairy products is milk, which is supplied by the shareholders of DFC: the member dairy-farmers. This special relation leads to the obligation to 'buy' every litre of milk that is produced by the member farmers. The price DFC has to pay for each litre of milk is calculated in a special way (market price + profit percentage approved by the members). Most additional ingredients and materials (e.g. milkpowder, packaging) are traded at global markets with a limited number of large suppliers. These suppliers have a strong bargaining position, making

it difficult for DFC to demand lower prices, higher quality or better service. Despite all the developments in the business context, DFC has been able to realise healthy financial figures over the period of 1996 to 1999 (see table 1).

Table 4.7.1 Financial indicators of DFC Holding NV (annual report of '99)

Indicator	1999	1998	1997	1996
Turn over (in NLG million)	8,873	8,633	9,225	8,948
Net profit (in NLG million)	81	130	90	53
RONA	9,4	14,3	14,1	8,9
ROI	7,1	11,3	7,8	5,2

#### 4.7.2 Observations regarding the corporate strategy

DFC is determined to strengthen its position as a global player in the international dairy products market. Firstly, DFC focuses on selective growth in volume by further enhancing product differentiation, customer value and market positions in existing and future markets. This growth in volume must come from technological innovation (both in products and production processes), Brand management to rationalise the brand portfolio and to build strong international brands, and improved distribution and sales positions. However, acquisitions are not absolutely impossible. Secondly, DFC is determined to improve its profitability, mainly through the post-merger integration of the main business processes and by increasing the efficiency of its operations. The OC Cheese, for example, wants to eliminate steps in their distribution channels by making direct deliveries to retailers, which results in higher profit margins.

#### 4.7.3 Observations regarding the corporate organisation

DFC's corporate organisation is build around operating companies (OC). These OC's are completely independent from each other. Milk is the only binding factor between them. Corporate steering is mainly financially through business plans, budgets, and financial targets. The OC's are profit and loss responsible and have the autonomy to formulate their own product and market strategies. There are small corporate staff groups for Innovation, R&D, IT, Human Resources, and Finance & Accounting.

Following the merger, numerous projects were initiated to integrate the merging companies and increase corporate coherence. First, DFC decided to reorganise its Dutch Sales structure. Brand sales organisations were clustered and other commercial and supporting activities were centralised. Secondly, several plants in The Netherlands were closed and new investments were made in other plants in order to concentrate production capacity in those areas that economically are most attractive. For example, November 1998, the OC Cheese announced the closing 4 of their 19 Dutch factories. Thirdly, immediately after the merger, DFC implemented a new uniform Management Information System in all business units. This MIS contains financial based information like financial results, investments, budgets, medium-term planning, transfer pricing, treasury and assurances. Fourthly, a new corporate Human Resource Management policy has been formulated. Finally, the Corporate Research and Development activities are clustered on one location<sup>78</sup>. All activities in the field of product development remain decentralised in the different OC's. During our interviews and document analysis we came across an important factor hindering further integration of the OC's: the lack of a strong uniform corporate identity and management style.

#### **4.7.4 Observations regarding purchasing maturity**

At a dairy company, milk is the single most important ingredient. A special corporate group manages the supply and allocation of milk over the different operating companies. The other purchases, like packaging, ingredients, production facilities and general expenses (e.g. office equipment, car leasing, travel) are managed by decentral purchasing units or by the internal users themselves. Due to the history of mergers between dairy co-operations and the fact that the business units operate independently from each other, there are significant differences between the decentral purchasing departments. Some can be regarded as professional buying groups, others are just ordering units for their Production department. The initiatives aimed at improving purchasing during the 1990s (e.g. VIP and IBT) have led to more mature purchasing in some business units. Today, some purchasing managers are no longer reporting to the Production or Logistics manager, but directly to the OC management team. In general, the orientation of the purchasing functions is still mainly transactional and

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<sup>78</sup> Leeuwarden, The Netherlands.

commercial. However, there are some initiatives to co-ordinate purchasing on a OC level.

For example, the OC Cheese has a small central purchasing department consisting of a purchasing managers, two buyers and an assistant buyer. The purchasing manager formulated a purchasing actionplan that covers an annual spend of NLG 290 million (excluding milk and capital investments and including transport, maintenance, energy, promotion and temporary labour), which is only 9% of the total turnover. Apart from gathering purchasing information and monitoring the decentral purchasing, the central purchasing department does the initial purchasing for the most important spend categories. Responsibility for the operational procurement (e.g. ordering, inventory management) is delegated to the 30 factories.

Another example is the purchasing department of the OC Production Long Life Products (PLH), which developed itself during the early nineties, from a operational buying group<sup>79</sup> towards a tactical and commercial purchasing organisation. Amongst others, PLH implemented a computer based purchasing system, which enabled them to decentralise a large part of the operational purchasing activities to the internal users. Despite these developments, however, purchasing was (and in some parts, still is) not recognised by OC management as an important business process. In their view, Purchasing's only task is to realise the best quality against the lowest price.

#### **4.7.5 Observations regarding purchasing synergy**

DFC's current corporate Purchasing co-ordination structure is relatively new and finds its origins in the former Gamma Dairy Foods (GDF) and Delta Dairy Foods (DDF) co-ordination structures.

##### *Purchasing co-ordination at GDF*

Gamma Dairy Foods (GDF) is the result of the merger between two co-operations in 1989. After the merger the corporate organisation was redesigned and consisted of a large number of business units. Top management did not stimulate synergy across

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<sup>79</sup> The buying group at that time was qualified during the research as functionally focussed, serving the factory, 'fire fighting', not paying attention to logistics (e.g. inventory, delivery) and not customer oriented.

these BU's. In fact, they allowed business units to compete with each other for customers and suppliers. Consequently, the development of a corporate purchasing organisation never really got off the ground. However, there is evidence of co-operation across production units that developed out of a decentral initiative taken by the purchasing department of the business unit Production Long Life Products (PLH).

Over the years, this purchasing department<sup>80</sup> had won a reputation within the GDF organisation as a '*centre-of-excellence*' for Purchasing. Driven by the need to reduce the Purchasing department budget and by the opportunity to save extra money through bundling volumes, the purchasing manager of PLH decided to start selling purchasing expertise and services to other GDF business units. First, they decided to only co-operate on spend categories that were similar to PLH, however, this expanded quickly to spend categories that were not specific for PLH. Also, for a specific product (e.g. sugar, pallets, bags), PLH co-operates with purchasing departments from other business units that act as leadbuyers for these products.

Another example of a purchasing synergy initiative, started late 1995, when a board member<sup>81</sup> took the initiative to start a purchasing improvement program within the Cheese Division. This Division was sub-divided in four independent operating companies. Purchasing was fragmented within and across these four OC's, and each OC did not have the critical mass to justify a professional purchasing organisation. A project, called VIP<sup>82</sup>, was started to improve purchasing performance and capture the potential synergies across the OC's of the Cheese group. The board member insisted that the VIP-project should deliver purchasing savings in short term, against low costs and cause only limited stress across the four business units. The VIP project team consisted of a group of five purchasers and internal users from the different OC Cheese plants. Each VIP project team member chaired a lead-buying team for a certain spend category. Other typical characteristics of this purchasing co-ordination project were:

- A small group of people was part-time involved (mainly purchasers)
- Limited resources and time were available

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<sup>80</sup> This department consists of a purchasing manager, 6 buyers and one support employee.

<sup>81</sup> A former consultant experienced with Purchasing synergy as a business performance lever.

<sup>82</sup> VIP is the Dutch abbreviation for 'Improving Purchasing Performance'

- Lead buying teams negotiated better purchasing conditions (e.g. lower prices) based on the consolidated needs
- Information was exchanged through frequent team meetings (8 times a year)
- No saving targets were defined in advance
- Results were reported to the OC managers and the board member

The main advantage of this approach was the flexibility and the speed of acting of the lead buying teams. Also, the purchasers involved in the teams improved their purchasing skills along the way. However, due to the temporary character of the VIP project and to the fact that it was a 'Purchasing-led' project, purchasing awareness in the rest of the organisation was not increased among line management and internal users.

#### *Purchasing co-ordination at Delta Dairy Foods*

Early 1990s, Delta Dairy Foods (DDF) tried to co-ordinate their decentral purchasing functions with Purchasing Co-ordination Meetings (ICV). However, this initiative was not successful, mainly due to a lack of commitment from the participating purchasers, too little steering of general management, and a lack of information on purchasing spend. In 1995/1996, DDF was in a position to perform better. Supported by an external consultant, DDF formulated a strategic reorganisation plan, called 'Focus 2000'. As part of the 'Focus2000' project, the so-called IBT approach<sup>83</sup> was developed to reorganise the purchasing function. In this approach, cross-business and cross-functional teams were formed to realise cost savings in purchasing. Division managers chaired the IBT-teams, which ensured top management commitment. There were frequent formal meetings with the board of management to discuss progress on the saving targets that were defined in advance. This approach was very successful for DDF. The largest part of people involved was heavily committed and worked with great enthusiasm. The teams combined purchasing power and exchanged specific knowledge across the divisions. However, participating in the teams required a lot of time and effort, which was not always in line with the other obligations of the team members. Another point of discussion was that the definition of savings was not always clear to the teams. Also, at the start of

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<sup>83</sup> IBT is a Dutch abbreviation for 'purchasing saving teams'.

the IBT project, it was not clear what would happen to the team approach after the first year.

*Starting points for DFC's new corporate purchasing structure*

After the merger, a Purchasing Steering Group<sup>84</sup> was established to develop a new corporate purchasing co-ordination structure to capture the post merger synergies. To determine the structure that fitted best in the new company, the steering group defined some starting points. First, given the corporate management philosophy and the operating company structure, DFC prefers a delegation model, in which OC management delegates purchasing responsibility to corporate teams. Second, line-management, OC directors and corporate directors should be involved, because purchasers often do not have enough authority to make corporate purchasing co-ordination successful. Third, selecting the right people for the right teams is regarded as a task of the corporate board and the OC's involved. Finally, purchasing responsibility for strategic commodities will be delegated to Corporate Sourcing Teams (CST, comparable to IBT) or Lead Buyer Teams (LBT, comparable to VIP) (see table below).

*Table 4.7.2 Differences between CST's and LBT's*

Aspect	CST	LBT
Comparable with	IBT of Delta	VIP of FDF
Issue	Technical complex product ('high profile, high emotion')	Basic commodity ('low profile, low emotion')
Reporting to	Group council	Corporate Purchasing Manager
Members backgrounds	Cross-functional	Purchasing
Term	If successful transformed to LBT	Repetitive
Chairman	BU Director	Purchasing manager
# of members	5-7	2-3
Current teams	Energy Liquid packaging Plastics Car leasing Metal packaging Maintenance Advertising and promotion System packaging Transport	Industrial clothing Telecommunication Thickeners/sugars Chemicals/detergents Industrial gasses Pallets Temporary labour

<sup>84</sup> The steering group consisted of a corporate board member, purchasing managers, functional managers, and an external consultant.



In case of technical complex products a cross-functional approach (with CST's) will be used; in case of standard commodities a purchasing approach (with LBT's) will be used. These CST's and LBT's are, next to reduction of purchasing expenses, primarily focused on the realisation of (post-merger) purchasing synergy. The most important responsibilities and competencies of CST's and LBT's are:

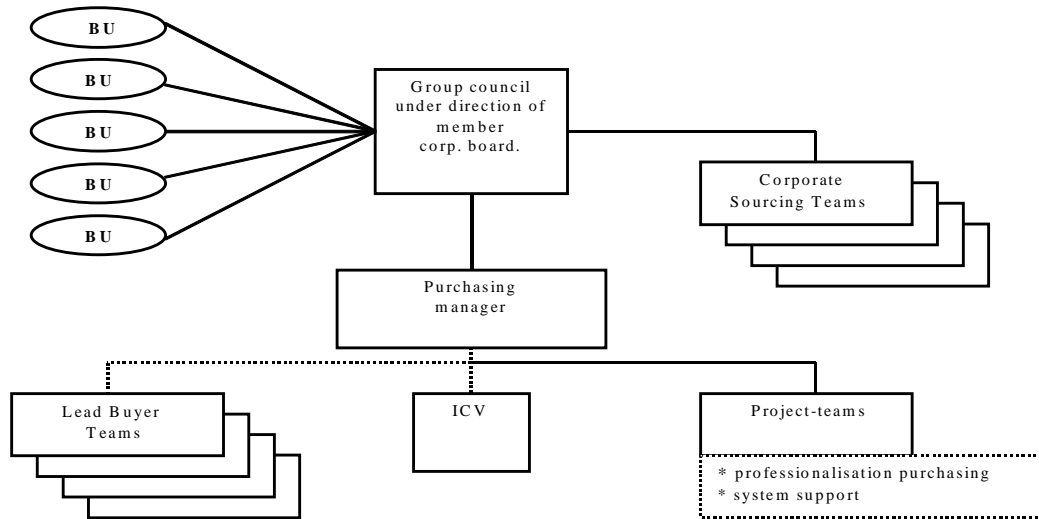
- formulate and manage purchasing specifications per commodity
- formulate pre-qualification requirements of suppliers
- execute a detailed purchasing market research
- benchmark suppliers and their performance
- manage and maintain a list of preferred suppliers
- sign corporate contracts with suppliers
- organise account management for suppliers and internal users
- formulate purchasing action plans for certain commodities
- monitor supplier performance together with the involved production plants

The participation of a OC is not mandatory, although a good explanation in case of exclusion is required. To co-ordinate the wide range of purchasing synergy activities a new corporate function was created: Director Purchasing Co-ordination (DPC). Given the demands of the job, a senior and experienced former OC director, instead of a senior purchasing manager, was assigned to this function. The DPC is reporting directly to the responsible member of the board. The most important tasks and responsibilities of the DPC are:

- organise and co-ordinate CST and LBT team activities, and look after their reporting to the management board
- monitor the progress of the LBT's
- formulate standard contract requirements, and purchasing action plan formats
- evaluate purchasing action plans made by the teams
- manage the applications of purchasing information systems
- enable internal communication by frequently organising purchasing co-ordination meetings and by publish periodical newsletters and progress-reports
- maintain contacts with the management board and OC directors
- co-ordinate and manage project teams aimed at professionalising purchasing and implementing purchasing information systems
- chair the Purchasing Co-ordination meeting (ICV)

Final responsibility for the initiatives to create corporate advantage in Purchasing resides with the Group Council (consisting of managing directors of the OC's, the CPM and the responsible member of the corporate board) (see Figure 4.7.3.).

Figure 4.7.3 Corporate Purchasing Organisation



With this approach DFC covered about 50% of the total purchasing spend and realised a saving of 3% on the total spend covered. On average the LBT's were slightly more successful (average savings about 7%) than the CST (average saving about 6%). However, the CST's delivered 78% of the total savings.

#### 4.7.6 Reflections on the case

Our first observation is that DFC's interest in purchasing synergy seems to be driven to a large extent by the merger of 1997. The general aim of this merger was to achieve economies of scale and reduce operational costs.

Our second observation is that top management deliberately selected a low profile approach to corporate purchasing (e.g. few selected commodities, limited number of people involved, and a temporary project organisation headed by a former OC director). Their argument was that a central purchasing group headed by a corporate purchasing director would not be in line with the corporate management philosophy of decentralisation. A central approach would certainly fail due to great resistance of

the directors of the OC's. Already, it happens more than often that corporate interests loose it from individual OC interests. However, it could also indicate that top management was not so much interested in the development of the purchasing function as well as in the potential cost savings. The chosen approach appeared to be very effective, since almost all teams delivered cost savings (ranging from 1 to 11%). However, there are some costs. Evaluation of the approached used showed that the team members spend a lot of their working time travelling to meetings and communicating with each other to develop strategies, solve conflicts or to make a compromise. Monitoring the time-pressure of the team-members can ensure that the workload for both the members and the OC's remains controllable.

Our third observation is that the purchasing function is still in the early stages of development. To be effective, it is of great importance that both the lead buyers and the team members are competent, prominent and have power of decision. However, the position of purchasing is often too low in the organisation, and the role too narrow defined. There is still much room for improvement, especially in the areas of co-ordination, cross-functional purchasing, supplier management and supply chain management. However, given the fact that there is no corporate group with purchasing specialists, it is still unclear who should develop the necessary training and development programs and manage their implementation.

Our fourth observation is that there is attention for the managerial aspects of purchasing co-ordination. Clear scope and goals were defined in advance and pointed to the different teams and –members, periodical measurement and reporting of the progress and the results was in place, management was involved in monitoring progress, and there were standard reporting formats and procedures. However, it appeared that despite these measures, the purchasing co-ordination director depends heavily on what information the teams are willing and able to report to him. This latter depends heavily on the stage of development of purchasing systems in the OC's. It has to be possible to collect, process and make available relevant purchasing data and information.

## **4.8 Comparative case analysis**

In this section we would like to describe the results from our empirical research. For this reason we use a comparative case analysis, to analyse the relationships between the constructs from our preliminary model. Further, we will use the data to build better constructs. Within the scope of this chapter we will only highlight our key observations. In the tables below we describe the five cases along the constructs: Business context, Strategic focus, Organisational context, Purchasing maturity and Purchasing synergy. During a roundtable, the overview tables were presented to and discussed with the participating companies. After some minor modifications, both tables were approved.

Table 4.8.1 Firm specific situational factors

	Financial Corp.	Pharmaceutical Corp.	Electronics Corp.	Oil Corp.	Dairy Food Corp.
<b>Business Context</b>					
Products	Banking and insurance	Pharmaceutical ingredients	Lighting Electro	Oil	Food & Beverages
Customers	Consumers + Business	Business to business	Business to business	Business	Business and Consumer
Competition	Limited	Limited	Fierce	Limited	Growing
Business stage	Mature	Mature	Growth	Mature	Mature
Price erosion	Low	Low	Very high	Low in NL	Low
<b>Corporate Strategy</b>	Customer value; differentiation	Customer value and diversification	Lowest cost, innovation speed and standardisation	Lowest cost, and asset maximisation	Customer value and differentiation,
<b>Corporate Structure</b>	Bureaucratic and centralistic structure	Business unit structure	Matrix structure with cross functional teams	Bureaucratic structure	Functional / Customer BU structure
Trends	Decentralisation	Decentralisation	Globalisation	Globalisation	Mergers
<b>Purchasing maturity</b>					
Status function	Low	Medium	High	Medium	Medium
Orientation	Transactional and commercial	Transactional, commercial and some co-ordination	Cross functional process and supply chain management	Transactional, commercial and some co-ordination	Transactional, commercial and some co-ordination
Purchasing quote	Low (excl. money)	Low / Medium	High	Low (excl. oil)	Low (excl. milk)
Organisation	Central group combined with purchasing by internal users	Corporate group, business unit- and site purchasing	Global competence centre with CPO combined with regional groups	European co-ordinator combined with decentral site purchasing	Corporate co-ordinator combined with business unit purchasing
Main spend group investigated	General expenses	Raw materials and general expenses	Bill of material (components, IC's)	Technical services and materials	Ingredients, packaging, and general expenses

In Table 4.8.1 we summarise the firm specific situational factors. The business context differs over the five cases. In the cases Financial, Pharmaceutical and Dairy Food Corporation, competitive pressure is limited (low price-erosion) and due to the fact that the companies are still very profitable, pressure to reduce costs is also rather low. At Electronics Corporation however, competitive pressure to reduce costs is very high (annual price erosion amounts more than 10%). In the corporate context (strategy and organisation) we also observed differences. Both Financial and Pharmaceutical Corporation are in the midst of a company-wide decentralisation process in which business units gain more autonomy and corporate involvement in day-to-day business is reduced. Electronics, Oil and Dairy Food Corporation are also restructuring, but in the opposite direction. They are working towards increased integration of their (regional or local) businesses.

Concerning corporate synergy initiatives in general, we observe that almost all companies look for synergies in the areas of human resources, financial management and corporate support staff. However, Financial and Dairy Food Corporation are actively searching for synergies in the areas of marketing and sales, information technology, new product development. Pharmaceutical Corporation concentrates mainly on corporate synergies in research and development, and issues related to health, safety and environment. Finally, Electronics and Oil Corporation concentrate on realising synergies in purchasing, manufacturing, engineering and development. We hypothesise that these different priorities can be explained too a large extent by what is needed to stay competitive (Treacy and Wiersema, 1993:84). At Financial Corporation customer relationships and trust (*customer intimacy*) are the keys to company success, and marketing and sales are instruments to increase or maintain customer intimacy. At Pharmaceutical Corporation developing new and improved drugs (*product excellence*) is the main road to company success, making research and development very important. At Electronics and Oil Corporation operational efficiency and innovation speed (*operational excellence*) are the keys to company success, which increases the importance of supply base management (a cross-functional effort of purchasing, manufacturing, engineering and development).

If we take a closer look at the purchasing synergy initiatives, we see that they also differ over the three cases (see table 4.8.2). At case Financial Corporation they formed

a corporate sourcing platform aimed at exchanging information and look for opportunities for professional improvement and cost savings. However, after one year the results are very poor (no costs saved or value created). It is very difficult for Finance's central purchasing group to gain more recognition because of the functionally oriented corporate structure, and the undervalued position of Purchasing in it. The initiatives taken by the purchasing director strand in political turf wars between the divisions. At case Electronics Corporation we found that the high price erosion at sales markets forced the company to manage purchasing synergies to increase buying power. This buying power was also needed to motivate their most important suppliers into partnership relations aimed at speedy innovation and lowest cost.

Electronics Corporation appointed a Chief Purchasing Officer with global responsibility for Supply Base Management issues and implemented a very communication intensive (cross-hierarchical, cross-regional and cross-functional) team structure. The results of the purchasing synergy initiatives are significant and measurable cost savings and better partnering with suppliers. Based on these two cases there seems to be a relation between the contextual factors and the purchasing synergy initiatives. It further seems that the purchasing synergy initiatives need to be crafted to meet the specific situation. If the strategic urgency to capture purchasing synergies is not experienced by all the stakeholders, it is very difficult to realise it. In table 4.8.2 we summarise the major similarities and differences of the synergy initiatives studied.

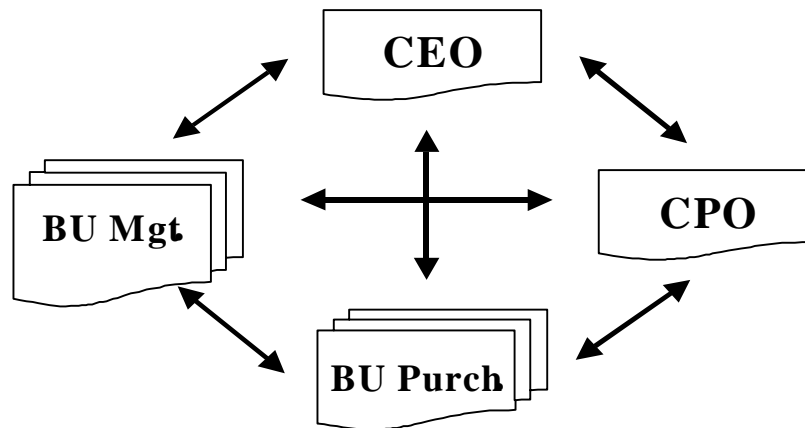
Table 4.8.2 Characteristics Purchasing synergy

	Financial Corp.	Pharmaceutical Corp.	Electronics Corp.	Oil Corp.	Dairy Food Corp.
<b>Synergy initiative</b>	Corporate sourcing platform	(Corporate) working groups, IC-Pharma	Global competence centre with CPO	European purchasing co-ordination	Corporate co-ordination
<b>Goal</b>	Exchange of information and look for opportunities for professional improvement and cost savings	Exchange of information and opportunities for co-operation on specific spend categories	Global supply base management on BOM and non-BOM spend	Exchange of information and opportunities for co-operation on specific spend categories	Exchange of information and opportunities for co-operation on specific spend categories for cost savings
<b>Scope</b>	Synergy within and over Divisions in the Netherlands	Synergy within and over Divisions and BU's in the Netherlands + Europe	Synergy within and over the four Regions of the global BU	Synergy over MSD sites across Europe	Synergy over BU's in the Netherlands + DFINT
<b>Synergy form</b>	Exchange of information	Pooled negotiation power and sharing information	Pooled negotiation power and sharing best practices and information	Pooled negotiation power and sharing best-practices and information	Pooled negotiation power and sharing information
<b>Synergy management</b>	Poor (voluntary, no clear targets, no planning, etc)	Medium (voluntary, no targets, but facilitated by corporate group)	Strong (mandatory, clear targets, performance measurement, etc)	Strong (mandatory, clear targets, measurement, but temporary) on the FRD-teams, and Normal on purchasing teams	Medium (voluntary, few targets, some measurement)
<b>People involved</b>	Non-purchasing + Purchasing	Purchasing	Cross functional	Cross-functional FRD-teams & Purchasing teams	Cross-functional Sourcing teams & Purchasing LBTeams
<b>Involvement of:</b>					
<b>CEO</b>	low	low	high	Medium	Medium
<b>CPO</b>	N/A.	medium	high	Medium/high.	Medium
<b>BU management</b>	low	medium	high	Medium	Medium
<b>BU Purchasing</b>	low/medium	medium	high	High	Medium
<b>Perceived success</b>	Poor results Increased professional level	Varying results	Significant results	Good; Value improvements > target	Good: 80% initiatives successful in cost savings



From the comparative analysis of the case studies follows that realising purchasing synergy is not a task for purchasing managers and purchasers only. It demands commitment and involvement of different groups of stakeholders: CEO (or top management), BU management, CPO (of corporate purchasing group) and the BU purchasing managers (or purchasers). For managing purchasing synergy, communication and co-operation among and between these four groups of stakeholders seems to be important (see Figure 4.8.3).

Figure 4.8.3 Relationship assessment diagram



We found that the mechanisms used by the companies to stimulate co-operation across these four groups can be classified into three categories: (1) Structural designs, (2) Networks of people and (3) Information and communication infrastructure. As indicated earlier there are a large number of different structural designs companies implement to stimulate intra-company co-operation: Corporate sourcing platform, Executive steering board, Chief Purchasing Officer, Central purchasing group, Commodity team, Cross-functional team, Competence team, Working group, Task force and Leadbuyership. All these structural mechanisms can be single-unit or multi-unit, and can have a national, regional or global scope. The structural design also seems to vary between, on the one hand co-operation that is voluntary, informal, and initiated bottom-up, and on the other hand co-operation that is mandatory, formal and initiated top-down.

Apart from structural instruments we have found that networks of people stimulate intra-company co-operation and teamwork. Instruments that are used to facilitate the forming of these networks are company events, corporate training courses and

conferences, job-rotation across business units, management development programs, group identity programs (e.g. survival weekend), co-location and all kinds of social events. In one occasion purchasers from different divisions set up co-operation not because of procedures, strategy or rules, but just because they knew each other and saw benefits in working together. If they had not decided to co-operate, nobody would have said something about it. Because of this, we think that facilitating networking can be a useful instrument for stimulating intra-company synergies.

Thirdly, we found that Internet technology (e.g. intranet), electronic communication systems (e.g. E-mail), conferencing systems (e.g. videoconferencing), electronic bulleting boards, group decision support systems and information sharing systems (e.g. Lotus Notes, corporate databases with information on components, suppliers, and contracts) facilitates co-operation. For example, Intranet can be used to communicate corporate agreements to internal users, but also to communicate best practice examples of implementing a certain purchasing process.

In addition to these three mechanisms, data from the case studies suggest further that management systems need to be developed. These (purchasing synergy) management systems are needed to systematically control the implementation process and ensure that the potential purchasing synergies are realised. One of the major barriers for implementation of the corporate purchasing strategy are unco-operative and non motivated BU managers and BU Purchasing managers/Purchasers (see also Chapter Six). Often they are afraid to lose decision autonomy. They also fear unfair blame for poor performance when they do not have full control over shared activities. It is also difficult to achieve symmetric benefits due to differences across business units. Benefits from co-operation may accrue more to one unit than another. The (horizontal) procedures and incentives give guidelines to solve these conflicts. The cases suggest there is a relationship between the level of management control and the purchasing synergy that is realised (see Table 4.8.2).

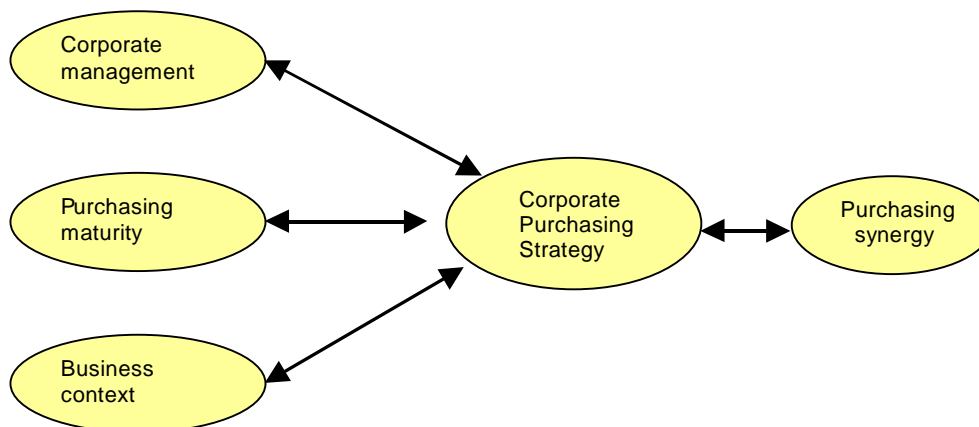
#### **4.9 Reflections on the conceptual model**

Based on the insights derived from the five case studies, modification of the conceptual model seems necessary for two reasons. Firstly, in the case studies we

observed that corporate cost reduction programs were a major driver of initiatives to realise corporate purchasing synergy. Other major drivers include component standardisation, downsizing, corporate improvement initiatives, mergers and acquisitions. Product/market strategies seem to play a minor role in the corporate purchasing strategy development process. It seems that the corporate management style and corporate structure are more important factors. Secondly, from the case studies we learned that there is a difference between measures aimed at realising purchasing synergy and the resulting purchasing synergy. Not every set of measures is successful in terms of purchasing synergy. In some cases, the measures motivated business units to co-operate (e.g. sharing best practices). However, the sharing of best practices did not result in cost savings, because they were not implemented in the business units.

We decided to modify our conceptual model in two directions. Firstly, we will bring the constructs ‘strategic focus’ and ‘corporate organisation’ together under one construct: ‘corporate management’. This indicates that we will concentrate on issues like corporate management style (strategic or operational), corporate structure, level of autonomy of the business units, interdependency between business units and presence of corporate support groups. Secondly, we decided to split up the construct ‘corporate purchasing synergy’ into two new constructs: ‘corporate purchasing strategy’ (e.g. measures) and ‘purchasing synergy’ (e.g. results). The modified conceptual model is shown in Figure 4.9.1.

Figure 4.9.1 Modified conceptual model



## **4.10 Conclusions**

We learned several lessons from the five case studies. Firstly, purchasing synergy is a rather vague concept and often ill-defined in practice. When practitioners speak of synergy, they often mean cost savings or value creation that results from two or more business units co-operating with each other. In the case studies we have found that business units can co-operate in four different areas: they can joint their forces (e.g negotiate corporate contracts), share functional resources, exchange information and share knowledge. Secondly, synergetic co-operation between business units does not come by itself it requires management and organisation. In the cases we have found a wide variety of approaches ranging from mandatory to voluntary, from temporary to ongoing, from a national to global focus, from top-down to bottom-up decision making, etc. In general, companies can focus on: formalising communication and decision making with structural mechanisms, stimulating networking of people through informal mechanisms and facilitating exchange of information and communication with ICT technology. In addition to this, management should control whether the measures have the planned effect (purchasing synergy). Thirdly, the case studies suggest that standard solutions for improving corporate purchasing co-ordination practices do not exist. A process of cross business unit co-operation needs to be tailored to each specific company situation. Based on the case studies we defined three contingency factors: business context, corporate management, and purchasing maturity. In our view, these contingency factors influence both the sorts of synergies that will be pursued and the means that will be used to pursue them. The means, in turn, determine the amount of purchasing synergy that may be expected.



## Chapter 5 Action research

### 5.1 Introduction

This chapter summarises the results of an action-research project that was carried out within Nedtronics<sup>85</sup>: a recently formed (1998) medium sized Electronics assembly company based in The Netherlands. Main activity of the company is large volume assembly of printed circuit boards. The group consists of four business units BU-V, BU-U, BU-SA and BU-SN, and has operating facilities in the Netherlands and in Eastern Europe. In 1998 the sales turnover increased with 12.5% and the prospects for 1999 look even better. For 1999, Nedtronics expects a sales volume of 100 million, a net profit of 5,7 million. The purchasing quote for the Bill-Of-Material (BOM) fluctuates around 60%, which can not be considered extraordinary high compared to other electronics companies. However, it still is a substantial part of the total turnover, which means that the purchasing function, and hence suppliers, have an important effect on the (financial) result of the company.

### 5.2 Methodology

The initiative for this action research project came from Nedtronics's Group Purchasing co-ordinator. He approached Eindhoven University of Technology and asked for help in developing a corporate purchasing strategy and structure. This request came just when we were finishing our series of in-depth case studies, and we decided to take the opportunity to test some of the lessons learned from our five cases. A steering group was formed consisting of the purchasing co-ordinator, together with a senior purchaser and a logistics manager (both of the largest business unit). In consultation with this steering group we formulated the problem statement as follows: *'How should Nedtronics organise its purchasing function on a corporate level?'*

We subdivided this problem statement into the following three research objectives.

1. Investigate current purchasing practices at Nedtronics, both on the corporate- and business-unit level.

2. Determine the gap between the current practices and best practices, and define strategies to close this gap.
3. Indicate short- and long term activities that could (and should) be taken to implement the new corporate purchasing strategy and structure.

Together with the steering group we decided that the first frame of reference would be based on the models known from our literature study and the examples from our case studies (see Chapter Three and Four). Also, the new purchasing strategy has to be drawn up in such way, that it has the support from the different business units and the board of management. Finally, the new strategy should be able to cope with future mergers and acquisitions. The project was named ‘Nedtronics Vision 2000’, and was executed according to the following steps:

- Step 1) ‘Kick off Meeting’ discussing the research questions and the research planning with the board of management.
- Step 2) Investigating the current position of the purchasing function by means of semi-structured interviews with the people (in) directly involved in the business units and at the corporate level.
- Step 3) The findings of the first round of interviews were discussed in a first workshop with all purchasers from the business units and the members of the steering group (including the corporate purchasing co-ordinator).
- Step 4) In a second workshop; we discussed the proposition for improvement with the board of management and the steering group.
- Step 5) With the input of this second workshop; we defined the final proposition in a draft report. This draft was discussed with the steering group before a final report was prepared.

### **5.3 Observations of the business context**

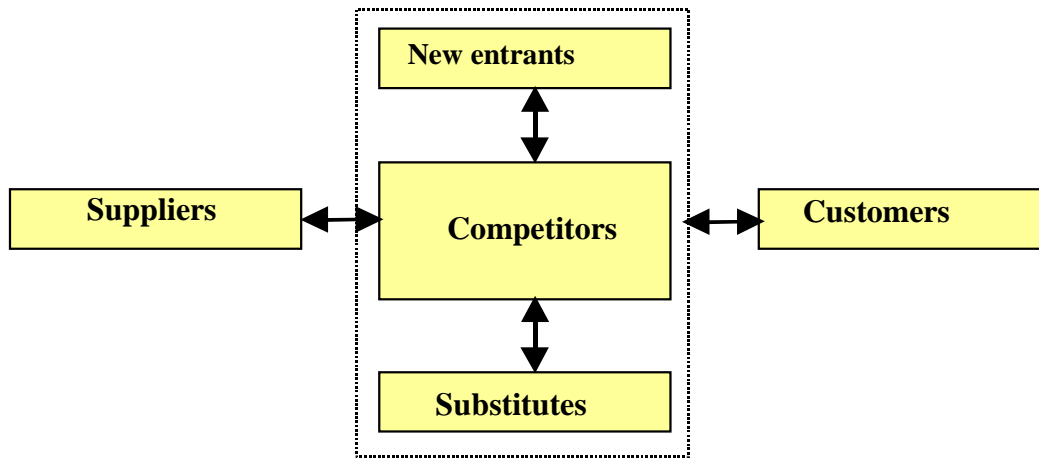
In the interviews and the workshops, we have used the ‘competitive forces’ model of Porter (1985) (see Figure 5.1), which appeared to be very useful in determining developments in the environment. Porter claims that a company’s relative competitive position is shaped by customers, suppliers, competitors, and the danger of new

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<sup>85</sup> Nedtronics is not the actual name of the company.

entrants and substitutes. During discussions the model helped us to explain that Nedtronics' position on supply markets is just as important in determining competitive advantage as the position on customer markets, and the relative position to competitors.

Figure 5.1 Model of competitive forces (Porter, 1985)



#### *Developments at the customer side*

The most important observation regarding the customers is that they demand more and more added value from Nedtronics; shorter delivery times, volume- and mix flexibility, additional logistic services and lower costs. The paradox is that customers are not willing to pay for this extra added value. In other words, Nedtronics can not charge too much for these additional services, otherwise it will lose customers to other suppliers. Another observation is that customers increasingly concentrate on their core activities, which leads to an increase of outsourcing of assembly, engineering and even project management to suppliers. Also, customers are increasingly assigning larger volumes to one supplier, and are moving an increasing number of their plants to the Far East and try to contract suppliers there. Summarising, it may be stated that Nedtronics is being confronted with ever growing demands from their customers.

#### *Developments at the competitor side*

In general it can be stated that competition is increasing. More and more competitors have mastered the sophisticated automated production techniques. Today, flexible



production in small series, which used to be very expensive, is being offered by a large number of suppliers. However, supply and demand are not geared to one another resulting in overcapacity. This leads to a buyers-market in which companies predominantly compete on price. In some occasions price erosion exceeds 10% annually. This demands companies to control and manage their costs. This is the ratio behind the growing number of mergers and acquisitions, aimed at realising economies of scale in production.

*Developments at the suppliers side*

On Nedtronics' supply markets, suppliers (manufacturers and distributors) are strengthening their bargaining positions relative to Nedtronics through mergers and acquisitions. Electronic component manufacturers and distributors are consolidating themselves into very big global companies. In order to realise economies of scale, the manufacturers only want to produce in very large volumes, with as few disturbances as possibly. Consequently, they only select customers that spend more than 10 million guilders per year. This trend forces relatively small customers, like Nedtronics, to shift to distributors for their purchases. Another observation is that the life cycle of IC's is getting shorter and shorter. Manufacturers push new technologies into the market at a high rate. When developing new electronic components, the manufacturers work closely together with the customers of Nedtronics. At the moment Nedtronics is not able to influence this development.

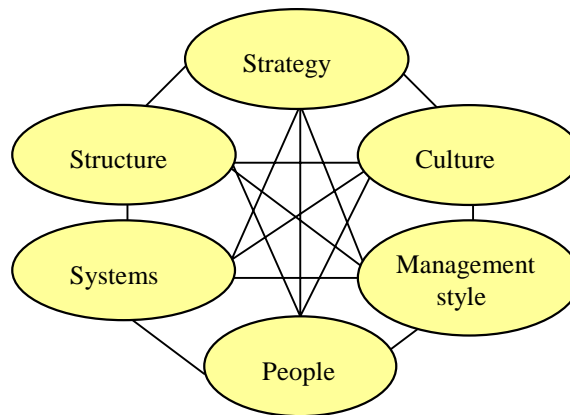
*Reflection business context*

Based on our observations, we conclude that Nedtronics is confronted with increasing pressures to improve purchasing and supply management practices at the corporate level. We noticed that suppliers are strengthening their position through mergers and acquisitions. Nedtronics is also confronted with ever more demanding customers in a strongly competitive environment (e.g. overcapacity, price-erosion, short life cycles). The key question is to what extent Nedtronics is able to convert its purchasing volume into buying power on its supply markets. From our observations, we derive that at this moment, Nedtronics is not yet able to translate the demands of their customers to their suppliers. Given the business context, it would be wise to take action on this. If Nedtronics does not manage its suppliers, the chances are high that Nedtronics will be managed by its suppliers.

## 5.4 Observations of corporate management

The Nedtronics Group was founded in 1998 through a merger. The management and a group of external investors, including participation companies, own the shares in Nedtronics. In order to develop corporate competitive strength for the group, corporate steering seems necessary. Mastenbroek (1997) states that corporate steering is strongly -related to the issue of autonomy and interdependence. The question for Nedtronics is how much (purchasing) responsibility top management wants to assign to the business units, and on which areas they want to control and manage. Mastenbroek (1997) states that companies increasingly empower decentral business units, while at the same time, powerfully managing the most critical connections between these business units (e.g. joint purchasing). Which connections are the most critical depends on what will provide the company the best competitive advantage in that particular situation. In this respect, an electronics company is completely different from a bank.

Figure 5.2 Practical model for to study organisations (Weggeman,1997b:86)



In this section we will describe our observations regarding the Nedtronics Group and its business units, based on the model shown in Figure 5.2. It provides a framework of the most important organisational factors: strategy, structure, information systems, management style, people and culture. The lines indicate that the elements are connected with each other. In other words, a change in strategy, can only be effective, if it is combined with a matching structure, information systems, working culture, people and management style (Weggeman, 1997:86). When putting the questionnaire together we used these insights. Below we discuss our most important observations.

*Observations on Corporate Strategy*

The Nedtronics Group has formulated an ambitious growth strategy that will prepare the corporation for a stock market quotation in 2001. Based on the conviction that only the larger suppliers in this market will ultimately achieve good results, the company wants to realise take-overs in the European market. They seek to extend their activities not only through joint ventures and acquisitions, but also by insourcing electronics activities that are no longer regarded as core activities by their customers. Nedtronics wants to become one of the major manufacturers of electronics and mechatronics in Europe. Nedtronics wants to double its returns within a few years. The head office of the group will remain in The Netherlands.

Nedtronics' business strategy is to offer all possible production facilities to a small group of large and stable customers against a competitive price. Through this, management expects that it will be possible to run large production series based on forecasts and also to work with contracts for delivery on demand. In line with this strategy, BU-V selected a small number of stable markets (e.g. electronics for heating equipment) and concentrates on a small number of customers in those markets. The other business units are still active in relatively unstable markets, and have many small and unpredictable customers. Consequently, production is very much customer driven, and can be characterised as 'hit and run' work. This has its (negative) implications for logistics and purchasing. For example, a lot of the electronic components are bought from wholesalers, who have high inventories and are able to deliver the components when needed. However, not always against the best possible prices and delivery conditions.

*Observations on Management style*

The group consists of four different business units. Group management consists of the four business unit-managers, completed with the group controller. The control of the corporation is not yet univocal, there still is room for the business unit managers to pursue their own interests, even when not in line with the corporate policy. The individual freedom and responsibility (autonomy) of the business units is considered very important. Besides, the business unit-managers would like to keep it this way, because this is what they are used to. At this moment, group management is aimed at

reaching consensus, instead of considering the group interest more important than the individual BU interests. Currently, the manager of the biggest BU is appointed as the ad interim general director.

#### *Observations on Organisational structure*

There are little differences in the internal organisation across the different business units. This has not so much to do with group policy, but more with the stage of development of the different business units<sup>86</sup>. It concerns four relatively young companies (about ten years old) that are at the end of their entrepreneurial stage. The business unit managers acknowledge that for further growth, a more professional organisation is necessary. During the research project, Nedtronics was building up a new Sales- and Account-management organisation, both on group- and BU-level. These initiatives are supposed to help the company to reduce the number of small and unpredictable customers and concentrate on a small number of large and stabile customers.

#### *Observations on Corporate Information systems*

Within the different business units a great variety of information systems can be found within Logistics, Purchasing, Sales, Production control and Finance. The software packages used are among others: MFG-Pro, Exact, and MAX. Although the systems and software are available, management information to support strategic decisions is still relatively unused. The business unit managers base their strategic decisions not on facts and figures, but rather on intuition and experience. Internet, Intranet and e-mail are available at all sites, but not often used to the full extent, and at the moment there is no priority for further development.

#### *Observations on Corporate Culture and People*

Due to the flat and simple organisation of the BU's the culture is informal and consultative. If one wants to know something, he or she can just ask a colleague. Few barriers are experienced between the different departments. The management style is down-to-earth, operational and strongly intuitive. Experience and entrepreneurship dominate strategic planning in stead of facts and figures. The fact that the Nedtronics

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<sup>86</sup> For more about organisational growth stages see Chapter Three.

Group has been a unity for only one and a half-year, has lead to the situation in which there is not yet a strong group identity. The group is also lacking a broadly supported vision about the future. We think this has to mature, what will take its time. The lack of a joint identity and vision becomes evident in the presence of tension between group thinkers (centralists) and BU thinkers (de-centralists) within the management team and on lower levels in the organisation. The educational background of the people differs across the BU's. Differences are also noticeable concerning the company cultures, which could partly be explained by their different locations in the Netherlands.

An important observation at this point is that the support for the development of a corporate purchasing function seems very fragile. It seems wise to work on the strengthening of the group identity and the solidarity of the management.

## **5.5 Observations of purchasing maturity**

To make an analysis of the purchasing function we used the concept of a purchasing development model (see Chapter Three). A development model describes the different stages that a purchasing function has to pass through, measured against the potential purchasing performance. Each stage has its own level of ambition and its own characteristic strategy, organisational form, information systems and culture. To determine in which stage the purchasing function of Nedtronics can be placed, we put some questions about each of these four dimensions together in the questionnaire. Below we will shortly discuss the results of this analysis.

### *Observations regarding Purchasing Strategy*

In general, business unit managers prefer availability of components over lowest possible price. Customers make is very difficult for Nedtronics to standardise components. It happens regularly that customers prescribe specifications and in some cases they even purchase the items for Nedtronics. Hence, Nedtronics does not have much control over those specifications. As a consequence of the continuously changing specifications, volumes and orders, is it difficult for the purchasing department to establish structural relations with suppliers. Due to the operational time pressure, it is not always possible to obtain three quotations. Purchasing is very much

similar to hit-and-run. With the negotiation of business agreements (BA's) with some critical suppliers, Nedtronics tried to find a solution for this matter. It is now possible to secure low prices, even with all the 'hit and run work'. With respect to the formation of purchasing plans, only BU-V had an explicit purchasing plan that formulates explicit improvement targets for the coming year. The other BU's showed a great variety of ideas within the heads of the purchasers, but none were laid down in an explicit purchasing plan.

#### *Observations regarding Purchasing Structure*

Purchasing departments are mainly occupied with purchasing the bill-of-material (BOM). The purchase of the non-BOM (goods and services) is largely in the hands of the internal users. The purchasing departments report in most cases to the head of Operations of a BU. The headcount of the purchasing departments varies from 1 to 3 full-time employees. Currently, BU purchasers are training their commercial orientation by attending NEVI 1 and 2 courses (especially in BU-V). Because of the small size of the BU Purchasing departments, purchasers have become 'purchasing generalists'. Consequently, they experience a high operational working pressure, which leaves little time for initial purchasing activities.

#### *Observations regarding Purchasing Systems and procedures*

The business agreements are the only mechanisms to control the number of purchasing orders and prices. Purchasing procedures are predominantly administrative and operational of nature (e.g. making the bill-of-material, ordering standard components). The coding of articles is not uniform across the BU's, which hinders the exchange of information. Vendor rating systems and/or supplier performance monitoring are only marginally present. The differences between the purchasing processes of the different BU's are determined to a large extent by their customers and the way they deal with them (process-oriented or project-oriented). Both at BU and group level, there is little purchasing management information available.

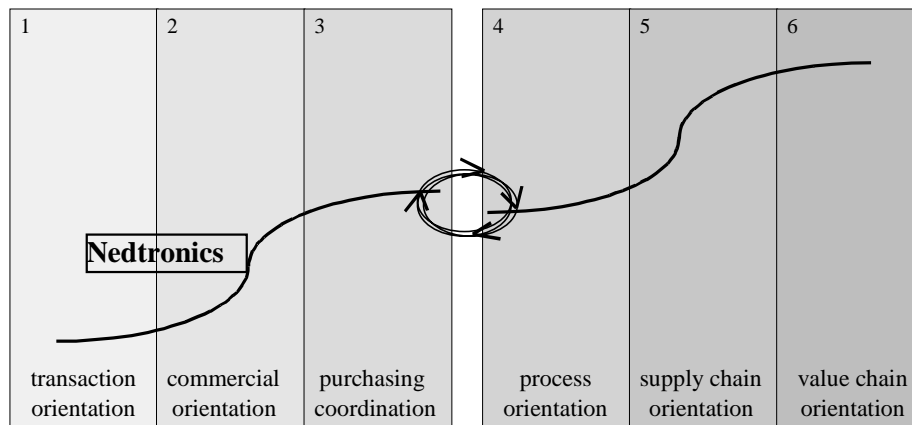
*Observations regarding Purchasing Culture*

The purchasers regularly have informal contact with different disciplines within the company. However, the stereo type picture of purchasers as lone rangers<sup>87</sup> was being confirmed in the interviews. Since 1998, a purchasing meeting at group level was initiated, in which the purchasers periodically meet and discuss possibilities of co-operation. Apart from these meetings there is only very limited informal communication between the purchasers. They are too busy with their own work and mainly focussed on their own business unit.

*Conclusions regarding the Purchasing function*

Considering the observations described in the previous sections, we state that Nedtronics can be placed in the first stages of the purchasing development model. However, BU-V (the largest BU) seems to be further in its development than the other BU's. When determining the opportunities for purchasing synergy, we should bear in mind the stage of development of Nedtronics' purchasing function.

Figure 5.3 Position of Nedtronics in the purchasing development model

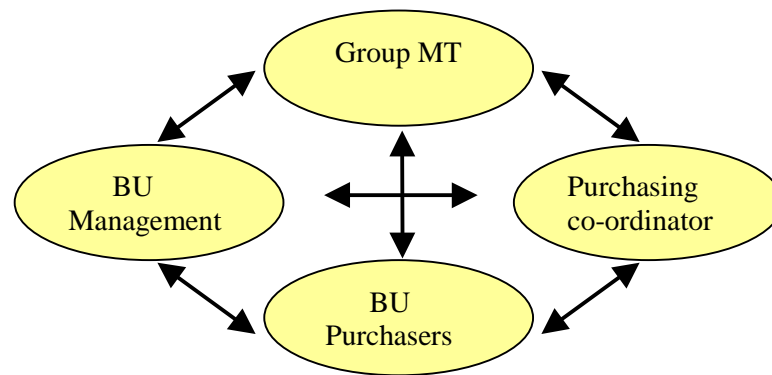


**5.6 Observations of corporate purchasing synergy**

In general it applies that the stronger the commitment of the different key players (e.g. CEO, CPO, BU managers and BU purchasing managers) and the better the interaction between them, the bigger the chances are for corporate purchasing synergy (see Chapter Four). When looking at the corporate purchasing structures at Nedtronics,

many questions may follow. For example, what is the position of the purchasing co-ordinator (PC)? What are his responsibilities and competencies? Is there frequent interaction the holding management team? How does communication between this PC and the BU purchasers takes place? Is there any interaction with the BU managers? What do these BU managers communicate tot their BU purchasers; ‘join the group contracts’ or ‘try to surpass these contracts’? Will the holding management team take action against BU managers that undermine corporate contracts? When putting the questionnaire together for this action research, we took these into account. Our most important observations concerning corporate purchasing strategy and its implementation are described below.

Figure 5.4 Relationship assessment framework (adapted from Rozemeijer, 1998)



#### *Observations concerning Nedtronics*

In 1998 the group management team of Nedtronics appointed a part-time purchasing co-ordinator (PC) to negotiate corporate contracts<sup>88</sup> for the most important commodities. The management team provided the PC more or less with freedom of action. The PC started working energetically, initiated periodic purchasing meetings and negotiated a number of business agreements with some critical suppliers. However, the monthly meetings with the BU purchasers did not always functioned properly. It appeared that the PC was so focussed on achieving savings that he operated rather solo. The PC chose an approach that quickly delivered results, but he did not extensively involve BU purchasers in all activities. From the interviews it appeared that at some points, this behaviour had a negative effect on the commitment

<sup>87</sup> A purchaser who thinks only he knows what is good purchasing and therefor goes his own way.



of the BU purchasers for the proposed strategies of the PC. The fact that apart from the monthly meetings there was little formal and informal contact between the purchasers amplifies this. Furthermore, there was little involvement and commitment of the BU and Group managers for the purchasing plans.

### *Quantitative analysis*

On the basis of the BU lists of creditors, we conduct a quantitative analysis of the purchasing turnover. First of all the non-BOM suppliers were filtered from the file and then a distinction between 1998 and 1999 was made<sup>89</sup>. We have listed the 20 suppliers that generated the highest turnover in 1999 and compared that with the top 20 of 1998. Comparing both lists, some clear shifts became visible: several suppliers from the 1998 list were no longer listed in 1999. This shift was caused by the negotiation of the BA's. With almost all of the top 20 suppliers listed in 1999 agreements of some kind were made, either by a central Business Agreement, or by a lead-buyer contract by one of the BU's. At this moment, BA's or lead-buyer contracts cover about 60% of the purchasing volume. Further, the data show a large number of suppliers in the BOM area with a low purchasing turnover (less than fl. 10.000 a year). This is fragmenting Nedtronics' buying power. In 1999 only a minor shift is visible in the data, which is probably the result of the BA's. There are 17 suppliers that do business with all four business units. These 17 suppliers together account for 37% of the groups' total purchasing turnover. With only 8 of the 17 suppliers, Nedtronics has negotiated business agreements on business unit or group level. Only 6 of these 17 suppliers are top 20 suppliers with regard to their total sales. Based on the data, we may conclude that commonality in supply is rather low. This is particularly due to the variety of product specifications across the different business units. Some BU's need very specific components that can not be included in a central business agreement with a supplier.

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<sup>88</sup> Earlier referred to as 'Business Agreements'.

<sup>89</sup> The data of 1999 concerned the period of 1/1/99 to 30/4/99, which were extrapolated to 1999 as a whole. This makes it possible to compare the purchases before and after the negotiation of the BA's (the BA start in 1/1/99).

*Conclusion purchasing synergy*

With the central business agreements, Nedtronics has taken the important first step towards co-ordinating its purchasing function. Through these BA's it has become clear for BU purchasers where they can buy certain brands of components against the most preferable commercial conditions. This saves them a lot of time, which can be used for more urgent and/or strategic purchasing activities. Although the first results can be considered positive, it is still too early to regard the BA's as successful<sup>90</sup>. Considering the qualitative observations, it seems that the relation between the purchasing co-ordinator and BU and Group managers needs improvement. Broadening the commitment of both BU purchasers and BU managers seems an important condition for further success. Besides commitment, more steering is needed in Purchasing from Group Management. The Purchasing function has not been a strategic point of interest on corporate level. Although the management team acknowledges the importance of the purchasing function, it still is not a fixed item on the agenda of the board meetings.

Based on our data, we concluded that there are enough opportunities for improvement in the purchasing function. Given the fact that Nedtronics' purchasing quote is more than 60%, it may be stated that these improvements can have a big influence on the business results.

**5.7 Towards corporate advantage in purchasing**

The following general conclusions concerning the basis for improvement of the corporate purchasing function were presented during the first workshop. Firstly, external pressure (caused by customers, competitors and suppliers) to rethink the purchasing function is growing. Nedtronics has little control over its customers and is unable to estimate the needed purchasing volumes. Secondly, the purchasing function is purely administrative and operational. Thirdly, there is little commitment for corporate purchasing synergy initiatives among the stakeholders. Development of a group identity, combined with a clear corporate strategy and strong corporate management is recommended.

For any given opportunity, there are usually several possible interventions. Inspired by Campbell and Goold (1998:155ff), we presented three options of intervening during the workshop. This not only reduced the danger of a single focus, but when the options are evaluated, creativity often results from combining the best ideas from each. On the other hand, attempts to define more than three options can make the evaluation process too cumbersome. Three options is a practical number to evaluate. Each separate strategy for addressing the synergy opportunity will be likely to compromise a number of related interventions (bundle of actions aimed to achieve the objective). To open discussion in the workshops, we suggested the following three options to improve corporate purchasing synergy across the business units:

1. Minimum change of the current situation
2. Full-time purchasing co-ordinator with extended responsibilities and authority
3. Cross-functional teams combined with high involvement of line management

*Ad 1) Minimum change of the current situation*

This option maintains the current monthly purchasing meetings to exchange experiences and information across BU's. The (part-time) purchasing co-ordinator (who could be stationed in one of the offices) provides general contracts for common items, but can not oblige the offices to make use of these contracts. Every BU can determine whether to make use of such a contract or not. However, the corporate business agreements are mandatory for every BU. In this option it is the BU manager who is responsible for setting cost savings targets for the purchasing department, initiate projects and measure progress of these projects. In this option it is possible that the co-ordinator's authority concerning the development of guidelines for the personnel management (e.g. recruiting, training, education) and the creation of uniformity of IT systems (coding of articles) could be expanded after some time.

*Ad 2) A full time purchasing co-ordinator with extended competencies*

In this option a (full time) purchasing co-ordinator occupies a strong position and has the responsibility to take initiatives to enhance purchasing synergy. This responsibility will be combined with the accompanying skills and competencies. The purchasing co-

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<sup>90</sup> Success of the Business Agreements can only be measured at the end of 1999.

ordinator himself can decide which projects to work on, can put purchasing teams together that report to him and will be monitored by him.

*Ad 3) Cross-business and cross-functional purchasing*

In this option a member of the holding management team will be responsible for the purchasing function, combined with a corporate purchasing co-ordinator. This co-ordinator will have the responsibility to take initiatives in co-ordinating joint needs across BU's. Besides this, he is authorised to reduce the number of suppliers and the number of products, of course in consultation with all the people involved. The co-ordination initiatives are limited to the commodities and suppliers that are determined by Nedtronics holding management team. BU managers are responsible for the purchase of goods and services that are not included in the corporate agreements.

We conducted two workshops to define which option is the best in the given situation. This structured process is particularly useful if managers are uncertain of their judgements (no former experience with purchasing), or if the decision is a joint one involving agreement between a number of managers (Campbell, 1998). In the first workshop we discussed the three suggested options together with the BU purchasers and the head of Operations. In the second workshop we discussed the three options with the board of management (i.e. BU managers) and the steering group. The conclusions that followed from the workshops are presented below in table 5.5.

*Table 5.1 Selecting the option...*

<b>Realistic, but not desirable</b> <b>Option 1)</b>	<b>Realistic and desirable</b> <b>Option 2)</b> This option is a good starting point, to grow further towards option 3)
<b>Not realistic and not desirable</b> Non	<b>Not realistic and desirable</b> <b>Option 3)</b> There is doubt if all necessary basic conditions are present to work cross functional at the corporate level.

In both workshops, the second option was preferred. However, the people involved also indicated that it was their ambition to grow towards option three in the near future. For this reason, we proposed the following option: Nedtronics starts working with cross-business purchasing teams that are pulled by BU management in the short

term, and cross-functional teams will set in later on. Below, we will summarise the tasks and responsibilities of the different stakeholders in the new corporate purchasing structure.

*ad) Holding Management Team*

The holding management team has to support the purchasing synergy initiative and make the necessary resources available. Also they should be actively involved in monitoring the progress made. Further, they should provide the purchasing co-ordinator with the mandate and authority to act. Finally, they have to set priorities regarding which commodities to work on first.

*ad) BU management*

The BU managers remain responsible for the purchasing of commodities that are not included in the corporate initiatives. However, they will leave the initiative to the corporate purchasing co-ordinator to define the commodities for which purchasing synergy can be accomplished. In addition, BU management is responsible for the professionalisation of the purchasing function in the BU's. Not before option 3 (the cross-functional approach to purchasing synergy) active involvement is expected from the BU managers. In option 3), every BU manager will be chairman of a cross-functional team for complex and strategic commodities.

*ad) Purchasing co-ordinator (PC)*

The PC is considered to have the responsibility to realise purchasing synergy in the broadest sense of the word. This means on the one hand negotiating central contracts and on the other hand facilitating the exchange of purchasing information and -knowledge across BU's. Also, he has the responsibility to create professional purchasing functions in the BU's and develop guidelines for recruiting new purchasers, training and education, organisation, systems development and auditing BU purchasing practices. In order to be able to do this, the PC need the authority to select purchasing commodities and to give priority to those commodities he considers as most important. Also he/she will have authority to compose (and staff) the purchasing teams, and monitor their performance.

The corporate contracts are mandatory, however, BU's can make use of better alternatives, but only after consulting the PC and having his/her approval. The PC can delegate certain tasks to the biggest user (lead buyer). By the time option 3) comes in sight, the PC will have a steering role in the cross-functional team structure. The PC has to make sure that a purchasing plan is drawn up, with concrete goals per supplier/product group and specific actions per office. Besides this he has to arrange a monthly purchasing meeting, which is meant for the commodity teams and lead-buyers to report the latest developments. Naturally, this whole structure has to fit the purchasing strategy. Therefore, the PC determines the corporate purchasing strategy centrally, after consultation and on the basis of the input of the decentral purchasers, the holding MT and the BU managers.

#### *ad) BU Purchasers*

The BU purchasers have to show a willing attitude to investigate and explore (together with the PC) opportunities to realise purchasing synergy. After the holding management team has determined the most important purchasing commodities, the BU purchasers have to join one or more purchasing teams. This means that BU purchasers have to exchange their individual responsibilities for group responsibilities for certain commodities.

#### *Implementing the new corporate purchasing approach*

For successful implementation of the proposed option, some basic conditions need to be in place. These basic conditions are related to the minimum required levels of 'Corporate coherence' and 'Purchasing Maturity' (see Chapter Four). For Nedtronics, we formulated two basic conditions for each contingency variable:

- *Active commitment of the board:* Sponsor of the purchasing function, activator of cross-functional teams, defining clear goals and frameworks, and monitoring the general progress ('corporate coherence').
- *Willingness of the offices to give up some of their autonomy:* This requires a fair amount of mutual trust and group identity. The BU's will keep the possibility to have influence on the corporate purchasing strategies, by having a BU representative in the team ('corporate coherence').
- *Central purchasing system and article coding:* Central development and control of corporate databases for contracts, components, and suppliers.

Combined with decentral use and maintenance of the databases ('purchasing maturity')

- *Professional purchasing function in the BU's*: the BU purchasers and internal users have sufficient purchasing knowledge and experience to man the different teams and make them successful. Changes in the personnel structure and/or training and education of the people involved could be necessary ('purchasing maturity').

We discussed these basic conditions in the second workshop and put a list together with short-term actions and long-term actions to establish these conditions.

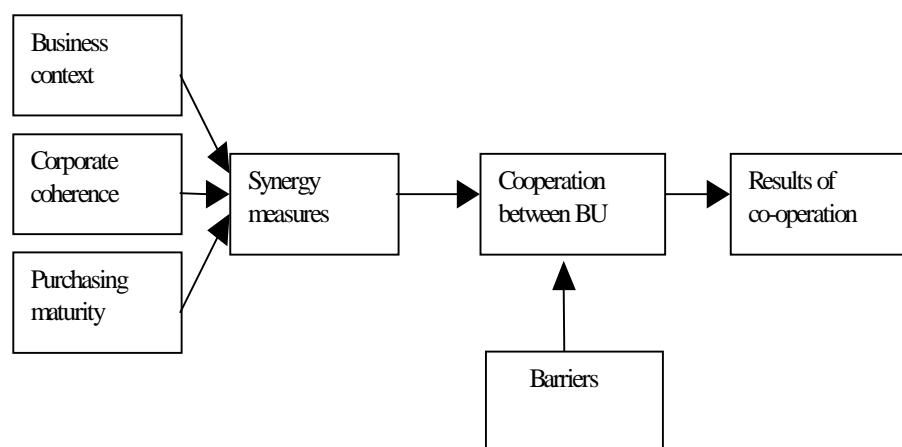
## **5.8 Reflections on the conceptual model**

This action research has increased our insights in the different constructs of our conceptual model. Again, it became clear that realising purchasing synergy requires more than just homogeneity of product specifications across business units. Corporate management, or more specifically 'Corporate coherence', and Purchasing maturity seem to be important contingency factors in the design and implementation of corporate purchasing strategies. Currently, both purchasing maturity and corporate coherence are low at Nedtronics. Corporate coherence is limited for several reasons: the group is just recently formed, it has no general manager, the business units are very autonomous, and a corporate identity is not yet developed (during the research we found several different business cards being used side by side). The effect of this low coherence showed just after the research project was finished: one of the business units decided to split off. In our view, a corporate purchasing strategy should be congruent with the level of corporate coherence and purchasing maturity. If not, it will be very difficult to implement on a sustainable basis. Therefore, interventions in both corporate coherence and purchasing maturity are required in order to secure successful implementation of the new corporate purchasing strategy at Nedtronics.

Based on the data from this action research we decide to modify the conceptual model in three ways. Firstly, we will change the construct of 'corporate management' into 'corporate coherence'. Secondly, we decided to split up the construct 'corporate purchasing strategy' into two constructs: a) 'measures to stimulate synergetic co-

operation across business units' (e.g. corporate steering group) and b) 'level of co-operation across business units' (e.g. frequent exchange of information across BU's). This will enable us to measure whether the measures have the intended effect: synergetic co-operation across BU's. In order to increase consistency in our model, we renamed the construct of 'purchasing synergy' into 'results from synergetic co-operation across business units' (e.g. cost savings). This construct measures to what extent the exchange of information results in cost savings. Only if the net result is positive, we can speak of purchasing synergy. Thirdly, we decided to add one construct: 'Barriers for co-operation across business units'. During this action research, we came across many reasons why business units do not co-operate with each other, or issues that hinder the co-operation. Some of these barriers are related to systems, structure and processes (e.g. non compatible ICT systems, lack of purchasing information, insufficient leadership, lack of resources, etc.) others are related to people (e.g. lack of trust, fear of losing jobs, unwillingness to co-operate, lack of motivation, etc.). During the case studies we did not explicitly paid attention to this construct. We will review the data from the case studies to look for more items underlying this construct. In Figure 5.5 we present the conceptual model that includes all the modifications. This model will be used as the basis for the survey (see Chapter Six).

Figure 5.5 Modified conceptual model





With regard to the Relationship Assessment Framework we may conclude that it can be a very useful tool during workshops. It helped the people involved in the design of the new corporate purchasing strategy and to think about their specific role, position and interaction with other stakeholders.

## **5.9 Conclusions**

Driven by increased external pressures, Nedtronics' management team considered rethinking its corporate purchasing strategy. We proposed three different options: 1) Minimum change of the current situation, 2) A full time purchasing co-ordinator with extended authority and responsibility and 3) Cross-functional teams managed by BU managers. By means of two workshops option two was chosen for the short term, with the possibility of growing to option three in the long term. However, during the research it appeared that, currently, only a small basis exists for corporate purchasing synergy initiatives. Both corporate coherence and purchasing maturity are low. We suggested developing stronger group management (e.g. corporate identity, shared corporate vision) together with initiatives to professionalise purchasing in the business units and at the corporate level.

## Chapter 6 The survey

### 6.1 Introduction

Based on literature, case studies and action research, we developed a conceptual model consisting of six constructs. In this chapter we will formulate a set of hypotheses regarding managing corporate advantage in purchasing. Further, we will empirically test these hypotheses through a survey. In the following sections we will describe the survey process and the final results.

### 6.2 The survey process

A (classic) survey is often defined as ‘conducting research using a pre-coded written questionnaire’ (Hertog and Van Sluijs, 1996:102). A typical survey involves a large number (at least 40 to 50) cases<sup>91</sup>, generates more general than in-depth information, and on the data various quantitative (statistical) analyses can be performed (Verschuren and Doorewaard, 1995:140-147; Tabachnick and Fidell, 1996; Tacq, 1992). We decided to use a written questionnaire because it is a rather easy way of getting information from a large number of companies, and it enables us to test our hypothesis. Apart from that, it is not costly and time consuming. Unfortunately, no cookbook method exists to implement a survey, since certain procedures in the surveying process will vary depending on the purpose for surveying, the individuals who will be invited to respond, the datacollection method employed, the use of the results, and of course, resources available to implement the process. Surveying is an art as well as a scientific procedure; individual judgement and decision-making are often required, and even experts in the field disagree on various aspects of the survey methodology. In such a situation the right recipe will come from readings in the field, contacting others who are implementing surveys, and most often, from hands-on experience. This was also the case in this research project.

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<sup>91</sup> Below this number the results of a quantitative analysis will become less valid.

A typical survey process consists of a number of stages. First, *Survey planning*. When conducting a survey planning is essential so that potential pitfalls and delays might be avoided. Secondly, *Developing the survey*. During this stage the content of the survey is delineated based on the purpose and the information needs. Thirdly, *Pretesting the survey*. In this stage, the survey and cover letter will be presented to a representative set of potential respondents (Den Hertog and Van Sluijs, 1995:119). Fourthly, *Actually conducting the survey*: this stage entails administrating the survey to the total sample from the population. Fifthly, *Analysis of the results*. In this stage the survey response data are (statistically) analysed and summarised for reporting purposes. Finally, *Summarising the results in a report*: after analyses the results are summarised in an interpretative report for dissemination. We will describe here in more detail how the sample was defined, how the questionnaire was developed, and how the survey was conducted (Den Hertog and Van Sluijs, 1995:98).

#### *Defining the sample*

A sample is a part of a population; the latter is the totality of entities in which we have an interest. In this study the population has been defined as '*large companies*'. The sample from this population matches the following criteria:

1. *Stockquotation at the Amsterdam Stock Exchange (AEX)*. This has two reasons. Firstly, these companies are relatively easy to contact for the research team. Secondly, additional information is easily obtainable through annual reports, newspapers, etc.
2. *Large companies*: the use of company size as a sample criterium is commonly used. Several authors (a/o. Daft,1992; Mintzberg and Quinn, 1991) conclude that there is a strong correlation between company size and the number of divisions and/or business units. One of the definitions of a large company is 'a company with more than 250 employees' (Van Oijen, 1997:172). This number is a 'quick and dirty' method to select companies that will probably have more than one division/business unit and more than one purchasing department.

We selected the companies with over 250 employees based on two lists. The first list, which we found on the AEX website, indicated the 199 companies that were listed at

the AEX in June 1999 (25 AEX funds, 22 AMX funds and 152 other funds). The second list, which we received from the AEX office after requesting it, indicated 147 companies with over 250 employees based on their 1997 annual reports<sup>92</sup>. When both lists were compared, it appeared that some of the 1997 companies were no longer listed in 1999, and some new companies entered the 1999 list that were not included on the 1997 list. Eventually we came up with a sample of 145 companies. We decided to send a small number of the AEX-companies more than one questionnaire (e.g. Philips Electronics, Royal Shell, Akzo-Nobel, and Unilever). This was driven by the fact that these corporations have numerous very large divisions. For technical reasons we preferred to contact as many companies meeting our criteria as possible. Preconditions for a division to be included in the sample were size and the assumed presence of an autonomous purchasing function. This resulted in a final sample of 152 companies. In the first weeks of June 1999 we have called all 152 companies to explain our research initiative and to get the correct name and address of the corporate purchasing director. If companies indicated not to have a corporate purchasing director, we asked the name and address of the head of purchasing of the largest division/business unit, the most senior manager involved in corporate purchasing synergy initiatives, the most senior manager of the largest spend category, or the head of purchasing of the largest purchasing department. In this way we were able to contact all the companies in our sample on a personal basis.

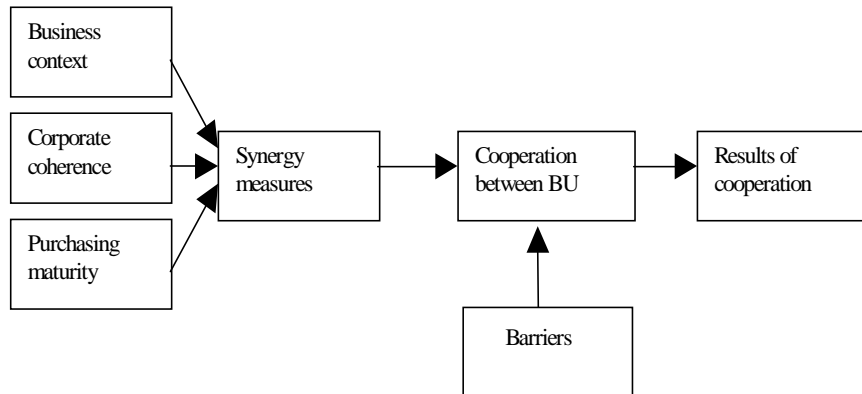
#### *b) Developing the questionnaire*

In developing the questionnaire we have used an interactive developmental approach consisting of four steps. First, based on the insights drawn from the cases and the literature study we developed a first draft questionnaire. Secondly, we discussed this draft questionnaire with a focus group of academics. After that we pilot tested the draft questionnaire among practitioners. Finally, we came up with the final questionnaire. A first step in survey research is the specification of constructs to be studied and of the hypotheses that relate these constructs to each other. These relationships are summarised in our last conceptual model (see Figure 6.1).

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<sup>92</sup> A more recent list was not available at the AEX organization.

Figure 6.1. Conceptual model



The conceptual model consists of seven constructs that have been developed through literature study, in-depth case studies and action research. In order to test the relationships between these constructs, we have translated them into six hypotheses (see Box 6.1).

Box 6.1 The six hypotheses

1. Higher perceived competitive pressure in the business context leads to more measures are taken to increase synergetic co-operation in purchasing across business units.
2. The more coherent the corporation, the more measures are taken to increase synergetic co-operation in purchasing across business units.
3. The more mature the purchasing function, the more measures are taken to increase synergetic co-operation in purchasing across business units.
4. The more measures are taken, the more synergetic co-operation in purchasing across business units will result.
5. The more synergetic co-operation in purchasing across business units, the more purchasing synergy results.
6. The more barriers are present, the less synergetic co-operation in purchasing across business units will result.

All constructs are abstractions and difficult to define and, thus, to measure. We have operationalised<sup>93</sup> the constructs through specifying several items (questions) necessary to measure these. It is desirable to have multiple operational definitions of the same construct to capture all dimensions of the constructs, so we have formulated more than one question for each construct (see Appendix 6.2). The initial list of items was generated based on literature review and also the case studies and the action research served as a basis for item generation.

In general, there are two general types of response alternatives for these questions, *forced-choice* (Yes/No items, checklists, rating scales, rank order scales and Likert-type scales) and *open-ended* (which allow respondents to answer in their own words to the questions). In written questionnaires most often researchers use forced-choice items. We have chosen to use the Likert type scale on which respondents rate on a scale their level of satisfaction or dissatisfaction with various services, or degrees of agreeing or disagreeing with various declarative statements<sup>94</sup>. There are a number of reasons to use these Likert-scales. Firstly, because they are more reliable than yes/no items or graphic scales. Secondly, they provide the respondents with the opportunity to express the degree of their judgement, resulting in more variable scores. Finally, Likert-type scales provide the surveyor with the opportunity to compute frequencies and percentages, as well as statistics such as the mean and standard deviation scores (in turn, allowing for more sophisticated statistical analyses such as variance analysis, factor analysis, etc. to be performed on the data)<sup>95</sup>. There is some discussion among researchers about whether Likert rating scales should be 3, 5, 7, 9 or even 11 points. All of these odd-numbered scales have a middle value that is often labelled neutral (or ‘neither agree, nor disagree’). However, it is also possible to use an even number response scale with no middle neutral choice. Here, the respondent is forced to decide whether they lean more towards the agree or disagree end of the scale for each item. There are researchers that indicate no overall difference in performance between Odd and Even numbered scales. To allow respondents to express their indifference, which

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<sup>93</sup> Translating the construct into observable events by specifying what the researcher must do in order to measure the construct concerned (Diamantopoulos, 1997:22).

<sup>94</sup> Respondent alternatives could be: 1 = completely disagree with, 2 = predominantly disagree with, 3 = neither disagree, nor agree, 4 = predominantly agree with, and 5 = completely agree with.

<sup>95</sup> According to the ‘purists’ (often statisticians) we should treat the Likerts scales as ordinal, unless we can prove otherwise. However, to be able to calculate means and correlations, we adopt the ‘pragmatic’ view often followed by (social) researchers, and treat the ordinal Likert scales as if they were interval.

we think, is a valid answer, we have chosen for odd numbered scales. We selected a 5-point scale because in our view, with a 3-point scale you risk losing nuances, and with a 7-point scale (or even more) you could confuse respondents.

It is suggested by Den Hertog and Van Sluijs (1995:119) to pretest a written questionnaire on a small subsample of individuals representing those who will be administered the final survey. Pretesting before conducting a survey provides you with the opportunity to improve the survey, and enhances its reliability and validity. We tested the questionnaire several times. The first step involved consulting a focus group of *selected academics* (see Appendix 6.1)<sup>96</sup>. We asked them to react on the questionnaire. First feedback was provided by e-mail or telephone, often combined with a personal meeting to discuss the questions and the underlying hypothesis and the methodology. With some members of the focus group more than one concept version was discussed. Secondly, the written questionnaire was pilot-tested among 7 *corporate purchasing managers* of the companies participating in the research project during the third research roundtable on July 18, 1999 at Eindhoven University of Technology (see Appendix 6.1). After the respondents had completed the survey, they were asked a series of questions related to the cover letter, the survey instructions and the survey itself (see Appendix 6.1). They checked whether the final statements made sense and were unambiguously worded. The remarks and suggestions from both the focus group and the pilot-test group encouraged us to slightly change some items in the design of the final questionnaire. For a final check we have discussed the final version with the members of the research team.

### *c) Conducting the survey*

On August 27, 1999, the complete survey package was sent out by mail to all 152 potential respondents. The survey package consisted of a cover letter, a short summary of the research, a letter of recommendation of the NEVI research foundation, a stamped return envelope and the questionnaire<sup>97</sup>. After two weeks we called all the non-respondents and sent them a reminder fax. This was repeated after four weeks.

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<sup>96</sup> We have selected them based on their knowledge of purchasing, management and organization, and/or methodology, and experience in conducting a survey.

<sup>97</sup> For suggestions regarding how to improve mail survey response rates, see Greer et al. (2000).

### 6.3 The results of the survey

Response rate is defined as the percentage of a sample that responds to the survey. There is no specific standard for a minimum acceptable response rate. To ensure a sufficient response for statistical analysis (between 40 and 50 cases) potential respondents were contacted several times during the response period. We expected that through this repetitive contacting (by telephone, fax and letter) they were more stimulated to fill in the questionnaire. After closing the response period early November 1999, we had received 46 completed questionnaires. This makes a response rate of 30%, which is close to the response rate of comparable other mailed survey research (Van Ooijen, 1997: 173). The 46 completed questionnaires originated from 41 different corporations (see Table 6.1). This is explained by the fact that we have sent more than one questionnaire to some large corporations (e.g. Akzo-Nobel, Royal Philips Electronics, Koninklijke olie/Shell and Unilever).

Table 6.1 Corporations and respondents

Fund	Sample	Number of corporations	Number of respondents
AEX	31	8	12
Midcap	19	4	4
Smallcap	102	28	29
Other (*)	-	1	1
Total	152	41	46

(\*) VanLeer is recently acquired by a Finnish corporation and is no longer quoted on the AEX.

Table 6.2 Sector background of the Respondents

Sector	Sample	Frequency	Percentage
Industry	84	30	65,2
Retail	23	10	21,7
Services	30	4	8,7
Other	15	2	4,3
Total	152	46	100

(Note: **Services:** Financial services, Engineering services, Information technology services; **Industry:** Chemicals, Pharmaceuticals, Food & Beverages, Construction, Oil, natural gas & Petroleum, Manufacturing; **Retail:** Trading, Wholesale, Retail; **Other:** Transport, Publishing, Entertainment, Telecommunication)

From Table 6.2 it becomes clear that especially corporations from the industry sector have responded. The Services sector and the Other sectors almost did not respond to the questionnaire. This could possibly be explained by the less important role the purchasing function plays in those sectors.



Table 6.3 Jobtitle respondents

Jobtitle	Frequency	Valid percent
Director Purchasing	11	24
Purchasing manager	23	50
Purchaser	5	11
Other	7	15
Total	46	100

Note: Director Purchasing: Vice President corporate purchasing, Director Purchasing, General Manager Procurement Group level, Group director Purchasing, Head of corporate purchasing, Managing director Supply Company, Director Group Purchasing. Purchasing manager: Purchasing manager, Sourcing manager, Head of Purchasing (department), Manager purchase facilities, European Procurement manager, General manager Technical Purchasing, Procurement coach, Manager purchasing department, Senior corporate purchasing manager, Manager Procurement, Manager Logistics and Purchasing, Strategic source manager, Purchasing and Logistics manager. Purchaser: Facility buyer, Purchaser, Senior purchaser, Buyer capital goods. Other: Business development manager (corporate), Vice president production, logistics and technology, Corporate staff director, Marketing manager, Product and concept manager, Director Merchandising.

We have clustered the respondents into four jobtitle categories: director purchasing, purchasing manager, purchasers and other. Table 6.3 shows that most respondents fall in the category ‘purchasing manager’. Apart from non-response from the purchasing directors, this can be explained by the fact that only a limited number of companies have a corporate purchasing department with a corporate purchasing director. In some occasions the purchasing managers were working at a corporate level, but not as a purchasing director.

Non-response analysis was conducted to determine the extent to which nonrespondents were different from respondents. The total number of non-respondents was 106 (70%). In the first two weeks we received letters or E-mails from 12 companies that indicated not to respond, 27 companies cancelled after contacting them by phone, and 7 companies indicated to respond after contacting by phone but did not reply. 60 companies were called more than once, received a reminder by fax or a complete new questionnaire, however they did not reply. In the letters and e-mails we received and during the telephone calls, companies indicated the following main reasons for not responding: 1) not willing to spend time due to a lack of time (too busy with other things (e.g. reorganisations, mergers, take-overs), 2) Information requested was too confidential or too strategic, and 3) Information requested could harm stock prices. If we look at the industry background of the non-respondents it shows that the services and the other companies show a higher non-response. If we look at the stock quotation we find that non-response is highest among the Midcap

and Smallcap funds. We did not find a significant difference in the organisation level. About 46% of the respondents originates from divisional level (sample contained 42% on divisional level) and 54% from corporate level (sample contained 58% corporate).

In order to analyse the answers on the different items we will describe the average scores on items of the six constructs: business context, corporate management, purchasing management, measures, co-operation, results, and barriers.

#### *a) Business context*

In the perception of the respondents the average corporation (AC) is confronted over the last three years with increased competitive pressures to reduce costs (mean 4,48) and to innovate (mean 4,11). Further to that the AC is confronted with increasing concentration through mergers and acquisitions in customer markets (mean 4,07) and supplier markets (mean 3,47). Based on the insights from chapter four, we may expect that this business context will stimulate corporate purchasing initiatives in the AC. This assumption was tested at a later stage.

#### *b) Corporate Coherence*

The respondents indicate that the AC concentrates on a small core of related businesses (mean 3,87), and has done some corporate restructuring over the last three years. Given the lower score on item D2 (mean of 2,64) we may expect that this restructuring took place mainly through external growth (=mergers and acquisitions) instead of internal growth. In chapter four we have described how in some cases, mergers and acquisitions were the main driving force behind initiatives to capture purchasing synergies between the merged organisations. However, external growth could make it more difficult to materialise the potential synergies, because of organisational differences in terms of strategy, structure, systems and culture between the merged companies. The respondents do not fully agree with the statements about how the corporate culture (mean 3,16) and the corporate staff departments (mean 3,11) stimulate synergy in areas other than purchasing. It seems that currently corporate synergy is not an issue of top priority for the AC.

Table 6.4 Level of internationalisation

	Frequency	Percent	Valid Percent	Cumulative percent
National	4	8.7	8.7	8.7
International	10	21.7	21.7	30.4
Multinational	19	41.3	41.3	71.7
Global	2	4.3	4.3	76.1
Transnational	10	21.7	21.7	97.8
Other	1	2.2	2.2	100.0
Total	46	100.0	100.0	

About 41 percent of the respondents indicate that their corporation is organised as a Multinational (a number of decentral, autonomous local-for-local operating companies combined with a central group with only a limited amount of authority). Given the high level of autonomy of the decentral country organisations, we don't expect this to be the best starting point for creating corporate advantage in purchasing. In order to create synergy, the country organisations should give up some of their autonomy in favour of corporate advantage. In chapter four we described that this can be a very difficult process.

*c) Purchasing Management*

Respondents almost fully agree with the statement that over the last three years their company has increased its purchasing quote. According to the respondents, purchasing is recognised by top management as an important business function. In the AC purchasing is more considered as a strategic function than as a clerical and operational function focused only on getting the lowest price. On average, the respondents did not disagree nor agree with the statements regarding the differences in purchasing needs across business units (purchasing homogeneity), differences in the role and position of purchasing across business units, and differences in the quality of the purchasing across business units (means around 3). However, the high standard deviations indicate that we cannot draw any conclusions from this. The statements related to the skills en capabilities in the BU purchasing departments for 'functioning in cross-functional teams', and for 'participating in corporate synergy initiatives', do not show a significant positive score (mean 3,0 (SD=0,92) and 2,93 (SD=1,06). Interesting is that, on average, the respondents indicate that they have the 'corporate level skills and capabilities for formulating and implement corporate purchasing synergy strategies' (mean 3,49, SD 0,98). This could be what Campbell

and Goold (1998:135) call the '*parenting skills bias*'. Corporate executives tend to believe that they have the skills to intervene effectively, however, often they don't.

Table 6.5 Organisation of the Purchasing function

	Frequency	Percent	Valid percent	Cumulative percent
Completely centralised	4	8.7	8.7	8.7
Completely decentralised	11	23.9	23.9	32.6
Decentral purchasing with voluntary co-ordination	14	30.4	30.4	63.0
Centre-led action network	12	26.1	26.1	89.1
Other	5	10.9	10.9	100.0
Total	46	100.0	100.0	

More than 30% of the respondents indicate that the purchasing function is decentrally organised with some (voluntary) co-ordination. The centre-led-action network (CLAN) organisation (26% of the respondents) and the completely decentralised organisation (23,9% of the respondents) also score relatively high.

#### *d) Measures aimed at stimulating co-operation*

In this cluster we asked the respondents to react on several measures that could be taken to stimulate co-operation between BU's. It appears that purchasing synergy is mainly realised through informal networking (e.g. annual purchasing days, specific recruitment criteria, jobrotation). Less often used to realise corporate advantage in purchasing are 'Formal organisation mechanisms' (corporate steering boards, commodity teams, leadbuyers, working groups) and 'Information and Communication systems' (corporate databases, Intranet, etc). There is still room for improvement in these areas. From chapter four we learned that interest of and interaction between the CEO, CPO, BU management and BU purchasers are crucial for successful implementation of a corporate purchasing strategy. The respondents indicate that the average CPO shows the highest interest in purchasing synergy and spends a lot of time on this issue (mean 3,89). The average CEO and BU manager are not very interested in participating in purchasing synergy initiatives (means 2,80 and 2,98). Not surprisingly, the highest interaction takes place between the CPO and the BU purchasers (mean 3,29) and between the CEO and the CPO (mean 3,04). The respondents indicate, on average, that there is almost no interaction between the CEO and the BU purchasers (mean 2,16) and between the CEO and the BU managers

(mean) on issues related to purchasing synergy. Given the high standard deviations (>1,0) we cannot draw strong conclusions from these average scores. In chapter four we found that management control was needed in order to successfully implement a corporate purchasing strategy aimed at realising synergy. The respondents indicate that, on average, they apply almost no management control on the implementation of their purchasing synergy strategies (all statements <3). It is striking that the respondents, while they indicate that they monitor implementation of purchasing synergy strategies, did not define specific performance indicators for this. We cannot draw strong conclusions from these average scores, because the standard deviations are very high (between 1,2 and 1,4).

*e) Level of co-operation between business units*

Given the responses on the items in this cluster, on average, the measures taken result in co-operation between business units. Business units often join their forces and *negotiate corporate contracts* especially for raw materials, components, general expenses and services. The high standard deviations indicate that this differs strongly per corporation. Apart from office space, business units *share functional resources* as much as possible. Respondents indicate that, on average, business units *share information* on company wide contracts (3,60), product prices (mean 3,52), suppliers (mean 3,29) and specifications (mean 3,27). Information supply market developments (mean 3,08) is less shared by business units. This can partly be explained by the fact that it regards information that is difficult to write down and/or to exchange. According to the respondents in the AC the sharing of purchasing knowledge across business units is rare (all items score on average <3).

*f) Results of co-operation between business units*

Respondents indicate that, on average, the purchasing synergy initiatives result in an improved purchasing performance. The following benefits are perceived as the strongest benefits: cost savings (mean 4,05), improved strategic position on supply markets (mean 3,73), reduction of the number of suppliers (mean 3,64), better partnering with suppliers (mean 3,61), the creation of value (e.g. better delivery) (mean 3,49) and an increased productivity of the purchasing function (mean 3,49). Further to this the respondents indicate that these “benefits far outweigh the costs of

the corporate purchasing synergy initiatives” (mean 3,91), and also that there is still a lot of potential purchasing synergy uncaptured (mean 1,63 on item L10).

*g) Barriers for co-operation*

We also asked the respondents to react on a number of barriers that could hinder the successful implementation of a strategy aimed at creating corporate advantage in purchasing. In the AC these corporate initiatives are predominantly hindered by a lack of information, poor information systems and poor exchange of information across the different parts of the corporation. Also the cultural barriers between departments and business units (mean 3,40), the functional focus of the purchasing departments (mean 3,42) and the quality of the purchasing people in the BU’s (mean 3,33) are regarded as hindering factors. The so-called soft factors like ‘lack of motivation’, ‘unwillingness’, ‘fear of losing jobs’, are not perceived as important hindering factors by the respondents. This is contrary to what we expected on forehand based on the insights drawn from the cases in chapter four.

## **6.4 Discussion of the hypotheses**

The data analysis was done following the steps of a conventional scale development procedure. To keep things manageable we performed a reliability analysis for each of the six construct variables. The typical approach for the assessment of reliability is by computing the Cronbach’s alpha coefficient (Cronbach, 1951; Klein Wolthuis,1999) (see Table 6.5).

Cronbach’s alpha indicates the homogeneity of a scale. In general, this measure varies between 1 (perfectly homogeneous scale) and 0 (absolutely non-homogeneous scale). A condition for statistical analysis is an alpha between 0,60 and 0,90. Further, the item-total correlations should be at least 0,30 for each item. This measure indicates to what extent the item correlates with the total of the rest of the scale. When a certain scale did not met the two requirements, we eliminated those items with the lowest item-total correlation from the scale until we ended up with an alpha > 0,60. Using this approach we had to remove 14 items from the original list of 97 items (see questionnaire appendix 6.2).

Table 6.5 Overview of the scale development procedure

Construct variable	Reliability analysis
'Business context'	The Cronbachs alpha is too low (0,6056) to speak of a homogeneous scale, however sufficiently high for this four-item scale.
'Corporate Coherence'	We removed six items (D1, D2, D3, D4, D8 and D9) from this 10-item scale, which resulted in a 4-item scale with an alpha of 0,6989.
'Purchasing Maturity'	We removed three items (E1, E6 and E4) from this 12-item scale, which resulted in a 9-item scale with an alpha of 0,7716.
'Purchasing Synergy Measures'	This scale is made up of six different clusters of items F,G,H,I,J, and K. These six clusters contain 21 items in total. Without removing any items, this scale showed a very high alpha of 0,9204.
'Level of co-operation'	This scale is made up of 24 items. Without removing any items this scale showed a very high alpha of 0,9416.
'Results of co-operation'	This scale is made of 10 items. We used only the first eight items for this construct variable (L9 and L10 are items of a different order). Without removing any items, this 8-item scale showed a high alpha of 0,8745.
'Barriers for co-operation'	This scale is made up of 16 items. We removed 5 items from this scale, which resulted in an alpha of 0,8420.

This left 83 items in the six different scales. These remaining items reflect the six underlying construct variables, and showed sufficiently high Cronbach alpha reliabilities. Next, we summed up the item scores of each construct variable and analysed the correlations between the six construct variables. We used one-tailed correlation test. This is appropriate when a directional hypotheses are specified, which implies considerable prior knowledge about the nature of the hypothesised phenomenon. While a two-tailed test is the one to use is an exploratory hypothesis is all that can be reasonably specified, due to absence of or conflicting prior knowledge (Diamantopolos, 1997:145). In Table 6.6 the correlations are presented between the six construct-variables as computed by the software program SPSS.

Table 6.6 Overview results on the six hypotheses

Hypothesis	One tailed correlation tests	Hypothesis supported?
H1) Higher perceived competitive pressure leads to more measures taken to increase synergetic co-operation in purchasing across business-units.	The path was positive (+0,102) but not significant (path coefficient = 0,275).	No
H2) The more coherent the corporation, the more measures are taken to increase synergetic co-operation in purchasing across business-units.	The path was positive (+0,618) and very significant (path coefficient = 0,000).	Yes
H3) The more mature the purchasing function, the more measures are taken increase synergetic co-operation in purchasing across business-units.	The path was positive (+0,567) and very significant (path coefficient = 0,000).	Yes
H4) The more measures are taken, the more synergetic co-operation in purchasing across business units.	The path was positive (+0,572) and very significant (path coefficient = 0,000).	Yes
H5) The more synergetic co-operation in purchasing across business-units, the more purchasing synergy results.	The path was positive (+0,477) and significant (path coefficient = 0,003).	Yes
H6) The more barriers are present, the less synergetic co-operation in purchasing across business units.	The path was negative (-0,472) and significant (path coefficient = 0,002).	Yes

### *Hypothesis 1*

The first hypothesis (H1) stated that the increased pressures from the business context (PBC) has a positive impact on the number of measures taken to create corporate advantage in purchasing (MCAP). The path between PBC and MCAP was positive (+0,102) but not significant (path coefficient = 0,275). As pressures increase from the business context, it is expected that the corporation will increase its effort to manage co-operation between business units with respect to creating corporate advantage in purchasing. However, we conclude that these pressures do not directly affect the number and form of the measures taken to create corporate advantage. They trigger changes in corporate coherence through changes in corporate strategy and structure, which in turn may stimulate companies to take measures to create corporate advantage in purchasing. Almost every textbook on corporate strategy identifies the business environment (e.g. competitive pressure, industry structure) as one of the major drivers of organisational change. However, this appears not true for corporate purchasing strategy.



### *Hypothesis 2*

The second hypothesis (H2) stated that corporate coherence (CC) had a positive impact on the measures taken to create corporate advantage in purchasing (MCAP). The path between CC and MCAP was positive (+0,618) and very significant (path coefficient = 0,000). As corporations become more coherent (integrated), it is expected that the corporation will increase its efforts to manage co-operation between business units to create corporate advantage in purchasing. This involves high corporate level communication on important issues with BU managers, maintaining frequent face to face communication with all key players, establishing direct computer links across business units, and stimulating the forming of personal networks. This hypothesis is supported by the data from our survey.

### *Hypothesis 3*

The third hypothesis (H3) stated that purchasing maturity (PM) had a positive impact on the measures taken to create corporate advantage in purchasing (MCAP). The path between PM and MCAP was positive (+0,567) and very significant (path coefficient = 0,000). As the purchasing function becomes more mature and strategic, it is expected that the corporation will increase its effort to manage co-operation between business units to create corporate advantage in purchasing. This hypothesis is also supported by the data from our survey.

### *Hypothesis 4*

The fourth hypothesis (H4) stated the measures taken to create corporate advantage in purchasing (MCAP) had a positive impact on the level of (synergetic) co-operation between the business units (CBBU). The path between MCAP and CBBU was positive (+0,572) and very significant (path coefficient = 0,000). As the corporation increases its efforts to manage (synergetic) co-operation in purchasing between business units, it is expected that the business units will co-operate more. This hypothesis is supported by the data from our survey.

### *Hypothesis 5*

The fifth hypothesis (H5) stated the level of (synergetic) co-operation between the business units (CBBU) had a positive impact on the purchasing performance (PP) of the firm. The path between CBBU and PP was positive (+0,477) and significant (path

coefficient = 0,003). As the (synergetic) co-operation between business units increases, it is expected that these firms will have higher levels of purchasing performance, with respect to reduced costs, value creation and increased productivity. This hypothesis is supported by the data from our survey.

#### *Hypothesis 6*

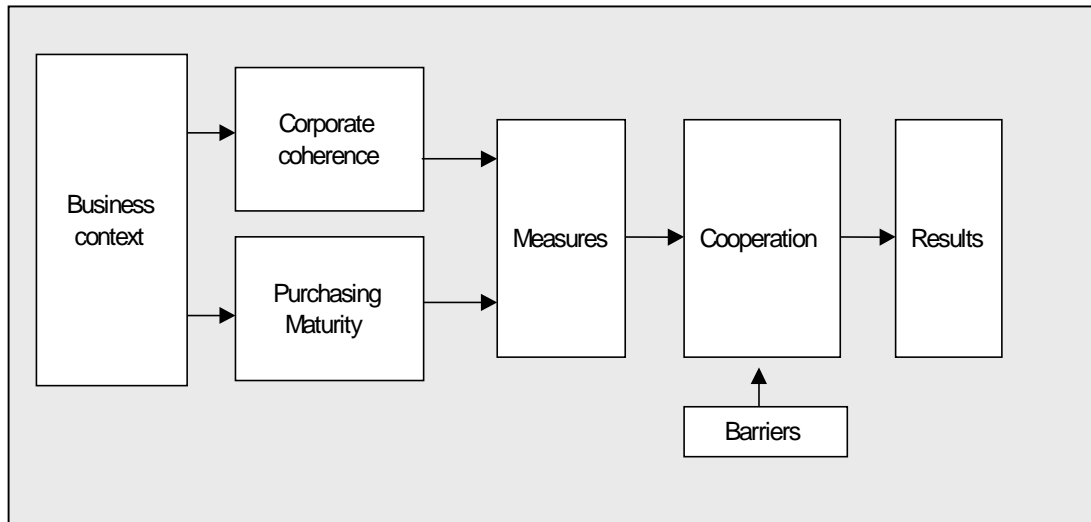
The sixth hypothesis (H6) stated that the presence of many barriers hinders the (synergetic) co-operation between the business units (CBBU). The path between CBU and PP was negative (-0,472) and significant (path coefficient = 0,002). Indicating that as the number of barriers increases it is expected that the level of (synergetic) co-operation between business units will decrease. The data from our survey support hypothesis number 6.

### **6.5 Reflections on the conceptual model**

We have conducted a survey under a large group of Dutch firms to assess the relation between three firm specific contingency variables and the approach used to create corporate advantage in purchasing. This survey provided us with insights into the validity of our conceptualisation of the constructs involved, but also into the relationships between them. For example, it has become clear which items are related to the construct 'corporate coherence' and which items not. One of the most striking results of the survey is that the business context appears not to have a direct relationship with the number and type of measures taken to stimulate synergetic co-operation across BU's. However, further analysis of the data taught us that there is a significant positive relationship between 'business context' and the constructs 'corporate coherence' and 'purchasing maturity'. We decided to modify the conceptual model according to this (see figure 6.3).

Further, the data show that the relationship assessment framework can be used to describe and classify corporate purchasing synergy initiatives. Due to the limited number of respondents (n=46) we were not able to explore in detail, with advanced statistical methods, which groups of measures are most effective in a specific company situation. Further investigation is necessary to find this out.

Figure 6.3 Final model for creating corporate advantage in purchasing



## 6.6 Conclusion

Based on a rigorous study that examined a number of hypothetical relationships not previously tested with a survey, we were able to show that five of the six hypothetical relationships exist and are positive and significant. Apart from the first hypothesis (H1), all hypotheses are supported by the data from the survey. The results indicate that purchasing maturity and corporate coherence have a relationship with the measures taken to stimulate synergetic co-operation across BU's. The data also suggests there is a relationship between the measures and the level of co-operation across BU's. This indicates that the measures we suggest, do have an effect on the level of synergetic co-operation in the company. Finally, the data supports the hypothesis that synergetic co-operation across BU's can result in increased purchasing performance. Whether this increased performance has an effect on the financial results of the company, was not investigated by our survey.

## Chapter 7 Towards design rules

### 7.1 Introduction

In Chapter One we described the research goal: formulate a coherent set of design rules for realising corporate advantage in purchasing. In this chapter, based on literature study (Chapter Three) and field research (as described in Chapters Four, Five and Six), we present the final set of design rules. With these design rules companies should be able to develop new organisational designs that enhance the realisation of corporate advantage in purchasing.

### 7.2 Definition of corporate advantage in purchasing

It became clear from our literature study that purchasing synergy is a rather vague term, and often ill defined in management literature. Consequently, it is difficult to test empirically<sup>98</sup>. In general, purchasing practitioners do not speak of purchasing synergy, they talk about corporate cost reduction programs, leverage initiatives, standardisation of specifications, co-ordination of (decentral) purchasing, negotiating corporate agreements or reduction of suppliers. However, to study corporate advantage in purchasing it is helpful to define clearly what purchasing synergy is and from what sources it can be derived. For this reason, we proposed that purchasing synergy is...

*...any increase in purchasing performance that stems from co-operation between two or more business units.*

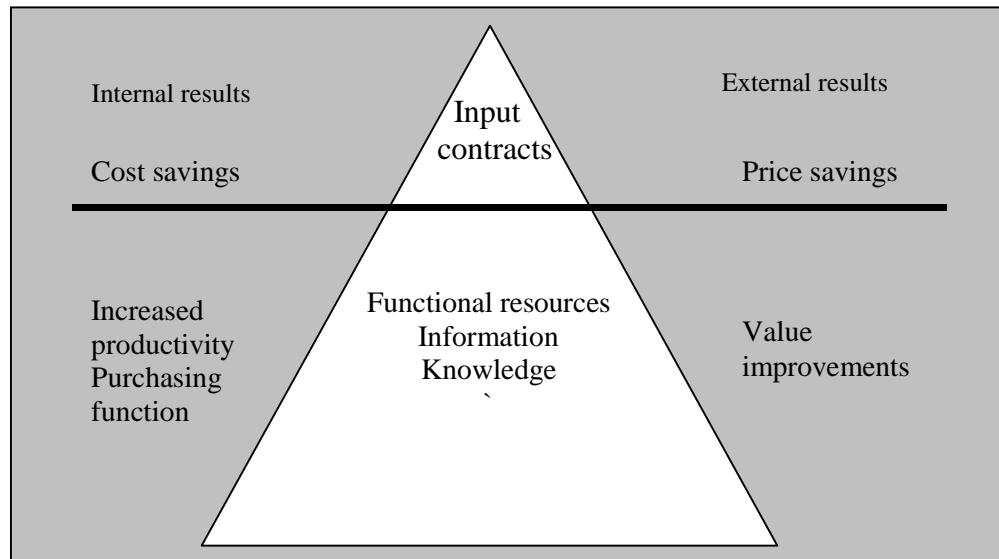
The underlying motivations for this co-operation could be cost economies arising from economies of scope, economies of scale, or improved management techniques. Alternatively, it could be increased market power in input markets. We have found a wide variety of possible results from business units co-operating with each other (see Table 7.1 below).

Table 7.1 Possible results of business unit co-operation

Cost related synergies	Value related synergies
<ul style="list-style-type: none"> <li>- Price reduction through corporate contracts</li> <li>- Cost savings ( unit costs, transaction costs and administration costs purchasing function)</li> <li>- Less purchasing employees ('doing more with less')</li> <li>- Reduction of the number of suppliers (less purchasing overhead needed)</li> <li>- Less ICT systems needed</li> </ul>	<ul style="list-style-type: none"> <li>- Value creation (more frequent delivery, better quality of products)</li> <li>- Better partnering with suppliers (e.g. shorter time to market)</li> <li>- Improved position in supply markets (e.g. increased market power)</li> <li>- Increased level of professionalism of purchasing function</li> </ul>

In our fieldresearch we have found that business units can co-operate in four different areas: they can join their forces (e.g. negotiate corporate contracts for different spend categories), share functional resources, exchange information and share knowledge. Traditionally, the focus of many firms was on negotiating corporate agreements. However, these agreements are only a tip of the iceberg, there is a lot more to gain by sharing functional resources, knowledge and information across business units.

Figure 7.1 Sharing contracts is just the tip of the iceberg



<sup>98</sup> Luimes and Spitholt (1994) even state that it is not possible to measure synergy.

*Ad 1) Share input resources*

Firms can negotiate corporate agreements for almost any purchasing category: raw materials, components (e.g. IC's), supplementary production materials, general expenses (e.g. office supplies, computer hardware & software, etc.), capital equipment, (Semi-) finished products, services (e.g. maintenance, cleaning, security) and travel, transport services, insurance, leasing, advertising, etc.). Often this input sharing is driven by the extent to which product specifications are similar across business units<sup>99</sup>. However, there are a number of other factors that determine whether inputs are shared or not (e.g. corporate structure, similarity of business units strategies, supply markets, etc.).

*Ad 2) Share functional resources*

As the results of the survey show, firms can also achieve better purchasing performance by sharing functional resources across the company. Especially, purchasing specialists, purchasing information systems, corporate management groups, and office space and/or facilities are shared across business units.

*Ad 3) Share information*

Information that resides in one business unit can be very valuable for another (e.g. information about suppliers, prices and performance). However, as we learned from the case studies and the survey, this information often is not shared. Business units can increase purchasing performance by sharing information across business units on: product specifications, suppliers (e.g. contact-persons, performance history, etc), company wide contracts, product prices, purchasing tools and techniques, purchasing procedures, and supply market developments (e.g. new technology). This sharing can, for example, lead to better utilisation of corporate contracts and better negotiation with suppliers (see results of the survey in Chapter Six).

*Ad 4) Share knowledge*

By avoiding reinvention of wheels in the business units, companies can increase purchasing performance. What is regarded as purchasing knowledge? For example, experience on how to formulate purchasing strategies, how to design purchasing

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<sup>99</sup> Arnold (1997a+b) speaks of 'procurement fit' or 'homogeneity of specifications'.

processes, how to apply purchasing tools and techniques in practice, how to develop purchasing skills and competencies, and how to gain access to world-class suppliers.

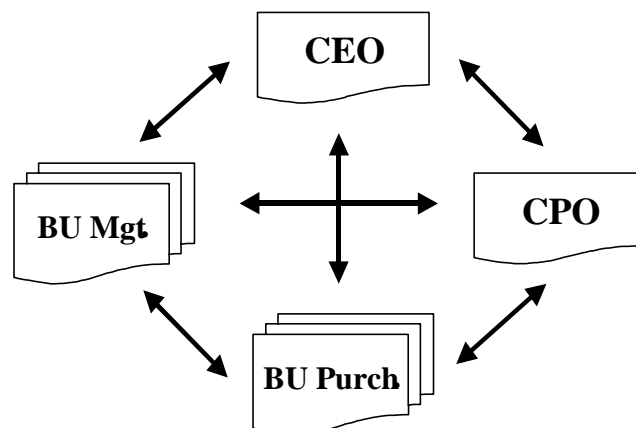
In most occasions, synergetic co-operation between business units on one or more of the above areas does not come by itself; it requires deliberate management and leadership. In the following section, we will describe the possible measures that can be used by management.

### 7.3 Organisational Mechanisms for creating corporate advantage in purchasing

What requirements are necessary to realise purchasing synergy across business units? This will depend on the nature of the benefit being addressed (e.g. sharing contracts, sharing resources, sharing information or exchanging knowledge). However, a clear benefit does not necessarily lead to a single type of corporate purchasing designs. These corporate purchasing designs could range from ‘mandatory central purchasing’ to ‘encouraging networking between commodity managers by informing them about synergy opportunities’.

For managing purchasing synergy, communication and co-operation between and among four groups of stakeholders seems to be important: CEO (or top management), CPO (or corporate purchasing co-ordination group or individual), Business Unit managers, and, last but not least, the Business Unit purchasing managers (or purchasers). They all have their specific roles and responsibilities in managing sustainable purchasing synergy (see Figure 7.2).

Figure 7.2 Relationship assessment diagram



Firstly, there should be a CPO (or a corporate purchasing co-ordinator) in place with clearly defined responsibilities that transcend all decentral purchasing departments. Without that, it seems almost impossible to capture corporate purchasing synergies on a sustainable basis. Secondly, it is difficult for a CPO to change the behaviour of BU managers without the mandate and support of the CEO (or top management). The CEO's role lies mainly in communicating to the company (especially to the BU managers) that purchasing synergy represents a critical component of the CEO's agenda, and that initiatives to realise it will be closely watched for their impact. Thirdly, the business unit Purchasing managers are the ones actually implementing the corporate initiatives in the business units. In doing so, they are actually facing a difficult situation in having two bosses: their hierarchical boss (business unit manager) and their functional boss (CPO). Finally, the business unit managers have an important role to play. They should be supportive to the corporate synergy initiative and they should make the necessary resources available to the teams. Further, they should participate actively on the steering boards and monitor the synergy teams.

The arrows in Figure 7.2 indicate the nature of the relationships between the four parties. In the figure all relationships are depicted as two-way and have the same intensity (as expressed by the line thickness). However, in practice some lines might be one-way or not even be present, and more intensive in terms of involvement and communication than the other (see Chapter Six). From the figure, many questions may follow, which are relevant. For example, what is the position of the Chief Purchasing Officer (or purchasing co-ordinator), if there is any? What are his/her responsibilities and competencies? Is there frequent interaction with the CEO of top management? How frequent does communication between the CPO and the BU purchasers takes place? Is there any interaction between the CPO and the BU managers? What do the BU managers communicate to their BU purchasers; 'join the group contracts' or 'try to surpass these contracts if you can'? Will the CEO (or top management) take action against BU managers who undermine corporate contracts?

Based on our experiences derived from our case studies and action research, we expected that the better the relationships are both formally and informally structured and supported by advanced ICT systems, the more successful the purchasing synergy



initiative will be. The data from our survey support this hypothesis. From our research, we have learned that there are four ways in which companies can facilitate and structure the interaction between these four parties needed for realising purchasing synergy.

*1) Executive management commitment and control*

An important factor seems to be the availability of executive management commitment and control. Firms should assign a senior executive with a clear authority and responsibilities for managing the integration and co-ordination of corporate purchasing across business units. Also, such a corporate level executive can provide an unbiased perspective and commitment to the process. Because a company cannot simultaneously undertake several corporate purchasing improvement teams, management should set priorities about where resources should be invested. Based on a case study at a US based company, Hughes et al. (1998) state there is a close correlation between the potential value delivered and the level of active executive support. Senior management needs to be prepared to invest time and resources in ensuring that collaboration projects are defined, prioritised, selected, and driven forward. Expectations, outputs and results should be made explicit, and a manageable and agreed number of projects should be fully supported by management of each business unit (business mandate). The teams are responsible for planning, organising and implementing a strategy incorporating the individual needs of each business. Progress should not only be reviewed by the teams, but also by top management (Hughes et al., 1998).

In addition to this, management should control whether their measures have the planned effect (= purchasing synergy). In other words, *management control* is needed to secure successful implementation of a corporate purchasing strategy. The danger of not using management control techniques<sup>100</sup> is that synergy initiatives can all too easily end up as a time-wasting talking shop. For example, in the cases of Financial and Pharmaceutical Corporation, purchasing managers told us about committees, project groups, liaison groups and functional forums that were set up to explore synergies, but which apparently turned into major time-wasters. In those cases, the

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<sup>100</sup> Campbell and Goold (1998: pp.154-ff) talk about the use of '*time limited mechanisms*'.

first few meetings were stimulating, generating new ideas and relationships, but since no process for ending proceedings had been defined at the start, they continued long after the rationale had disappeared. Without a clear target, a time limit and monitoring of the progress made, it is easy for managers to lose sight.

## 2) *Information systems and communication technology*

The second important principle is related to information and communication technology. Firstly, our research data suggest that the ability to identify the consolidated procurement requirements of diverse purchasing units can facilitate co-operation across business units. Companies that have some form of an integrated corporate *purchasing information system* will be able to identify opportunities for co-operation across business units. Such a system can have the following characteristics: a common part number coding system, a means to identify common part requirements across all operating units, capability to accumulate needed volumes by part number or part family, calculation of usage requirements over time for the entire system and by business unit, a time phased schedule of material requirements by part number for each business unit, and the capability of business units to access the corporate database.

Implementing such a corporate information system can be complex and a number of obstacles must be overcome (e.g. justification of the large investment in the ICT system, dealing with uncertain technical standards, dealing with cultural and language gaps). For this reason, some firms will only be able to develop business unit or divisional information systems. Secondly, firms can use *computer-supported communication technology* to facilitate the exchange of information across business units in favour of ‘co-ordination and sense making processes’. These systems that are able to support human co-operation, have developed tremendously since the ‘90s (Ruel, 1999). The terms used for this type of technology are various (see Table 7.2 below).

Table 7.2 Information and communication technology (based on survey (n=46))

	Number of respondents using the ICT technology
1. ERP software (e.g. SAP, BAAN, etc.)	36
2. E-mail systems	34
3. Internet technology (e.g. intranet, extranet, internet)	21
4. Financial software	18
5. Systems that collect information in a central database and is accessible for all participants	17
- Supplier database	18
- Lotus Notes	9
- Contract database	7
- Component database	7
- Best practices database	2
6. Conferencing systems (e.g. video conferencing)	16
7. Workflow systems (e.g. procurement system that automates ordering and payment processes)	15
8. Co-authoring systems that facilitate groups to work on the same document simultaneously	7
9. Electronic bulletin boards	4
10. Group decision support systems	3

It is important to recognise that technology alone cannot create co-operation across business units. Technology can create the connection between people in different business units (e.g. electronic networks, virtual teams<sup>101</sup>), but does not necessarily lead to co-operation. It only leads to more co-operation within interpersonal networks where people have some affinity for one another and share a common language (Galbraith, 1995:52). When people already have the relationships, then technology is a great facilitator.

### 3) Formal organisational mechanisms

When a corporate purchasing strategy requires more communication, interaction and joint decision making to implement than will occur naturally, formal co-ordination mechanisms can be used (see Table 7.3). Formal mechanisms are not a substitute for voluntary and natural processes; rather they are used in addition to them.

<sup>101</sup> That is they are not real teams but are linked electronically to behave as if they were.

Table 7.3 Formal organisational mechanisms to realise purchasing synergy  
(based on survey (n=46))

	Number respondents using the formal mechanism
1. Corporate steering group (or corporate sourcing group, executive steering board)	23
2. Chief Purchasing Officer (CPO)	20
3. Commodity teams (purchasers)	20
4. Corporate purchasing department	19
5. Component teams (purchasers and engineers)	18
6. Cross-functional teams	17
7. Temporary task forces	14
8. Part-time lead buyers	12
9. Separate BU providing Purchasing services	10
10. Voluntary working groups <sup>102</sup> (only purchasers)	7
11. Competence teams	6
12. Part time corporate purchasing co-ordinator	4
13. Other (e.g. internal consultants)	4

One mechanism commonly used is that of cross functional / cross-business teams. These teams are responsible for identifying high volume common purchase items across the company, identifying global suppliers for these items, and performing supplier evaluation and selection<sup>103</sup>. Another popular co-ordination mechanism is the periodic review meeting of business unit or divisional procurement managers. These meetings allow managers from around the world to discuss concerns and opportunities about the corporate purchasing process. At some point, in addition to the voluntary co-operation and the formal teams that must already be in place, full-time integrators or leaders (such as a CPO or a corporate purchasing co-ordinator) may be required to manage the implementation of a corporate purchasing strategy aimed at creating corporate advantage.

Such a CPO can play a key role in managing purchasing synergy. Different business unit managers and purchasing managers all see their worlds differently. Disagreement and the inability to resolve it effectively can slow down the process of creating corporate advantage in Purchasing. The ability of a CPO to deal with controversy and

<sup>102</sup> A working group is a temporary mechanism involving a small group of (part-time) members from different business units.

<sup>103</sup> A useful classification of purchasing teams is provided by McKinsey&Co (interview, 1997). They differentiate nine forms of purchasing teams based on the level of local responsibility (local lead buying responsibility, active local involvement and limited local execution) and geographical scope (local (mono-site), regional (multi-site) or global (company wide)).

different views is determined to a large extent by the powerbase of the CPO. Line managers have authority control resources, but what is the power base of the CPO? Based on our case studies and inspired by the work of Galbraith (1995:68ff), we state that the power base of the CPO will be shaped by the following factors:

- *Structure of the role:* Does the CPO have access to the CEO and the most senior business unit managers? The higher the reporting line and the access, the more influence the CPO will probably have (see cases Electronics and Oil Corporation).
- *Staffing choice:* Does the CPO has the skills to influence decision making without (formal) authority, or the interpersonal and networking skills to be personally persuasive? The more of these skills are present, the more influence is may be expected. Often, the good way to find these individuals is to “grow” them in the company. In three of our case studies the CPO was a former BU manager with no previous purchasing experience, indicating that business skills were perceived as more important than purchasing skills (see cases Financial, Dairy Food and Pharmaceutical Corporation).
- *Status of the role:* does the CPO have enough status to influence without using authority? What constitutes status varies with the culture of the company. Usually, status can be enhanced by increasing the rank of the CPO, locating the office on the executive floor, and staffing the role with senior people with a good track records (see cases Electronics and Financial Corporation).
- *Availability of information:* multi-dimensional and consolidated information will arm the CPO with facts and knowledge, which can be used to influence others. In contrast, a lack of such information presents a large impediment to corporate integration in purchasing (see case Financial Corporation).
- *Budget authority:* does the CPO have a budget for corporate purchasing initiatives and does the CPO have control over that budget?
- *Dual authority:* does the CPO have the authority over all people (also the non-purchasing ones) involved in the purchasing synergy initiative? If so, it often means that the people involved will have two reporting lines. One to their functional boss (the CPO) and one to their hierarchical boss (CEO or BU manager). Dual authority is implemented by having both bosses participate in the joint setting of goals and joint performance assessment for the people involved in the purchasing synergy teams.

#### 4) Informal networking mechanisms: fostering voluntary co-operation

Facilitating the informal networking of people can stimulate the developing a co-operative group identity<sup>104</sup> and can enhance teamwork (Hughes et al., 1998). From the cases it appeared that just the fact of people knowing each other can lead to voluntary co-operation across business units (see case Electronics Corporation). The hypothesis is that when people know each other well, they will co-operate more naturally and spontaneously. In many cases this co-operation does not occur because of cross-functional or cross-business barriers. Managers can employ a number of actions to elicit voluntary co-operation: job rotation across business units of purchasers and purchasing managers, co-location, training courses and conferences, information systems and company events (see Table 7.4 for more mechanisms).

Table 7.4 Informal network mechanisms (based on survey (n=46))

	Number of respondents using the mechanism
1. Annual purchasing day or other company event	25
2. Specific recruitment criteria are used for new purchasing managers	15
3. Corporate training courses	13
4. Purchasing is part of Management Development program	10
5. Rotation of purchasing managers across BU's	9
6. Purchasing is part of corporate trainee program	7
7. Other (e.g. Purchasing human resources pool, Leadbuying teams, informal meetings, etc.)	7
8. Co-location of purchasers	6
9. Group identity programs (e.g. survival weekend)	4
10. Rotation of experienced purchasers across BU's	4

All of these create networks of relationships. Our case studies suggest that people are more willing to co-operate voluntarily when they have (trustful) relationships with people in other departments / business units and are comfortable working with them. One powerful tool for creating personal networks is the rotation of key people across departments and business units (see cases Electronics and Oil Corporation). Rotation trains and develops people in all facets of the business and creates flexible generalists with relationships in various departments and business units. Often, these rotated

<sup>104</sup> See Essig (1998:249) for more arguments in favor of the importance of a cooperative group identity.

people can more effectively participate in cross-functional teams (Galbraith, 1995:50). Also, reducing distance and physical barriers between people seems to be an important factor in fostering relationships across business units. Finally, well thought out, politically sensitive personnel planning seems able to merge the skills and energies, as well as to integrate the cultures and work ethics of key personnel involved in the corporate purchasing synergy initiative. Those involved in corporate purchasing synergy initiatives should have certain traits that match the requirements of the assignment, including: a commitment to the corporate integration process, a corporate focus to purchasing, a general business view, an understanding of other cultures and knowledge of corporate information systems.

#### **7.4 Towards design rules for creating corporate advantage in purchasing**

Akbar and Lamming (1996) claim that there is no one best way to organise for purchasing synergy. From our case research, it becomes clear that standardised solutions for improving corporate purchasing co-ordination practices do not exist. A process of cross-business co-operation needs to be tailored to each business. In other words, the firm specific context determines the measures that can be taken and the approach that should be used (Hughes et al., 1998). Parent managers need to think deeply about implementation. What will be required to make this intervention work in our specific company context? Based on our research findings, we defined three contingency factors: business context, corporate coherence and purchasing maturity, which we will discuss shortly.

##### *Ad 1) Business context*

Data from our cases suggested that the higher the competitive pressures to innovate and to reduce costs, and the higher the pressures for delivering shareholder value, the more measures are taken to establish stronger corporate purchasing functions (see Table 7.5).

Table 7.5 External drivers

Drivers for change in corporate purchasing as indicated by respondents in the five case studies
- Financial market pressure for shareholder value ( <i>e.g. Oil Corporation</i> )
- Customer market maturity (a/o customer resistance to price increases) ( <i>e.g. Electronics Corporation</i> )
- Competitive pressure to innovate and to reduce costs ( <i>e.g. Electronics and Pharmaceutical Corporation</i> )
- Supply market concentration: suppliers gain bargaining power due to mergers & acquisitions ( <i>e.g. Dairy Food Corporation</i> )
- Speed of technology innovation ( <i>e.g. opportunities of internet, e-procurement, intranet, etc.</i> ) ( <i>e.g. Finance and Electronics Corporation</i> )

Corey (1978) was one of the first researchers claiming this relation between the business context and corporate purchasing strategy. More recent research on this relation is from Birou (1997). Despite the fact that the case studies indicated a strong link between the business context and the corporate purchasing strategy, a direct link was not supported by the data from our survey. Based upon our survey we conclude that the pressures do not significantly affect the number and form of the measures taken to create corporate advantage. Still, they trigger changes in corporate strategy and structure, which in turn may stimulate companies to take measures to create corporate advantage in purchasing. Almost every textbook on corporate strategy identifies the business environment (*e.g. competitive pressure, industry structure, and technology*) as one of the major drivers of organisational change. However, this appears not to be entirely true for corporate purchasing strategy. Here, changes in the environment appear to play an indirect role, namely via changes in corporate coherence and purchasing maturity.

#### *Ad 2) Purchasing maturity*

The use of purchasing maturity as a contingency factor, was inspired by the work of Charles Perrow (in Daft, 1992, pp.126) He was the first to describe the relation between ‘*departmental technology*’ (*i.e. main characteristics of the work processes*) and ‘*departmental structure*’. Studies have found that when structure and communication characteristics did not reflect the underlying departmental work processes, departments tended to be less effective (in Daft, 1992, pp.126-139). In line



with this work, we expect that when a firm's purchasing function develops from a traditional operational function towards strategic supply chain management function, the approach used to create corporate advantage in purchasing should adapt to that, in order to be effective. This hypothesis is supported by the work of amongst others Collins and Montgomery (1998:27), Keough (1992), Jones (1997) and Hughes et al. (1998)<sup>105</sup>. We expect that certain interventions require a minimum skill base in the business units and at headquarters. Campbell and Goold (1998) state that all corporate interventions require specific skills on the part of the parent organisation. The parent needs specialised knowledge of the particular synergy, the ability to make business managers pay attention and the processes and interpersonal skills to bring about the desired result. The idea of appointing a purchasing specialist to advise businesses on achieving benefits from pooled purchasing power may be excellent: but if the parent does not have the right person to do it, the new appointment will end up irritating and alienating the businesses. Alternatively, trying to achieve the same result through a wider sharing of purchasing information may, in theory, be sound: but if the outcome is simply indigestible mountains of paper which the businesses are unwilling or unable to wade through, the initiative will sink under its own weight. To measure the level of purchasing maturity, we developed a list of questions<sup>106</sup> based on the results of the case studies and the action research (see Table 7.6).

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<sup>105</sup> See Chapter Three for a more detailed overview of purchasing development models.

<sup>106</sup> This list of items was used to measure Purchasing maturity in the survey.

Table 7.6 Questions to determine the maturity of the purchasing function

The more questions are answered with yes, the higher the purchasing maturity...
<ol style="list-style-type: none"> <li>1. The purchasing spend with outside parties is high and increasing.</li> <li>2. Top management recognises Purchasing as an important contributor to the competitive position</li> <li>3. In our company the purchasing function reports directly to top management.</li> <li>4. In our company purchasing relates to strategic and truly cross-functional processes, with high involvement of line management.</li> <li>5. In our company, purchasing's main goal is achieving the lowest total cost against highest value.</li> <li>6. In our company there is a high degree of homogeneity in purchasing needs across the BU's.</li> <li>7. There are no significant differences in the role and position of the different purchasing departments across the BU's of our company.</li> <li>8. The skills and capabilities of purchasing personnel in the different BU's are more than adequate for participating in formulating corporate purchasing strategies.</li> <li>9. The purchasing departments in the different BU's operate on comparable levels of professionalism.</li> <li>10. The skills and capabilities on the corporate level are adequate for managing corporate purchasing synergy.</li> </ol>

### Ad 3) Corporate coherence

The use of corporate coherence as a contingency factor followed from our fieldresearch. Seemingly obvious interventions that worked well for one company appeared to be wholly inappropriate for other companies. In some cases, it appeared that even when opportunities for corporate advantage were high from a purchasing perspective (e.g. homogeneous specifications across business-units), initiatives to materialise these opportunities were not taken. It turned out to be that no corporate coherence was created in these companies. These companies, lacked a *clear corporate strategy* (e.g. no strategic focus on related businesses, conglomerate growth strategy, no emphasis on cross-business synergies), an *integrated corporate structure* (e.g. high level of BU autonomy, small size of corporate staffs) and a had a *weak corporate culture* (e.g. low level of trust among business units, no group identity). This low corporate coherence appeared to be a major roadblock for successfully implementing a corporate strategy to create corporate advantage in purchasing.

As we learned during our case studies and action research, Corporate coherence has two sides<sup>107</sup>: a structured ('hard') side and a behavioural ('soft') side. The structured

<sup>107</sup> See also Wissema (1992:169ff).

side comprises components that can be ‘arranged’ by management (e.g. making plans together, designing a structure that encourages communication and solves its own conflicts, a good information and communication system, a corporate identity expressed in a house-style, a published mission statement, corporate advertising, office parties and so on). The behavioural side comprises what is usually termed corporate culture (e.g. shared values, management style, communication intention, trust across business-units, learning organisation). In Table 7.7 we describe some of the items we came across in our research and were used in our survey to determine corporate coherence. The results of our survey indicate that different levels of corporate coherence influence the means that will be used to pursue purchasing synergies.

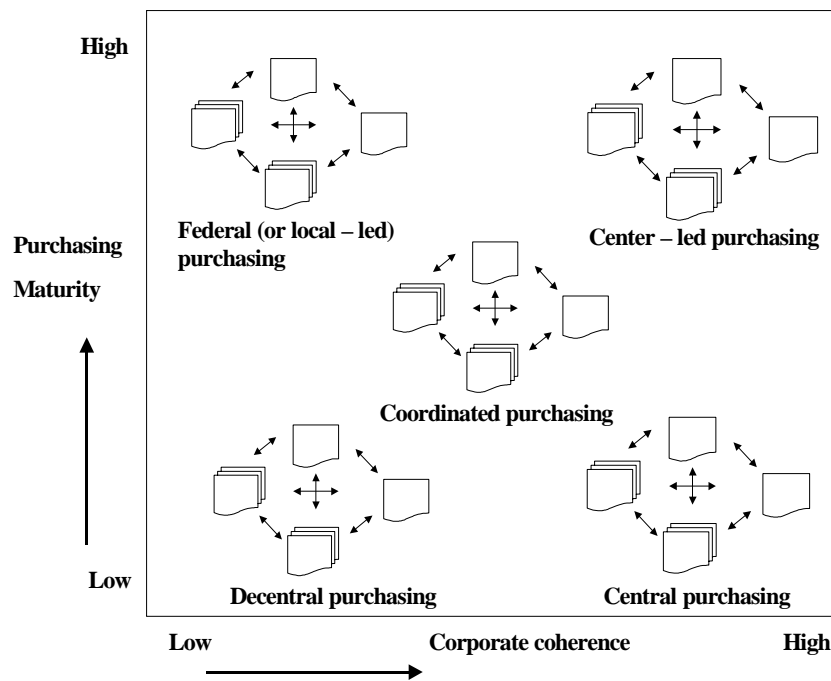
Table 7.7 Questions to determine corporate coherence

The more questions are answered with yes, the higher the corporate coherence...
1. Our company only concentrates on strongly related business areas.
2. Our company has grown mainly through internal growth (instead of through mergers and acquisitions).
3. Our company is not structured around completely autonomous and stand-alone business units (BU)
4. In our company, BU managers are compensated for participation in corporate synergy initiatives.
5. Co-ordination and co-operation between business units is strongly encouraged and supported by corporate staff groups in other areas than purchasing.
6. Our company has a corporate culture that encourages co-operation across business units.
7. In our company the national organisations have only a limited amount of authority which is combined with global efficiencies through co-ordination (transnational organisation).
8. Our company has a uniform and strong corporate identity.
9. In our company there is little (political) conflict between the different ‘blood groups’ (e.g. hierarchical levels and functional departments).
10. Our company management information systems are compatible.

Contrary to other researchers (Essig 1998, Arnold, 1997a+b) who take the homogeneity of the underlying product-specifications as the most important contingency factor, we have found that the approach used for creating corporate advantage in Purchasing is more closely linked with ‘*Purchasing maturity*’ and ‘*Corporate coherence*’ than with the homogeneity of specifications (see Chapter Six). Combining the two, we suggest that corporate coherence and the level of maturity of the purchasing function both are determining what set of measures is most effective

for realising purchasing synergy. The Corporate Purchasing Approaches Matrix (see Figure 7.2) can be a useful tool to reduce a confusing range of possible purchasing design options to a few generics. It identifies two dimensions – the level of purchasing maturity and the level of corporate coherence – and it describes five generic corporate purchasing designs: decentral, central, co-ordination, federal (or local-led) and centre-led purchasing. Top managers can use this matrix to define an approach that fits their specific situation.

Figure 7.2 Corporate Purchasing Approaches Matrix



Based upon our findings so far, we formulate five tentative design rules determining what (generic) corporate purchasing approach is effective for creating corporate advantage. Though there is no conclusive proof for the effectiveness of these design rules, there is sufficient supporting evidence on the basis of our literature study, case studies, action research and survey. Further research may compile supporting evidence that may lead to further ‘theoretical saturation’ (Eisenhardt, 1989) when subsequent findings (sufficiently) confirm the ones of this study.

Design rule 1)

*When corporate coherence is low and purchasing maturity is low, a decentral purchasing approach with moderate voluntary co-operation is appropriate.*

In this situation, there are not many best practices to share across business units, and also we expect little homogeneity in specifications across business units. However, there are some opportunities to realise purchasing synergy through exchanging information of supply markets, suppliers and prices by using voluntary working groups. A corporate purchasing group may circulate data on the purchasing terms and conditions being achieved by each business unit, while top management maintains strong pressure on the business units to reduce their individual costs. This approach leaves the business units free to determine whether and how they wish to work with other businesses to improve their purchasing power, but gives them no direct help or guidance about what to do and how.

Design rule 2)

*When corporate coherence is high and purchasing maturity is low, a central purchasing approach is appropriate.*

In this situation, companies may set up a central purchasing department with purchasing experts and insist that all purchases of certain items are handled by this department. The main focus is on bundling volumes of similar inputs and mandatory corporate agreements, and not so much on sharing resources, information, or knowledge. Business units have limited autonomy and limited purchasing resources in this centrally driven approach.

Design rule 3)

*When corporate coherence is low and purchasing maturity is high, a Federal (or local led) purchasing approach is appropriate.*

In this situation, the corporate culture contains a belief that business unit (purchasing) managers should have complete control over their day-to-day operations. Also, there will be a culture of resisting standardised corporate (purchasing) policies as intrusions on local autonomy, and any attempt to impose best practices is likely to be resisted

vigorously. In these circumstances, a centrally led intervention will probably have low chances of success. This corporate context will make it hard for even the most skilled purchasing director (or co-ordinator) to have an impact. Maybe the answer here is to motivate voluntary adoption of best practices. The federal approach consists of a small central core, flat in structure, supporting and co-ordinating a number of autonomous purchasing units. These units are interrelated in some way due to shared facilities or services. The power of the purchasing function resides equally with these units, instead of being delegated downwards by the corporate centre. The units have a reporting line to the business unit managers, not to the central purchasing core. There is only a professional relationship between the federal purchasing unit and the central core (see also Chapter Three).

Design rule 4)

*When corporate coherence is high and purchasing maturity is high, a Centre-led purchasing approach is appropriate.*

In this situation, a fully centralistic approach will not work. The decentral purchasing managers will not easily accept a central purchasing group telling them what to do, or even executing activities for them. However, given the high corporate coherence, it will be sensible to investigate opportunities for purchasing synergies (e.g. harmonisation of specifications, platform sourcing, etc). In this quadrant, we suggest to use a centre-led purchasing approach to capture the purchasing synergies. This structure consists of a network in which purchasing action (i.e. the actual buying) takes place in fully empowered decentral purchasing units or cross business teams, but purchasing accountability and functional excellence is led from the corporate centre by the Chief Purchasing Officer.

Design rule 5)

*When corporate coherence is moderate and purchasing maturity is moderate, a co-ordinated purchasing approach is appropriate.*

In this intermediate situation, a corporate co-ordinator set up central policies to ensure co-ordination and promote professionalisation of purchasing (e.g. encourage the

business units to hire new purchasing people). Further, companies can choose from a variety of possibilities, such as establishing joint purchasing teams with members from different business units, nominating selected business units to act as lead buyers for different items, centralising certain aspects of negotiation on terms and conditions but allowing each business unit to make its own buying decisions, and hiring central purchasing experts who are available to the business unit, but need only be used by them if they choose to. This approach may lead to a matrix structure in which the joint purchasing teams report to a corporate purchasing co-ordinator, as well as to their business unit managers.

## **7.6 Conclusions**

This chapter presents in a coherent way some of the insights derived from our literature study, case studies, action research and survey. What did we learn from this? Firstly, there is a great variety in opportunities for purchasing synergy: jointly buying and sharing functional resources, information and knowledge. Secondly, there is a great variety in approaches to materialise these potential synergies. Approaches range from voluntary co-operation to formally managed co-operation. Thirdly, based on our research we suggest a model indicating that the type of approach is related to the level of purchasing maturity in the business units and the level of corporate coherence. The design rules presented in this chapter are not a standard recipe for success. The position taken in this chapter is that companies should choose among alternative corporate purchasing designs, based on how well they meet their specific situation, rather than by how fashionable they are. The insights presented in this chapter can be used as guide lines in deciding what is effective and what not.

## Chapter 8 Conclusions and recommendations

### 8.1 Introduction

In this thesis, we investigated how large firms create corporate advantage in purchasing. The intention of this chapter is to sum up the thesis by answering the questions that were formulated at the start of the research project.

### 8.2 Conclusions

This study started with the observation that, despite the potential for purchasing synergy, many companies do not pay sufficient attention to it in a structured way. The challenge was to generate knowledge regarding how to structure and manage corporate purchasing synergy effectively given the situational contingencies. The main objective of this research project was to answer the following question:

*'How can firms create corporate advantage in purchasing?'*

We formulated the following overall research objective of our current study:

*Develop a coherent set of firm specific organisational design rules for realising corporate advantage in purchasing*

This research objective has been subdivided in the following main research questions:

1. How can we define corporate advantage in purchasing?
2. What organisational mechanisms can be used to create corporate advantage in purchasing?
3. How are these organisational mechanisms related to the firm specific situation?

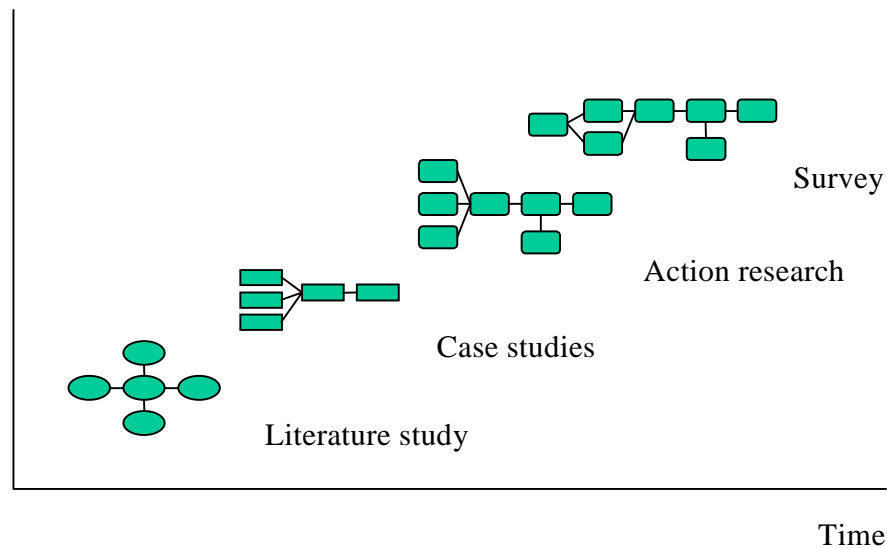
In order to answer these three research questions, we combined different research methods (see Chapter Two). The first step in the research has been to conduct a literature study and define a preliminary conceptual model (see Chapter Three). In the



second step, a series of five explorative case studies was conducted to explore the topic in depth and test the constructs of the preliminary model and their relationships (see Chapter Four). In step three, an action research project was executed to test our first findings from the cases and further evaluate the effect of our preliminary design principles and conceptual model in practice (see Chapter Five). Finally, the design principles were tested through a survey among 46 large companies (see Chapter Six).

During the research period (1996 – 2000) several modifications have been made on our preliminary conceptual model (see Figure 8.1).

Figure 8.1 Modifications of the preliminary model



Based on our literature study we formulated our first (preliminary) model describing the factors, which we considered to be relevant for creating corporate advantage in purchasing. At that time, we expected a positive relation to exist between the approach used to create corporate advantage in purchasing and the four constructs, which we identified (i.e. business context, corporate strategy, corporate organisation, and purchasing maturity). From the individual case studies we learned more about each construct, which resulted in some modifications.

Our most important modification concerned the replacement of the two constructs ‘corporate strategy’ and ‘corporate organisation’ by a new construct ‘corporate management’ and later on by ‘corporate coherence’. It appeared that the corporate

purchasing strategy was more directly influenced by a group of interrelated items related to the level of coherence and interdependency across business units. We called this construct 'corporate coherence'. Our action research showed more clearly the influence of corporate coherence, or more specifically the lack of corporate coherence (see Chapter Five). Finally, the survey showed us, as we have reported before, that business context as a variable has far less influence on the number and quality of measures taken to realise synergetic co-operation across business units, than we originally anticipated. Therefor we revised our hypothesis regarding the influence of the business context. Based on our survey, we now hypothesise that the business context has an indirect influence. It first directly influences the level of corporate coherence and purchasing maturity, and with that eventually also the measures to create corporate advantage in purchasing.

Based on the collective findings resulting from these research methods, it is possible to answer the research questions in a precise and empirically founded manner. Below we summarise the results for each of the three main research questions.

*Question One            How can we define corporate advantage in purchasing?*

This first research question regards the basic sources that underlie corporate advantage in purchasing. During our research we experienced that it was difficult to come up with an exact definition for corporate advantage in purchasing. From our empirical analysis of the cases, action research and survey, it follows that corporate advantage can be regarded as the result of synergetic co-operation between business units. This co-operation can take place in four different areas. Firstly, business units can jointly negotiate contracts with suppliers for the goods and services they need. From the survey, it appeared that this co-operation predominantly takes place for the following spend categories: raw materials, components, general expenses and services (see Chapter Six). Secondly, business units can share (investments in) functional resources like people (e.g. purchasing specialists), facilities, overhead, information and communication systems. Our data show that the way, in which these functional resources actually are shared, depends to a large extent on the geographical location of the different business units (see Chapter Four). Thirdly, business units can co-operate through sharing information on product prices, company wide contracts, specifications and suppliers and supply market developments. The survey indicates

that this sharing of information is the form of synergetic co-operation that occurs most frequently (see Chapter Six). However, it often takes place in an ad-hoc and unstructured way. Finally, business units can co-operate through sharing purchasing knowledge on, for example, formulating purchasing strategies, developing purchasing skills, and gaining access to world-class suppliers. Our data show that this sharing of purchasing knowledge across business units is still very rare among the companies we have investigated (see Chapter Six). This can partly be explained through the fact that within business units (although they belong to the same company) purchasing departments often differ in terms of their ways of working (i.e. procedures, working culture and systems). Differences on these aspects often are an impeding factor to the sharing of knowledge.

If done properly, effective synergetic co-operation may result in different benefits to the group. These benefits consist of amongst others cost savings, a sustainable competitive position on supply markets, important gains in terms of productivity, better relationships with suppliers (e.g. better quality and delivery from suppliers)<sup>108</sup> and a better use of the supplier's expertise (e.g. contribution to product innovation). The net effect of these benefits<sup>109</sup> can be regarded as purchasing synergy. It is fair to conclude that if a corporation would create more synergies in purchasing than any of its rivals, this would lead to a significant sustainable corporate advantage in purchasing. The respondents of our survey indicated that the benefits in many cases far outweighed the costs related to the purchasing synergy initiatives. Moreover, our research showed that a lot of potential purchasing synergy is not captured within the companies that have been investigated.

*Question Two*                      *What organisational mechanisms can be used to create corporate advantage in purchasing?*

From our empirical analysis of the cases, action research and survey, we conclude that different measures can be taken to motivate and facilitate business units to co-operate with each other in the area of purchasing. The data from our research suggest that interaction between four main stakeholders within the company (i.e. CEO, CPO, BU

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<sup>108</sup> See Chapter Six for a more detailed overview of the benefits of corporate purchasing initiatives.

<sup>109</sup> *Net effect* = *Total benefits* minus *Total costs* of the corporate initiative to create purchasing synergy in purchasing.

managers, BU purchasers) is crucial for reaping the benefits of initiatives aimed at fostering corporate purchasing synergy. To facilitate this interaction, we have found that companies may use *formal* organisational mechanisms (e.g. corporate steering boards, commodity teams, working groups), *informal* networking mechanisms (e.g. annual purchasing conferences through which purchasing managers from different business units can meet each other and establish relationships, recruiting only people that fit the current working culture, management development programs, and job rotation), advanced corporate wide purchasing *information and communication systems* (e.g. intranet, corporate databases, GroupWare) and advanced *management control systems* (e.g. plan-do-check-act cycle, working procedures, incentives rewarding joint efforts). In the case studies and in the action research we have observed that companies may use different mechanisms at the same time. Further, we observed that the number and type of the mechanisms used differs across the different companies. Some companies prefer to use informal mechanisms, others prefer formal mechanisms. The reasons behind this, it seems, are related to specific contingency factors (see below Question three).

*Question Three*      *Which firm specific factors influence the design of organisational mechanisms used to create corporate advantage in purchasing?*

Based on the data of our research, we conclude that two factors influence the number and quality of the measures aimed at creating corporate advantage in purchasing. These are *corporate coherence* and *purchasing maturity*. The external business context, one of the factors that was included in our preliminary model (see Chapter Three), indeed has its influence on the number and quality of measures taken to foster purchasing synergy, but, it does so in an indirect way. Almost each respondent in our survey, indicated that their companies suffered from increased pressures to reduce costs and contribute to product and process innovation. Also, they reported an increased concentration going on in their major supply markets. However, based upon our survey we conclude that these pressures do not significantly affect the number and form of the measures taken to create corporate advantage. Still, they trigger changes in corporate coherence through changes in corporate strategy and structure, which in turn may stimulate companies to take measures to create corporate advantage in purchasing. Almost every textbook on corporate strategy identifies the business

environment (e.g. competitive pressure, industry structure, and technology) as one of the major drivers of organisational change. However, this appears not to be entirely true for corporate purchasing strategy. Here, changes in the environment appear to play an indirect role.

The results from the survey (Chapter Six) suggest that corporate purchasing initiatives should be congruent with the overall level of corporate coherence and the level of maturity of the Purchasing function. Corporate coherence is related to the extent to which the different parts of the corporation operate and are managed as one entity. Major differences across business units in management style, vision, strategy, culture and structure reflect a low corporate coherence. When major differences in culture and structure exist across business units, the integration of the purchasing function will be a significant challenge. Purchasing maturity is related (amongst others) to the level of professionalism in the purchasing function as expressed in status of the function, role and position of the purchasing departments, availability of purchasing information systems, quality of the people involved in purchasing, and the level of collaboration with suppliers. Our research suggest that when the purchasing function is highly mature, companies should use a larger number and more advanced measures to create corporate advantage in purchasing than with low purchasing maturity (see Chapter Seven).

In our view, top managers do not add value by choosing a certain approach to create corporate advantage in purchasing as such. They add value by creating a fit between the approach used to create corporate advantage in purchasing, and the level of corporate coherence and purchasing maturity. In practice, this is not very often the case. In the case studies we came across a number of initiatives that were not aimed at creating long-term corporate advantage, but at short-term cost reductions (see Chapter Four). For example, in several case studies, for different reasons, external consultants were hired to drive corporate purchasing cost reduction initiatives through increased co-operation across business units. Often, after these consultants left, the companies gradually returned to their former and less co-operative ways of working, not using the momentum to establish formal organisational mechanisms, or other measures, to create sustainable corporate advantage in purchasing. In our view, this is related to the

fact that the approach used by the consultants was not congruent with the level of corporate coherence and purchasing maturity of these companies.

From the survey we learned that the companies, which have been covered by our research, show a rather low (i.e. moderate) synergetic co-operation among their business-units. Having analysed the results of our survey, we conclude that the foundation underlying current purchasing synergy initiatives in many companies seems to be weak. The reasons for this are several. Firstly, the initiatives taken are often not integrated in the main lines of the business through formal organisational mechanisms and an effective information and communication infrastructure. They are mainly resulting from unstructured and/or (voluntary) informal personal networking. Secondly, general management is only involved in the purchasing synergy initiatives in a limited way. Consequently, there is almost no formal management control in place to monitor the progress of the purchasing synergy initiatives. Thirdly, it seems that purchasing synergy depends heavily on the capabilities of the CPO concerned. If the CPO decides to move to another company, or function, this will, as we have seen, certainly harm further purchasing synergy initiatives.

#### **8.4 Recommendations for science**

This study contributed to purchasing literature, synergy literature and to methodological literature.

##### *Ad) Purchasing literature*

Though we observe an increased attention for subjects like strategy, organisation, and management in purchasing literature, still little scientific research is focussed on these issues. In this thesis, we summarise many useful insights from management literature related to synergy, corporate strategy, co-operation across business units, organisational designs, and co-ordination. Further, we describe how companies can use these insights to improve their corporate purchasing functions. Our main contribution to purchasing theory is the insight that corporate purchasing organisations are predominantly contingent with the internal environment (*corporate coherence*) and not so much with the external environment (*business context*). Also, we explained that the homogeneity of products and services plays only a minor role in

the design of corporate purchasing organisations. Further, we introduced the term ‘purchasing maturity’ in purchasing literature to indicate the level of professionalism in the purchasing function. Finally, we introduced a coherent set of measures that motivate business units to co-operate with each other in order to realise purchasing synergy.

*Ad) Management literature*

Within management literature, little attention is being paid to understand synergy in purchasing. This study shows that management theory can learn valuable lessons from studying synergy in purchasing. Our main contribution to management literature is the insight that, in addition to the corporate coherence, the level of maturity in a functional area determines the approach you should use to manage synergy in that particular functional area. Further, we introduced the insight that companies cannot realise synergy with a standard management approach. It requires an approach tailored to the unique situation of a specific firm. This insight deviates from some recent articles on managing synergy. Our final contribution to management literature, which follows from our survey, is that in many companies there are still many opportunities available to realise purchasing synergies. Managers are often not aware of these opportunities. More attention for purchasing in management literature could help to increase this awareness. For this reason, we intend to publish some articles on purchasing synergy in the management journals.

*Ad) Methodological literature*

In our opinion, a complex organisational research topic about which not much is known yet, such as the one which has been central in this thesis, is best tackled by applying triangulation of methodologies. Based upon our experiences, which we gained through this research project, we suggest that any PhD study, aimed at developing meaningful guidelines for practitioners, would start with a literature study resulting in a preliminary conceptual model. Secondly, we suggest conducting a series of in depth case studies in order to get a detailed insight into the different constructs of the model and their interrelationships. As a third step, just when a set of preliminary design rules has been formulated, we recommend conducting real life action research in order to assess these in practice. Finally, we suggest conducting a survey in order to test the findings and relationships among the constructs of the

conceptual model statistically among a larger group of companies. In this way, the researcher will be able to generalise his/her findings and to develop meaningful guidelines for practitioners.

## **8.5 Recommendations for business**

A major aim of this study was to discuss the characteristics of corporate advantage in purchasing and to provide insights into the mechanisms that create it. Both managers and policy makers can obtain guidelines from the description and analysis of these mechanisms. If they understand the mechanisms underlying (synergetic) co-operation between business units in the area of purchasing, they may become better able to manage or support this co-operation. Clear detailed directives on how and when to implement these mechanisms, cannot be given based on the results of this study. However, we can give some general recommendations related to creating corporate advantage in purchasing.

1. Creating corporate advantage in purchasing is a business issue, not only a purchasing issue. It often starts with a CEO (or top management team) setting a corporate business goal and stressing the important contribution the purchasing function can make in achieving this corporate business goal. The implication of this observation is that a CPO should focus his attention on corporate initiatives that originate from the business and should be well prepared to support these initiatives. 'Selling' corporate purchasing initiatives to business unit managers, will not have a significant effect as long as these managers do not perceive the initiatives as essential for achieving their business goals. Some examples of corporate initiatives that eventually may lead to changes in corporate purchasing strategy are: grouping previous separate business units, or national organisations, under one single general manager, mergers and acquisitions, corporate cost reduction programs, and rationalisation of the corporate product and brand portfolio.
2. Corporate purchasing initiatives should not only focus on negotiating corporate contracts for commodities and non-production goods and services. The most significant gains are to be made in consolidating purchasing in those spend



categories that are really important for the business unit. However, despite the potential gains, corporate initiatives aimed at these spend categories, often directly related to the end product, will meet great resistance in the business units. Simply, because of the direct effect these spend categories have on the financial performance of the business unit. Since business unit managers are profit and loss responsible, they will be very careful to become too dependent of other business units for their strategic supply. A CPO that does not walk away from this challenge and persists in trying to achieve purchasing synergy through harmonisation and/or standardisation across business units will gain respect and credibility among business unit managers. This will pave the way for future corporate purchasing initiatives.

3. Creating corporate advantage requires more than just consolidate spend information and a few group meetings. Based on consolidated spend information, it is relatively easy for a corporate purchasing group to come up with a corporate purchasing strategy aimed at realising synergy, with or without the help of external consultants. However, implementing this corporate purchasing strategy requires changes in behaviour of the purchasers and internal users at the business unit level. When the corporate purchasing group does not have a detailed insight and knowledge of the world behind the consolidated numbers, they risk formulating an '*ivory tower strategy*'. This can lead to both resistance at the operational level (e.g. "we do not want to change suppliers!") and to frustration at the corporate level (e.g. "business units do not use our contracts!"). To prevent this, we recommend early involvement of business unit managers (e.g. let them chair cross-business teams) and business unit purchasers (e.g. stimulate them to formulate annual purchasing plans) in the development of corporate purchasing strategies.
4. Recognise that soft issues play a major role in realising purchasing synergy. The CPO should be very careful with starting initiatives that take away purchasing responsibility from the business units. Business unit managers will perceive this as an attack on their autonomy. They accept this from their boss, the CEO, but probably not directly from a CPO or a corporate purchasing co-ordinator. Further, business unit managers might resist corporate purchasing initiatives because they

do not like to become dependent on others for their supply, because they do not trust other business units or corporate support groups, or because they like to control their own purchasing. Workshops and informal group sessions through which the different BU managers learn to know each other and build some mutual trust can be very helpful to solve this issue.

5. Corporate managers should be aware of the (hidden) side effects of corporate purchasing initiatives (e.g. elimination of purchasing positions, re-assignment of purchasers, increased need for training and recruitment, and the increased need for investments in ICT). Some of these side effects may cause resistance among business unit managers as well as business unit purchasers.

## **8.6 Recommendations for future research**

The focus of this research, as stated in Chapter One, was to develop insight in the creation of corporate advantage in purchasing. We have conducted an empirical study with the aim of assessing the relation between firm specific variables and the approach used to create corporate advantage in purchasing. The research, as it stands, has shed some light on a number of issues regarding our topic of study. However, there are some recommendations for further research.

### *Ad) Literature review*

We have only reviewed a limited number of sources of the available literature. It could be valuable to investigate the possible contributions of other fields of science (e.g. Economics and Psychology) and use their concepts and theories (e.g. transaction cost theory, decision-making theory). Further, this investigation could identify potentially important constructs related to the topic of this study.

### *Ad) Case studies*

In the case studies, we have not investigated the actual effects, in terms of performance (e.g. cost savings) of the initiatives taken to create corporate advantage in purchasing. We have not carried out detailed 'before' and 'after' studies, which could have measured some of those effects. In the survey, we have used an intermediate indicator (i.e. the level of co-operation between business units) to

measure the effect of the measures taken. Not all aspects of purchasing synergy are readily measurable, especially not the qualitative effects. It would be interesting to investigate the actual impact (e.g. increase in shareholder value, net profit, purchasing savings) of initiatives to create corporate advantage in purchasing. A possible way to conduct this research is by longitudinal ‘before’ and ‘after’ in-depth case studies, in which companies are studied that carry out initiatives to create corporate advantage in purchasing (preferably by using our set of guidelines). The effects should be measured not only with regard to the benefits (e.g. purchasing cost reductions), but also with regard to the costs (e.g. co-ordination costs, overhead costs).

*Ad) Action research*

Further, we have conducted just one (action) case study that evaluates the practical use of the suggested design principles. A series of action research studies (preferably using the design principles from this research) could improve the practical relevance of the model and the design rules.

*Ad) Survey*

The survey provided us with insights into the validity of our conceptualisation of the factors involved. Though the results provide us with several interesting insights, it also raises questions for further research. Firstly, our study measures the perceptions of the respondents, in our case purchasing executives. This reflects our choice to operationalise the constructs in terms of managerial perceptions. However, these perceptions of the environment may deviate from the real environment. This poses the potential danger of biased answers. In order to get a clear picture of the real situation, we should also have investigated the perceptions of the CEO, BU management, and BU purchasing managers in order to arrive at more complete unbiased results. A second point of concern is that the corporations in our survey are all based in The Netherlands. This limits the generalisation of our findings beyond this region. However, the firms participating in our case studies were internationally operating companies, active in many countries. Based on the data from these cases, we do not expect that firms based outside The Netherlands show significantly different behaviour regarding the topic of study. It could, however, still be interesting to conduct same research in other countries to measure the influence of cultural issues. Finally, although we think that the items in our measurement instrument

(questionnaire) are covering, to a large extent, the content of the seven constructs, it still would be worthwhile to develop additional items to secure the reliability of the measures.

## **8.7 Closing**

This chapter concludes this thesis by summarising the final conclusions and recommendations and reflecting on the research set at the start of the project, as well as providing suggestions for potential areas of future research. In addition to the conclusions of the study, we have three final remarks. First, based on an elaborate literature review, we formulated a first conceptual model as a starting point for our empirical research. A large number of publications from both management and purchasing literature is being reviewed, because in our view both purchasing theory and management theory were needed to solve the research problem. The results of the empirical study confirmed this thought. Secondly, this study shows an intimate connection with empirical reality. We conducted five case studies, an action research and a large-scale survey, which makes the empirical base of this research rather strong. Thirdly, to achieve knowledge that is valid and relevant at the same time, we deliberately studied the phenomenon of corporate advantage in purchasing, by using different research approaches, data collection methods or methodologies.



## Chapter 9 Epilogue

### 9.1 The scientific journey

This thesis has a long history. Its origins can be traced back to a study on the future of purchasing conducted in 1995 for Philips Electronics<sup>110</sup>. Through the many discussions we have had for this study with corporate purchasing directors from different companies it appeared that one of their main concerns was how to manage purchasing of the corporate level. After finishing the study in 1995, we decided to initiate a Ph.D. research project early 1996 focussed on the topic of corporate purchasing. We started our research with an extensive literature study and a series of interviews with purchasing managers and independent experts. We found out that the topic had linkages with many different fields like strategic management, purchasing and organisation theory. Our literature study revealed that purchasing literature did not pay much attention to the strategic and organisational issues related to corporate purchasing. In addition, strategic management and organisation literature did not pay attention to the specific issues around formulating corporate strategies for purchasing. There existed a large knowledge gap in literature regarding corporate management of Purchasing. This stimulated us to continue the research in this area.

Our second step in learning to understand corporate management of purchasing was to take a developmental perspective. Based upon an assignment from a consultancy firm we developed a Purchasing development model in 1997. It was our aim to link this model to general growth models like Greiner's organisational growth model and the industry life cycle. However, though it appeared feasible in theory, it turned out to be very difficult to test in practice. We have tried to set up a research project to compare purchasing development paths in different companies across different industries, but we did not succeed. Companies indicated that a detailed integral analysis of the development in their corporate strategy, organisation and purchasing function would reveal too much sensitive information and did not want to co-operate in this research project.

For this reason we decided to focus our research on the topic of managing purchasing synergy mid 1997. Late 1997 we started with the fieldwork for this project involving documenting synergy initiatives in a sample of five large companies. This fieldwork lasted until early 1999. We found that it takes a lot of time to find companies that want to co-operate in a research project with includes a large number of interviews and detailed document analysis. Late 1998, the purchasing manager of a medium sized Electronics company approached us to discuss whether we could support him in a project aimed at developing a new corporate purchasing strategy. This gave us the opportunity to test some of the insights drawn from the cases. The project started early 1999 and after several interviews and two workshops we finished it with a final report in the summer of 1999. Applying the concepts and models derived from literature and the case studies in a real life case, was very useful and led to several new insights.

Late 1999 we had the idea that we had explored all the relevant issues related to purchasing synergy. The cases and the action research project had generated a lot of new insights, however, they were limited to only these six cases. Since we had still some time left, we decided to conduct a survey among 46 large companies in The Netherlands. This survey provided us with the quantitative data to test our six main hypotheses that we derived from the qualitative data from the cases.

## 9.2 Looking back on the journey

A lot of what has been written about research and methodology depicts it as a deliberate process. First we think, then we act. We formulate a research proposal and then we conduct the research. The progression seems so perfectly sensible. Why would anybody want to proceed differently? Imagine someone planning scientific research. What likely springs in mind is an image of orderly thinking, a researcher sitting in an office formulating a research plan that will be implemented on schedule. The central notion in this line of thought is reason – rational control, the systematic gatherings of data, analysis of data, and finally the analysis producing clear, explicit, full-blown conclusions. Now imagine someone *crafting* research. A wholly different

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<sup>110</sup> The results of this study are summarised in the book ‘Revolution in Purchasing’, which was published by Philips Electronics in 1996.

image likely results, as different from planning as craft from mechanisation. Craft evokes traditional skill, dedication, and perfection through mastery of detail. What springs in mind is not so much thinking and reason as well as involvement, a feeling of intimacy and harmony with the topic at hand, developed through long experience and commitment.

Inspired by Mintzberg's award winning article '*Crafting strategy*' (Mintzberg and Quinn, 1991:105) we state that the crafting image better captures the process by which research is conducted (at least this research), than the planning image. The common assumption is that thought must be independent of and precede action. However, sometimes researchers could be smarter by allowing their research strategies to develop gradually, through their actions and experiences. Smart researchers appreciate that they cannot always be smart enough to think through everything in advance.

The research as described in the preceding chapters has emerged to a large extent in response to evolving situations (e.g. companies that did not want to co-operate, a purchasing manager approaching us with an assignment). However, it has also been brought about deliberately, through a process of formulation followed by implementation (e.g. the survey).





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## Appendix 2.1 First list of general topics for the interviews

### a) Business context

- What are the major developments going on with regard to Competitors, Suppliers, Customers, and Potential substitutes and entrants? (Porter's five forces model)
- How is the relative power position vis-à-vis customers, competitors and suppliers?
- What is the position on the Business life cycle of the major businesses?

### b) Strategic focus

- What is the dominant strategic management orientation: financial/market based or resources based?
- What are the current and future strategic priorities in this company
- How important are cost leadership and differentiation (innovation)?
- What initiatives are taken to stimulate/realise business synergy in general?

### c) Corporate structure

- Could you describe the corporate structure?
- Could you describe the development over time of the corporate organisation?
- What are the latest developments in terms of centralisation/decentralisation?

### d) Purchasing maturity

- Could you describe the stage of development of the purchasing function in terms of Keough?
- What is the role and position of purchasing function in your company?
- Could you describe supplier management activities?
- Could you describe the changes in the purchasing function over the last ten years?

### e) Purchasing synergy initiatives

- Could you describe the initiatives that currently are implemented?
- How are they managed, who is involved, who is responsible,
- What are the (perceived) results of these initiatives?

## **Appendix 2.2 Case research format**

### *Step 1) Inventarisation and Mobilisation fieldresearch*

- First meeting with responsible purchasing director (sponsor)
- Determination of relevant respondents together with sponsor
- Organisation of efficient and effective datagathering
- Communication of the research objectives to all people involved
- Desk research company brochures

### *Step 2) Datagathering*

- Interviews are conducted with: purchasing directors, buyers, general management and other key managers (Production, Development, Finance, HRM, etc.)
- Semi-structured interviews with topic list (see appendix for questions)
- Interviews are recorded on tape and written down according to a standard format
- Comments and remarks were asked from the interviewees to verify the findings
- Direct observation of company behaviour
- Document analysis (Annual reports, notes, articles etc)

### *Step 3) Analysis of the data*

- Description of the current situation regarding the business context, organisational context, purchasing maturity and purchasing synergy
- Based on our major observations we will define the relevant design-parameters

### *Step 4) Feedback and final report*

- Feedback to sponsor in the form of a report
- Integration of comments and remarks
- Final report case study findings

## Appendix 4.1 Overview of interviews

### *Financial Corporation*

1. Mr. Mommers Executive Vice President, Operations & Services (24/11/1997)
2. Mr. Zeilmaker Executive Vice President, Management Accounting (24/11/1997)
3. Mr. Jansen Executive Vice President, Org., Info. Mgt. & Housing (04/12/1997)
4. Mr. Hesp Executive Vice President, Information Technology (05/12/1997)
5. Mr. Spronk Purchasing Manager, Information Technology (05/12/1997)
6. Mr. Vriesman Senior Vice President, Real Estate & Housing (07/01/1998)
7. Mr. Kramer Senior Vice President Corporate Purchasing (04/12/1997, 23/01 and 20/02/1998)
8. Mr. Grasso Purchasing Manager Corporate Purchasing (22/01/1998)
9. Mr. Westdorp Director Facility Management, Region Zuid-West (05/02/1998)
10. Mr. van Veen Purchasing Manager, Corporate Purchasing (20/02/1998)
11. Mr. Van der Kolk Senior Vice President, Corporate Real Estate (24/02/1998)
12. Mr. Provoost Director Facility Management, Region Amsterdam ( 24/02/1998)
13. Mr. Kuyken Director Rayon Helmond (03/03/1998)
14. Mr. Schilder Manager IT Purchasing (04/03/1998)
15. Mrs. Kleinhout Vice President Corporate Purchasing

### *Electronics Corporation*

1. Mr. Pipping Director Purchasing, PD Lighting (20/11/1997 and 12/02/1998)
2. Mr. Verhappen Chief Purchasing Officer, BG LE&G (12/02, 19/02, 09/04 and 07/05/1998)
3. Mr. Verhees Manager Advanced Development, BG LE&G (14/04/1998)
4. Mr. Peeters Manager Finance & Accounting, BG LE&G (17/04/1998)
5. Mr. Aarts Chief Manufacturing Officer, BG LE&G (17/04/1998)
6. Mr. Houkes Manager Development, BG LE&G Europe (20/04/1998)
7. Mr. Jansen CEO, BG LE&G Europe (21/04/1998 and 29/09/1998)
8. Mr. Hendriks Purchaser BOM, BG LE&G (21/04/1998)
9. Mr. Schellekens Purchaser BOM, BG LE&G (21/04/1998)
10. Mr. Pannekoek Purchaser Non-BOM, BG LE&G (21/04/1998)
11. Mr. Hazeberg Purchasing Manager, BG Luminaires (12-02-2000)
12. Mr. Wildeman Purchasing support group, PD Lighting ( 28/05/1998)



*Pharmaceutical corporation*

1. Mr. Rodenberg      Manager Central Purchasing (19/03/1998)
2. Mr. Klaas          Head of Purchasing Deltapharm (28/05, 19/08 and 06/10/1998)
3. Mr. Kok             Purchasing manager (07/07/1998 and 19/08/1998)
4. Mr. Haasnoot       Development manager (24/06/1998)
5. Mr. Klessens       Production manager (24/06/1998)
6. Mr. Sanders         General Manager (29/06/1998)
7. Mr. Gerrits         Finance & Accounting manager (29/06/1998)
8. Mr. Rolloos         HRM manager (29/06/1998)
9. Mrs. Huizinga       Buyer (07/07/1998)
10. Mr. Ter horst       Buyer (07/07/1998)
11. Mr. Breur           Buyer (07/07/1998)
12. Mr. van Eerd       Buyer (11/08/1998)
13. Mr. Maas           International Purchasing manager, Octapharm (07/08/1998)
14. Mr. van Zantvoort   Buyer (19/08/1998)
15. Mr. van Geel       Buyer (24/08/1998)
16. Mr. Voortman       Buyer (29/09/1998)
17. Mr. Bartelse       Purchasing director
18. Mr. Baars           Director Central Purchasing (07/10/1998)

*Oil Corporation*

1. Mr. White            Manager Purchasing support SSI (07/08/1997 and 22/10/1997)
2. Mr. Ramsey         Manager Purchasing Coordination Chemicals Europe (23/06/1998)
3. Mr. Lucas            Purchasing manager SEOP/Pernis (15/09/1998)
4. Mr. Schijven        Consultant Purchasing support SSI (15/09/1997, 24/04 and 20/10/1998)
5. Mr. Mulder           Manager Purchasing coordination SEOP/MSD (30/10, 22/12and  
03/06/1999)
6. Mr. Goetzee         North Cluster Manager MSD (08/01/1999)
7. Mr. Benink          PO Manager in ROM (at the Pernis site) (13/01/1999)
8. Mr. de Gritter      Contracting and Procurement manager at Pernis (13/01/1999)
9. Mr. Falcone         CEO SEOP/MSD (planned but not interviewed)

*Dairy Food Corporation*

1. Mr. Karsbergen     Director corporate purchasing coordination (16/11/1998 and 15/02/1999)
2. Mr. Heere            Manager Purchasing Department BU (09/03/1999)
3. Mr. Troost           Director Sourcing FRINT (12/02/1999)
4. Mr. van de Velde    Head of Purchasing BU (12/02/1999)
5. Mr. van der Ham    Corporate Director IT (25/03/1999)
6. Mr Majoor           Member of the Board of Directors (planned but not interviewed)

## Appendix 6.1 Pretesting the survey

### A) Focus Group Academics

<b>Selected academics</b>	<b>Feedback on:</b>	<b>University</b>
prof dr A.J. van Weele	PM, MO, SM	TUE
dr J.Y.F. Wijnstra	PM, MO, SM	TUE
prof. dr ir M.Weggeman	MO, SM	TUE
dr L. Oerlemans	SM	TUE
prof dr H. van der Hart	SM	TUE
dr M. Wouters	SM	TUE
drs ing J.Wouters	SM	TUE
dr R. van Stekelenborg	PM, SM	TUE
dr M. Kempeners	PM, SM	TUE
dr M. Essig	PM, SM	University of Stuttgart (Germany)
dr F. Johnson	PM, SM	University of Western Ontario (Canada)

(PM: purchasing management issues; MO: management and organization issues; SM: survey methodology issues)

### B) Pilot test group practitioners

Mr. R. Baars	Director Corporate Purchasing
Mr. P. Maas	International Purchasing manager
Mr. G. Kasbergen	Director Purchasing Coordination
Mr. Th. Mulder	Procurement manager
Mrs. M. Klijnhout-Kroeze	Corporate Purchasing manager
Mr. J. Pannekoek	Purchasing manager
Mr. P. Frints	(former) Corporate Purchasing manager

### C) Pretest questions

<p><b>Survey</b></p> <ul style="list-style-type: none"> <li>- Are the instructions clear and concise? Do they make sense?</li> <li>- Are any irrelevant items included in the survey (items that are unrelated to the purpose of the survey)?</li> <li>- Do the item response choices make sense? Are all response choices for items?</li> <li>- Did respondents leave any items unanswered? If so, why?</li> <li>- Are the items listed in proper order? Are any items out of context? Do items flow with the rest of the survey?</li> <li>- Is there enough space for recording responses to the items and additional remarks?</li> <li>- Can you think of any additional items that should be included in the survey to fulfill its purpose? Are any additional items required to accomplish the purpose of the survey?</li> <li>- How long did it take respondents to complete the survey? What is the average response time?</li> <li>- Are there any additional comments about the survey (e.g. appearance, length, ease of completion)?</li> </ul>
<p><b>Cover letter</b></p> <ul style="list-style-type: none"> <li>- Is the purpose of the survey and potential use of results clear?</li> <li>- Is it clear to respondents that their participation is voluntary, that anonymity and/or confidentiality are ensured, and that they know who to contact should they have any questions about the survey?</li> </ul>

## Appendix 6.2 The survey questionnaire

### Part A. General information

A1) Name of the parent company	.....																												
A2) Please specify which part you are working for in this company (indicate the name of the department, division, business-group, or other organisational part)	..... .....																												
A3) Please specify your job title	..... .....																												
A4) Please indicate (all) the business area(s) of the parent company	<table border="0"> <tr><td>1) Construction</td><td>[ ]</td></tr> <tr><td>2) Services</td><td>[ ]</td></tr> <tr><td>3) Financial services</td><td>[ ]</td></tr> <tr><td>4) Trading</td><td>[ ]</td></tr> <tr><td>5) Manufacturing</td><td>[ ]</td></tr> <tr><td>6) Food &amp; Beverages</td><td>[ ]</td></tr> <tr><td>7) Pharmaceuticals</td><td>[ ]</td></tr> <tr><td>8) Oil, natural gas &amp; petroleum</td><td>[ ]</td></tr> <tr><td>9) Chemicals</td><td>[ ]</td></tr> <tr><td>10) Information technology</td><td>[ ]</td></tr> <tr><td>11) Telecommunication</td><td>[ ]</td></tr> <tr><td>12) Transport</td><td>[ ]</td></tr> <tr><td>13) Publishing</td><td>[ ]</td></tr> <tr><td>14) Other (please specify), .....</td><td>[ ]</td></tr> </table>	1) Construction	[ ]	2) Services	[ ]	3) Financial services	[ ]	4) Trading	[ ]	5) Manufacturing	[ ]	6) Food & Beverages	[ ]	7) Pharmaceuticals	[ ]	8) Oil, natural gas & petroleum	[ ]	9) Chemicals	[ ]	10) Information technology	[ ]	11) Telecommunication	[ ]	12) Transport	[ ]	13) Publishing	[ ]	14) Other (please specify), .....	[ ]
1) Construction	[ ]																												
2) Services	[ ]																												
3) Financial services	[ ]																												
4) Trading	[ ]																												
5) Manufacturing	[ ]																												
6) Food & Beverages	[ ]																												
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10) Information technology	[ ]																												
11) Telecommunication	[ ]																												
12) Transport	[ ]																												
13) Publishing	[ ]																												
14) Other (please specify), .....	[ ]																												

#### Definition Purchasing Synergy

*The value that is added when two or more business units (or purchasing departments) combine their efforts (e.g. combined buying), and/or share resources (e.g. people, ICT-systems), and/or information, and/or knowledge in the area of purchasing management.*

#### Explanation Survey

Please give your judgement about the statements in this survey by circling the number which reflects your judgement most accurately on a scale of 1 to 5. Please circle the answer that best represents your judgement about each aspect on “how things actually are”, rather than on “how things ought to be”. In case you would like to give further explanation or other remarks regarding a specific issue, you are requested to include these in the boxes on each page of this questionnaire (please mention the number of the assertion to which your remark or explanation refers).

**Explanation of marks:** 1 = Completely disagree with, 2 = Predominantly disagree with, 3 = Neither disagree, nor agree, 4 = Predominantly agree with, and 5 = Completely agree with.

**Part B. Statements purchasing synergy**

Statements B) In our company it occurs that business units...

.... very frequently jointly negotiate contracts for the following spend categories:	Completely disagree				completely agree
B1) Raw materials	1	2	3	4	5
B2) Components (e.g. IC's)	1	2	3	4	5
B3) Supplementary production materials	1	2	3	4	5
B4) General expenses (e.g. office supplies, computer hardware & software, etc.)	1	2	3	4	5
B5) Capital equipment	1	2	3	4	5
B6) (Semi-) Finished products	1	2	3	4	5
B7) Services (e.g. cleaning, security, travel, transport services, insurance, leasing, advertising, etc.)	1	2	3	4	5
...very frequently share functional resources like:	Completely disagree				completely agree
B8) (Corporate) purchasing specialists	1	2	3	4	5
B9) Purchasing information / communication systems	1	2	3	4	5
B10) Corporate management group	1	2	3	4	5
B11) Office space and/or facilities	1	2	3	4	5
....very frequently exchange and share information on:	Completely disagree				completely agree
B12) Product specifications	1	2	3	4	5
B13) Suppliers (e.g. contact-persons, performance history, etc)	1	2	3	4	5
B14) Company wide contracts	1	2	3	4	5
B15) Product prices	1	2	3	4	5
B16) Purchasing tools and techniques	1	2	3	4	5
B17) Purchasing procedures	1	2	3	4	5
B18) Supply market developments (e.g. new technology)	1	2	3	4	5
...very frequently exchange and share knowledge related to	Completely disagree				completely agree
B19) Formulating purchasing strategies	1	2	3	4	5
B20) Designing purchasing processes	1	2	3	4	5
B21) Applying purchasing tools and techniques	1	2	3	4	5
B22) Developing purchasing skills and competencies	1	2	3	4	5
B23) Purchasing management and organisation	1	2	3	4	5
B24) Gaining access to world-class suppliers	1	2	3	4	5
Additional remarks part B):					

**Part C. Statements Business Context**

C1) Over the last three years our company experienced strongly increased competitive pressures to innovate.	Completely disagree				completely agree
	1	2	3	4	5
C2) Over the last three years our company experienced strongly increased competitive pressures to reduce costs.	Completely disagree				completely agree
	1	2	3	4	5
C3) Over the last three years our company experienced strongly increased concentration in our customer markets.	Completely disagree				completely agree
	1				
C4) Over the last three years our company experienced strongly increased concentration in our supply markets.	Completely disagree				completely agree
	1	2	3	4	5

**Part D. Statements Corporate Management**

D1) Our company only concentrates on strongly related business areas.	Completely disagree 1 2 3 4 5 completely agree
D2) Our company has grown mainly through internal or autonomous growth (instead of through mergers and acquisitions).	Completely disagree 1 completely agree
D3) Our company is structured around completely autonomous and stand-alone business units (BU)	Completely disagree 1 completely agree
D4) In our company BU managers are compensated only depending on their business unit results.	Completely disagree 1 completely agree
D5) Our company rewards BU managers that participate in corporate synergy initiatives.	Completely disagree 1 2 3 4 5 completely agree
D6) Co-ordination and co-operation between business units is strongly encouraged and supported by corporate staff groups in other areas than purchasing.	Completely disagree 1 completely agree
D7) Over the last three years our company went through significant corporate restructuring.	Completely disagree 1 2 3 4 5 completely agree
D8) Business unit strategies in our company favour achieving lowest costs ( <i>cost leadership</i> ).	Completely disagree 1 completely agree
D9) Business unit strategies in our company favour innovation ( <i>differentiation</i> ).	Completely disagree 1 2 3 4 5 completely agree
D10) Our company has a corporate culture that encourages co-operation across business units.	Completely disagree 1 2 3 4 5 completely agree
D11) Please indicate the level of internationalisation of the company.	1. National (no foreign subsidiaries) 2. International (strong parent company with some foreign subsidiaries with limited authority) 3. Multinational (local-for-local, decentral organisation with a central group with a limited amount of authority) 4. Global (central organisation on a global scale) 5. Transnational (combines local responsiveness with global efficiencies through co-ordination) 6. Other (please specify)
Additional remarks part C and D):	

**Part E. Statements Purchasing Management**

E1) Over the last three years the purchasing spend with outside parties has increased significantly.	Completely disagree 1 2 3 4 5 completely agree
E2) Top management recognises Purchasing as an important contributor to the competitive position of the company.	Completely disagree 1 2 3 4 5 completely agree
E3) In our company the purchasing function reports directly to top management.	Completely disagree 1 2 3 4 5 completely agree

E4) In our company purchasing relates to clerical and operational activities, that are limited to the purchasing department.	Completely disagree 1            2            3            4            5 completely agree
E5) In our company purchasing relates to strategic and truly cross-functional processes, with high involvement of line management.	Completely disagree 1            2            3            4            5 completely agree
E6) In our company, purchasing's main goal is achieving the lowest price.	Completely disagree 1            2            3            4            5 completely agree
E7) In our company there is a great degree of homogeneity in purchasing needs across the different business units.	Completely disagree 1            2            3            4            5 completely agree
E8) There are no significant differences in the role and position of the different purchasing departments across the BU's of our company.	Completely disagree 1            2            3            4            5 completely agree
E9) The skills and capabilities of purchasing personnel in the different BU's are more than adequate for working in cross-functional teams.	Completely disagree 1            2            3            4            5 completely agree
E10) The skills and capabilities of purchasing personnel in the different BU's are more than adequate for participating in formulating corporate purchasing strategies.	Completely disagree 1            2            3            4            5 completely agree
E11) The purchasing departments in the different BU's operate on comparable levels of functional professionalism.	Completely disagree 1            2            3            4            5 completely agree
E12) The skills and capabilities on the corporate level are adequate for managing corporate purchasing synergy.	Completely disagree 1            2            3            4            5 completely agree
E13) What option does best resemble the structure and positioning of the purchasing function in your company?	<ol style="list-style-type: none"> <li>1. <i>Completely centralised</i>: one central unit responsible for all company purchasing</li> <li>2. <i>Completely decentralised</i>: business units are responsible for their own purchasing</li> <li>3. <i>Decentral purchasing with leadbuyers (or commodity teams)</i> facilitated and supported by a central purchasing group or –coordinator</li> <li>4. <i>Center-led action network (CLAN)</i>: decentral purchasing units with a central group for strategy formulation, control and coordination</li> <li>5. Other (please specify)</li> </ol>

## Part F.Statement Organisational Mechanisms

F1) Our company currently has a large number of formal organisational mechanisms in place to facilitate the management of potential purchasing synergies	Completely disagree 1            2            3            4            5 completely agree
--	--

F2) Please indicate all initiatives that apply:

<input type="checkbox"/> Corporate steering group / Executive steering board	<input type="checkbox"/> Cross-functional teams
<input type="checkbox"/> Chief Purchasing Officer	<input type="checkbox"/> Competence teams
<input type="checkbox"/> Part-time corporate purchasing co-ordinator	<input type="checkbox"/> Voluntary working groups (only purchasers)
<input type="checkbox"/> Corporate purchasing department	<input type="checkbox"/> Temporary task forces
<input type="checkbox"/> Commodity teams (only purchasers)	<input type="checkbox"/> Part-time lead-buyers
<input type="checkbox"/> Component teams (purchasers and engineers)	<input type="checkbox"/> Separate business-unit providing purchasing services
	<input type="checkbox"/> Other, (please specify below in box)
Additional remarks:	

**Part G. Statement Networks of Relationships**

G1) Our company currently intensively stimulates the forming of networks of relationships in the area of purchasing to encourage voluntary co-operation of people in different business units, and also facilitate the formal purchasing synergy initiatives.	Completely disagree	1	2	3	4	5	completely agree
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G2) Please indicate all initiatives that apply:

<input type="checkbox"/> Annual purchasing day, or other company events	<input type="checkbox"/> Group identity programs (e.g. survival weekend)
<input type="checkbox"/> Corporate training courses and conferences	<input type="checkbox"/> Purchasers sharing same office building (Co-location)
<input type="checkbox"/> Purchasing is part of the Executive Management Development Program	<input type="checkbox"/> Rotation of experienced purchasing managers cross business units (BU's)
<input type="checkbox"/> Purchasing is part of the corporate trainee program	<input type="checkbox"/> Rotation of experienced purchasers across BU's
<input type="checkbox"/> Use of specific criteria for the recruitment of new purchasing managers	<input type="checkbox"/> Other, (please specify below in box)
Additional remarks:	

**Part H. Statement Information and Communication Technology**

H1) Our company uses the full potential of information and Communication technology to facilitate the formal purchasing synergy initiatives, and to encourage voluntary co-operation of people.	Completely disagree	1	2	3	4	5	completely agree
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H2) Please indicate all systems that apply:

<input type="checkbox"/> ERP software (SAP, BAAN, etc.)	<input type="checkbox"/> Information sharing-systems: systems that store knowledge and information in a central database and is accessible for all participants
<input type="checkbox"/> Financial software	<input type="checkbox"/> Lotus Notes
<input type="checkbox"/> Internet technology (e.g. Purchasing Intranet)	<input type="checkbox"/> Component database
<input type="checkbox"/> Electronic communication systems (e.g. E-mail)	<input type="checkbox"/> Contract database
<input type="checkbox"/> Conferencing systems (e.g. videoconferencing)	<input type="checkbox"/> Supplier database
<input type="checkbox"/> Electronic bulletin boards	<input type="checkbox"/> Best practices database
<input type="checkbox"/> Co-authoring systems that make it possible for groups to work electronically on the same document simultaneously	<input type="checkbox"/> Group Decision Support systems
<input type="checkbox"/> Workflow systems (e.g. procurement system that automates the ordering and payment processes)	<input type="checkbox"/> Other (please specify below in box)
Additional remarks:	

**Part I. Statements Level of Commitment**

I1) The <u>Chief Executive Officer</u> (CEO) (or top-management) shows the highest possible interest and spends a significant amount of time on issues related to purchasing synergy.	Completely disagree	1	2	3	4	5	completely agree
I2) The <u>Chief Purchasing Officer</u> (CPO, or individual responsible for corporate purchasing synergy) shows the highest possible interest and spends a significant amount of time on issues related to purchasing synergy.	Completely disagree	1	2	3	4	5	completely agree
I3) The <u>business unit (BU) managers</u> involved show the highest possible interest and spend a significant amount of their time on issues related to purchasing synergy.	Completely disagree	1	2	3	4	5	completely agree
I4) <u>BU purchasers</u> involved show the highest possible interest and spend a significant amount of their time on issues related to purchasing synergy.	Completely disagree	1	2	3	4	5	completely agree
Additional remarks part I):							

**Part J. Statements Degree of Integration**

J1) The <u>CEO</u> (or top management) and the <u>CPO</u> (or individual responsible for purchasing synergy) interact very frequently to discuss issues related to purchasing synergy, and to jointly conduct tasks with regard to managing purchasing synergy.	Completely disagree 1	2	3	4	completely agree 5
J2) The <u>CEO</u> and the <u>business unit (BU) managers</u> interact very frequently to discuss issues related to purchasing synergy, and to jointly conduct tasks with regard to managing purchasing synergy.	Completely disagree 1	2	3	4	completely agree 5
J3) The <u>BU managers</u> and the <u>BU Purchasing managers</u> interact very frequently to discuss issues related to purchasing synergy, and to jointly conduct tasks with regard to managing purchasing synergy.	Completely disagree 1	2	3	4	completely agree 5
J4) The <u>CEO</u> and the <u>BU Purchasing managers</u> meet very frequently to discuss issues related to purchasing synergy, and to jointly conduct tasks with regard to managing purchasing synergy.	Completely disagree 1	2	3	4	completely agree 5
J5) The <u>CPO</u> and the <u>BU Managers</u> interact very frequently to discuss issues related to purchasing synergy, and to jointly conduct tasks with regard to managing purchasing synergy.	Completely disagree 1	2	3	4	completely agree 5
J6) The <u>CPO</u> and the <u>BU Purchasing managers</u> interact very frequently to discuss issues related to purchasing synergy, and to jointly conduct tasks with regard to managing purchasing synergy.	Completely disagree 1	2	3	4	completely agree 5
Additional remarks part J):					

**Part K. Statements Formal Control Process**

K1) A clearly identified senior general manager actively supports the purchasing synergy initiatives, and acts as a problem owner.	Completely disagree 1	2	3	4	completely agree 5
K2) A clear and measurable corporate purchasing synergy target was formulated based on an analysis of detailed purchasing information.	Completely disagree 1	2	3	4	completely agree 5
K3) Standard policies and working rules for formulating purchasing synergy strategies were defined in advance.	Completely disagree 1	2	3	4	completely agree 5
K4) Once decided on by all the business units involved, the purchasing synergy strategies are mandatory.	Completely disagree 1	2	3	4	completely agree 5
K5) Implementation of the purchasing synergy strategies is closely monitored by top management and/or responsible purchasing manager.	Completely disagree 1	2	3	4	completely agree 5
K6) Performance measurement is based on specifically defined 'purchasing synergy' indicators.	Completely disagree 1	2	3	4	completely agree 5
K7) If the results are not according to plan corrective actions are taken by top management, and/or responsible purchasing manager.	Completely disagree 1	2	3	4	completely agree 5
K8) For all the people involved their reward structure is linked to their performances with regard to purchasing synergy.	Completely disagree 1	2	3	4	completely agree 5
Additional remarks Part K):					



### Part L. Statements Benefits of the Corporate Synergy Initiatives

Please react, from what you know today, on the statements concerning the benefits directly related to the purchasing synergy initiatives.

In our company the corporate purchasing synergy initiatives resulted in the following, otherwise not possible, benefits:

L1) ...significant and measurable cost savings (e.g. lower prices).	Completely disagree				completely agree
	1	2	3	4	5
L2) ...the creation of value (e.g. shorter lead times, more frequent delivery, better quality, faster innovation, and so on).	Completely disagree				completely agree
	1	2	3	4	5
L3) ...increased productivity of the purchasing function ( <i>'doing more with the same (or less) purchasing resources'</i> )	Completely disagree				completely agree
	1	2	3	4	5
L4) ...a reduction of the number of suppliers.	Completely disagree				completely agree
	1	2	3	4	5
L5) ... a reduction of the number of part numbers.	Completely disagree				completely agree
	1	2	3	4	5
L6) ... increased level of professionalism in the purchasing function across BU's.	Completely disagree				completely agree
	1	2	3	4	5
L7) ... better partnering with suppliers for new product development.	Completely disagree				completely agree
	1	2	3	4	5
L8) ... improvement of the company's long term strategic position on supply markets	Completely disagree				completely agree
	1	2	3	4	5
L9) The benefits of the purchasing synergy initiatives far outweighed the cost and efforts of managing these initiatives.	Completely disagree				completely agree
	1	2	3	4	5
L10) Our company has captured all potential synergies in the area of purchasing, no further improvement is possible.	Completely disagree				completely agree
	1	2	3	4	5
Additional remarks part L):					

### Part M. Statements Potential Problem Areas

Please indicate below, from what you know today, your judgement about which problems your company has to overcome in order to successfully seize all potential purchasing synergies.

M1) Our company still lacks detailed purchasing information on what the BU's buy.	Completely disagree				completely agree
	1	2	3	4	5
M2) Our company still does not have common part numbers across different BU's for comparable goods and services.	Completely disagree				completely agree
	1	2	3	4	5
M3) Our company still experiences unwillingness to harmonise specifications across the different BU's for comparable products.	Completely disagree				completely agree
	1	2	3	4	5
M4) There is still a lack of motivation among BU management for purchasing synergy.	Completely disagree				completely agree
	1	2	3	4	5

M5) There is still a lack of motivation among BU purchasers for purchasing synergy.	Completely disagree				completely agree
	1	2	3	4	5
M6) The level of quality of purchasing people in the different BU's is still insufficient.	Completely disagree				completely agree
	1	2	3	4	5
M7) There is still insufficient corporate leadership and vision in the purchasing function.	Completely disagree				completely agree
	1	2	3	4	5
M8) The BU purchasing departments are still too much functionally focused.	Completely disagree				completely agree
	1	2	3	4	5
M9) There are still significant cultural barriers between different BU's, functional departments and country organisations.	Completely disagree				completely agree
	1	2	3	4	5
M10) Information and communication systems still are not compatible across BU's.	Completely disagree				completely agree
	1	2	3	4	5
M11) Power battles between senior managers hinder the purchasing synergy initiatives.	Completely disagree				completely agree
	1	2	3	4	5
M12) There is still a lack of top-management support for purchasing synergy initiatives.	Completely disagree				completely agree
	1	2	3	4	5
M13) Necessary resources (time, budget, staff, systems, etc.) still do not meet the high performance requirements.	Completely disagree				completely agree
	1	2	3	4	5
M14) Suppliers are unable, or unwilling, to participate in company-wide contracts.	Completely disagree				completely agree
	1	2	3	4	5
M15) There is still a lot of distrust among the people involved from the different BU's.	Completely disagree				completely agree
	1	2	3	4	5
M14) Purchasers and purchasing managers that fear losing their jobs resist the changes.	Completely disagree				completely agree
	1	2	3	4	5
Additional remarks part M):					



## Summary

From the 1980s till early 1990s, many firms preferred to trade off corporate synergy in order to give their business units greater independence. Today, faced with an increasingly competitive environment, pressures from capital markets and the possibilities of information and communication technology, many firms are going through a consolidation process. This consolidation does not only take place in functional areas as Marketing, Production and Research & Development, but also in Purchasing. Research shows that an increasing number of firms recognise the potential benefits of pooling materials requirements and start implementing corporate purchasing strategies. As part of this process, a number of firms have resorted to using corporate lead-buyers or commodity teams to represent the supply needs of multiple businesses within the firm. Also, an increasing number of firms stimulate the sharing of purchasing information and ‘best-practices’ across their business units. However, research also indicates that only a limited number of firms are actually implement corporate purchasing strategies and pay attention to it in a structured way.

The way, in which firms can create corporate advantage in purchasing, has not yet been the topic of scientific research. For this reason, we have initiated this Ph.D. research project aimed at generating knowledge on this subject. The challenge was to generate knowledge regarding how to structure and manage corporate purchasing synergy effectively given the firm specific contingencies. The main objective of this research project was to answer the following question: *‘How can firms create corporate advantage in purchasing?’*, We formulated the following overall research objective of our current study: *Develop a coherent set of firm specific, organisational design principles for realising corporate advantage in purchasing.* This main research objective has been subdivided in the following main research questions:

1. How can corporate advantage in purchasing actually be defined?
2. What organisational mechanisms can be used to create corporate advantage in purchasing?
3. How are these organisational mechanisms related to the specific firm situation?

In order to answer these three questions, we combined different research methods (see Chapter Two). The first step in the research has been to conduct a literature study and define a preliminary conceptual model (see Chapter Three). In the second step, a series of five explorative case studies was conducted to explore the topic in depth and test the constructs of the preliminary model and their relationships (see Chapter Four). In step three, an action research project was executed to test our first findings from the cases and further evaluate the effect of our preliminary design principles and conceptual model in practice (see Chapter Five). Finally, the design principles were tested through a survey among 46 large companies (see Chapter Six). Based on the collective findings resulting from these research methods, it is possible to answer the research questions in a precise and empirically founded manner. Below we will summarise the results for each of the three main research questions.

*Ad 1) What is corporate advantage in purchasing?*

This first research question regards the basic sources that underlie corporate advantage in purchasing. The most well known source is the bundling of product requirements across business units together with joint negotiation of corporate contracts. In most cases, this joint buying will lead to significant savings. However, our research revealed that this is just the tip of the iceberg. There are three other areas in which companies can look for purchasing synergies. Firstly, sharing functional resources across business units (e.g. purchasing specialists, facilities, overhead, and information systems). Secondly, exchanging information across business units on product prices, company wide contracts, specifications, suppliers and supply market developments. Finally, sharing purchasing knowledge across business units (e.g. how to formulate a purchasing strategy, how to manage strategic supplier relationships). If done properly, effective synergetic co-operation across business units in these four areas can result in cost savings, improved competitive position on supply markets, important gains in terms of productivity, and better supplier performance. The net effect of these benefits can be regarded as purchasing synergy. If a corporation creates more synergies in purchasing than any of its rivals, one can speak of a corporate advantage in purchasing

*Ad 2) What organisational mechanisms can be used to create corporate advantage in purchasing?*

Realising purchasing synergy requires more than just group meetings with purchasing managers from different business units. We have found that interaction between four main stakeholders within the firm (i.e. top managers, corporate purchasing managers, business unit managers and business unit purchasing managers) is crucial for creating corporate advantage in purchasing. To motivate and facilitate this interaction, companies use both 'soft' and 'hard' measures. Apart from formal organisational mechanisms (e.g. corporate steering boards, commodity teams, working groups), advanced corporate wide purchasing information and communication systems (e.g. intranet, corporate databases, GroupWare) and advanced management systems (e.g. plan-do-check-act cycle, working procedures, incentives rewarding joint efforts), firms can also use informal networking mechanisms (e.g. annual purchasing conferences, management development programs, job rotation) to achieve the necessary interaction and co-operation between the main stakeholders.

*Ad 3) Which firm specific contingency factors influence the design of organisational mechanisms used to create corporate advantage in purchasing?*

In the case studies we have observed that companies may use different mechanisms at the same time. Further, we observed that the number and type of the mechanisms used differs across the different companies. The reasons behind this are not so much related to the homogeneity of the product purchased, as well as to firm specific contingency factors. We conclude that there are two contingency factors that influence the number and quality of the measures aimed at creating corporate advantage in purchasing. These factors are corporate coherence and purchasing maturity. The external business context, one of the factors that was included in our preliminary model (see Chapter Three), indeed has its influence on the number and quality of measures taken to foster purchasing synergy, however, it does so in an indirect way.

The results from our research lead to the conclusion that in order to be sustainable, corporate purchasing initiatives should be congruent with the level of corporate coherence and the level of purchasing maturity in the firm. The process of cross-business co-operation needs to be tailored to each situation.

Corporate coherence is related to the extent to which the different parts of the corporation operate and are managed as one entity. Major differences across business units in, management style, vision, strategy, culture and structure reflect a low corporate coherence. When major differences in culture and structure exist across business units, the integration of the purchasing function will be a significant challenge. Purchasing maturity is related (amongst others) to the level of professionalism in the purchasing function as expressed in status of the function, role and position of the purchasing departments, availability of purchasing information systems, quality of the people involved in purchasing, and the level of collaboration with suppliers. Our research suggest, that when the purchasing function is highly mature, companies should use a larger number and more advanced measures to create corporate advantage in purchasing than with low purchasing maturity (see Chapter Seven).

In our view, top managers do not add value by choosing a certain approach to create corporate advantage in purchasing, as such. They add value by creating a fit between the approach used to create corporate advantage in purchasing, and the level of corporate coherence and purchasing maturity. In Chapter Seven, we present five tentative design rules indicating the relation between five generic purchasing approaches (i.e. local-led purchasing, centre-led purchasing, co-ordinated purchasing, decentral purchasing and central purchasing) and the corresponding levels of purchasing maturity and corporate coherence. These design rules are not a standard recipe for success. The position taken in this thesis is that companies should choose among alternative corporate purchasing designs, based on how well they meet their specific situation, rather than by how fashionable they are. The insights presented in this thesis can be used as guidelines in deciding what is effective and what not.

## Samenvatting (summary in Dutch)

Eind tachtiger begin negentiger jaren hebben veel ondernemingen hun matrix structuren gericht op het realiseren van concern synergie ingeruild voor een structuur met autonome business units. Vandaag de dag zien we dat ondernemingen, gedreven door toenemende concurrentie, druk van kapitaal markten de mogelijkheden van informatie technologie, enigszins terugkomen op deze business unit structuur. In toenemende mate zien we bedrijven zoeken naar mogelijkheden om meerwaarde te behalen uit intensievere samenwerking tussen business units. Deze samenwerking vind niet alleen plaats in functionele gebieden als Marketing, Productie en Research & Development, maar ook in Inkoop. Onderzoek toont aan dat een toenemend aantal ondernemingen de potentiële voordelen inzien van het bundelen van inkoopvolume en starten met het implementeren van concern inkoopstrategieën. Als onderdeel van dit proces, hebben een aantal ondernemingen hun toevlucht gezocht in het gebruik van zogenaamde concern lead-buyers of commodity teams die de totale inkoopbehoefte van de business units representeren. Tevens zien we een groeiend aantal ondernemingen die het uitwisselen van inkoop informatie en ‘best-practices’ over verschillende business units heen stimuleren. Echter, ander onderzoek toont aan dat slechts een gering aantal ondernemingen ook werkelijk met success concern inkoopstrategieën implementeren en er gestructureerd aandacht aan besteden.

De manier waarop ondernemingen concern voordeel realiseren in inkoop is nog niet eerder onderwerp van wetenschappelijk onderzoek geweest. Daarom hebben wij het initiatief genomen om een promotie onderzoek te starten gericht op het genereren van kennis over dit onderwerp. De uitdaging is kennis te genereren omtrent hoe concern inkoop synergie te managen gegeven de onderneming specifieke situatie. De hoofdvraag waar we met dit onderzoek een antwoord op trachten te vinden is: *Hoe kunnen ondernemingen concern voordelen realiseren in inkoop?*. Hiertoe hebben we de volgende onderzoeksdoelstelling geformuleerd: *Ontwikkel een coherente set ondernemings specifieke, organisatie ontwerp regels om concern voordelen te realiseren in inkoop.*



Deze doelstelling is vervolgens onderverdeeld in de volgende drie concrete onderzoeksvragen:

1. Wat is concern voordeel in inkoop? Hoe kan het gedefinieerd worden?
2. Welke organisatie mechanismen kunnen gebruikt worden om concern voordeel in inkoop te realiseren?
3. Hoe zijn deze organisatie mechanismen gerelateerd aan de specifieke ondernemings situatie?

Om op deze vragen een antwoord te vinden hebben we verschillende onderzoeksmethoden gecombineerd (zie Hoofdstuk 2). De eerste stap in het onderzoek betrof een literatuurstudie waaruit wij een voorlopig conceptueel model hebben afgeleid (zie Hoofdstuk 3). Als tweede stap hebben we een serie van vijf case studies uitgevoerd om de constructen uit het voorlopige model in de diepte te verkennen in de praktijk, met name op hun onderlinge relaties (zie Hoofdstuk 4). Als derde stap hebben we een actieonderzoek uitgevoerd om onze eerste voorlopige bevindingen uit de literatuur en de vijf cases te evalueren op hun praktische bruikbaarheid (zie Hoofdstuk 5). Tenslotte hebben we alle bevindingen omgezet in een zestal hypothesen die we hebben getest met behulp van een enquête onder 46 Nederlandse beursgenoteerde ondernemingen (zie Hoofdstuk 6). Gebaseerd op de bevindingen afgeleid uit deze verschillende onderzoeksmethoden, is het mogelijk om de onderzoeksvragen precies en empirisch gefundeerd te beantwoorden. Hieronder zullen we de resultaten uit het onderzoek kort samenvatten.

*Ad 1) Wat is concern voordeel in inkoop?*

Deze eerste onderzoeksvraag heeft betrekking op de bronnen van concern voordeel in inkoop. De bekendste bron is het bundelen van inkoopvolumes over business units en het vervolgens onderhandelen van concern raamcontracten. In de meeste gevallen leidt deze manier van gezamenlijk inkopen tot aanzienlijke besparingen, meestal als gevolg van prijsvoordelen. Echter, ons onderzoek toont aan dat dit maar het puntje van de ijsberg is. Er zijn nog drie andere gebieden waar ondernemingen kunnen zoeken naar inkoop synergie. Ten eerste het delen van functionele inkoopresources over business units (bijv. inkoop specialisten, faciliteiten, overhead, en informatie systemen). Ten tweede, het uitwisselen van inkoop informatie tussen business units op gebied van prijzen, concern raamcontracten, product specificaties, leveranciers

prestatie en ontwikkelingen op leveranciers markten. Tenslotte het uitwisselen van inkoop kennis tussen business units (bijv. ervaring met het formuleren van inkoop strategie). Als het goed wordt uitgevoerd, kan synergetische samenwerking tussen business units op bovenstaande gebieden resulteren in kosten besparingen, verbeterde onderhandelingspositie op inkoopmarkten, verbeterde productiviteit van de inkoopfunctie, en verbeterde leveranciers prestaties. Het netto effect van deze voordelen kan worden beschouwd als inkoop synergie. Inkoop synergie kan aldus worden gedefinieerd als: de waarde die wordt toegevoegd wanneer twee of meer business units hun krachten bundelen (d.w.z. gecombineerd inkopen) en/of mensen, middelen, informatie en kennis op het gebied van de inkoop delen of samenvoegen. Van concernvoordeel in inkoop spreekt men als een onderneming in staat is meer inkoop synergie te realiseren dan ieder van zijn directe concurrenten.

*Ad 2) Welke organisatie mechanismen kunnen gebruikt worden om concernvoordeel in inkoop te realiseren?*

Het realiseren van concern inkoop synergie vereist meer dan alleen het bijeen brengen van de inkoop managers uit de diverse business units. Wij hebben gevonden dat er binnen grote ondernemingen vier groepen cruciaal zijn voor het realiseren van concern voordeel in inkoop. Dat zijn achtereenvolgens top managers, concern inkoop managers, business unit managers en de business unit inkoop managers. Interactie tussen deze groepen is noodzakelijk om tot een breed gedragen concern inkoopstrategie te komen en deze vervolgens te succesvol implementeren. Ondernemingen gebruiken zowel harde als zachte maatregelen om deze groepen te motiveren tot samenwerking en de interactie te faciliteren. Er zijn vier groepen van maatregelen te onderscheiden: 1) maatregelen gericht op de *formele organisatie* (bijv. het instellen van een concern inkoop stuurgroep, het vormen van commodity teams en/of werkgroepen), 2) het implementeren van *geavanceerde inkoop informatie en communicatie systemen* (bijv. intranet, concern databases), 3) het toepassen van *management control systemen* (bijv. het doorlopen van de plan-do-check-act cyclus, vastgelegde procedures voor samenwerking, specifieke incentives die samenwerking belonen), en tenslotte 4) maatregelen gericht op het stimuleren van *informele netwerken* (bijv. het organiseren van een jaarlijkse inkoopdag, inkoopseminars, management development programs, job rotatie).

*Ad 3) Hoe zijn deze organisatie mechanismen gerelateerd aan de specifieke ondernemings situatie?*

Met andere woorden, welke ondernemings specifieke contingentie factoren beïnvloeden de keuze van maatregelen gericht op het realiseren van concern voordeel in inkoop? In de case studies hebben geobserveerd dat ondernemingen vaak verschillende mechanismen op hetzelfde moment toepassen. Ook observeren we dat het aantal en de aard van de gebruikte mechanismen verschillen tussen ondernemingen. De reden hiervoor is niet zozeer gerelateerd aan de homogeniteit van de in te kopen producten, alswel in onderneming specifieke contingentie factoren. Op basis van ons onderzoek komen wij tot de conclusie dat er twee contingentie factoren zijn die direct de aard en het aantal mechanismen bepaald. Deze factoren zijn concern samenhang (*corporate coherence*) en (*purchasing maturity*). De externe bedrijfsomgeving, een van de factoren die we opgenomen hadden in ons voorlopige model (zie Hoofdstuk 3), heeft inderdaad invloed op de aard en het aantal mechanismen die ondernemingen gebruiken om inkoop synergie te realiseren, echter, deze invloed is niet direct. Toenemende concurrentiedruk op zich zal niet direct leiden tot meer maatregelen gericht op het realiseren van inkoop synergie. De resultaten van ons onderzoek leiden tot de conclusie dat wil een initiatief tot concern inkoop synergie duurzaam zijn, zij congruent zal moeten zijn met de mate van samen hang binnen het concern en de volwassenheid van de inkoopfunctie.

Concern samenhang (*Corporate coherence*) is gerelateerd aan de mate waarin de diverse onderdelen van een concern samen worden gemanaged als een geheel. Grote verschillen tussen business units op het gebied van management style, visie, strategie, cultuur en structuur duiden op een geringe concern samenhang. In een dergelijke situatie is het realiseren van concern inkoop synergie een ware uitdaging. Volwassenheid van de inkoopfunctie (*Purchasing maturity*) is gerelateerd aan de mate van professionaliteit binnen de inkoopfunctie tot uitdrukking komend in de status van de inkoopfunctie, de rol en positie van inkoopafdelingen, beschikbaarheid van inkoop informatie systemen, kwaliteit van de inkopers, en de mate van samenwerking met leveranciers. Ons onderzoek geeft aan dat wanneer er sprake is van een zeer professionele inkoopfunctie, ondernemingen andere mechanismen moeten gebruiken om inkoop synergie te realiseren dan wanneer er sprake is van een weinig professionele inkoopfunctie (zie Hoofdstuk 7).

Het is onze overtuiging dat top managers geen waarde toevoegen door alleen maar het kiezen en toepassen van mechanismen gericht op het realiseren van concernvoordelen in inkoop. Zij voegen pas werkelijk waarde toe als zij een fit weten te realiseren tussen de mechanismen en de mate van concern samenhang en de volwassenheid van de inkoopfunctie. In Hoofdstuk 7 presenteren we vijf voorlopige ontwerp richtlijnen die aangeven hoe vijf generieke concern inkoop benaderingen (local-led inkoop, centre-led inkoop, gecoördineerde inkoop, decentrale inkoop en centrale inkoop) corresponderen met de verschillende niveaus van concern samenhang en volwassenheid van de inkoopfunctie. Deze ontwerp richtlijnen zijn geen standaard recept voor succes. Wij stellen dat ondernemingen moeten kiezen voor een bepaalde concern inkoop benadering op basis van de eisen van de specifieke situatie, en niet zozeer op hoe modieus deze zijn. De diverse inzichten die worden gepresenteerd in dit proefschrift kunnen hierbij behulpzaam.



## About the author

Frank A. Rozemeijer (1969) completed his secondary schooling (Atheneum A) at the St. Michael College in Zaandam. In 1994, he graduated from the University of Amsterdam (M.Sc. in Economics) with majors in 'Strategic Management' and 'Industrial Organisation'. In the same year his book on managing outsourcing relationships (*'Managen van uitbestedingsrelaties'*) was published on behalf of a large maintenance services provider in the Netherlands. In 1995 he was involved in an international research project on the future of purchasing, which brought him into contact with a number of large companies both in the USA and in Europe. The results of this study were summarised in the book *'Revolution in Purchasing'* (1996) which he co-authored. In 1996, he started working both as a lecturer and Ph.D. researcher at the Institute for Purchasing & Supply Development (IPSD) at Eindhoven University of Technology. His research concentrated on solving the problem of managing corporate purchasing synergy in large multi-business companies. Apart from his research, he was involved in lecturing and coordinating post-experience, postgraduate and undergraduate purchasing management courses at Eindhoven University of Technology and other Universities and Institutions. Frank Rozemeijer's publications at international conferences and in academic and practitioner journals and books have focused on purchasing management, supplier relations and corporate purchasing synergy. Currently, Frank Rozemeijer is employed both as a senior consultant at Compendium Resource Management, and as a researcher at the Institute for Purchasing & Supply Development (IPSD) at Technische Universiteit Eindhoven.



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