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UNDERSTANDING A STRATEGIC ALLIANCE

A DISSERTATION SUBMITTED TO
THE SCHOOL OF BUSINESS STUDIES
IN CANDIDACY FOR THE DEGREE OF
MASTER OF BUSINESS STUDIES

BY
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I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of M.B.S. is entirely my own work and has not been taken from the work of others, save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: Emma Donnelly Date: 25th April 1995

Candidate

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Summary

The purpose of this study is to examine strategic alliances between large, established and small, evolving firms, in the software industry in Ireland. The core objectives are to develop an understanding for why cooperative agreements between large and small firms are initiated; and how such relationships are initiated, implemented and developed over time.

Until recently, strategic alliances were exceptions to normal operations since they were formed on an *ad hoc* basis to deal with specific situations generally linked to product access and market control. Due to the significant changes occurring in the business environment, the focus on strategic alliances has moved to a point where they are becoming the rule rather than the exception. A strategic alliance has been defined as a linkage between companies to jointly pursue a common goal – a collaborative agreement which may be viewed as an intermediate position along a spectrum of inter-firm dealings, encompassing arms-length transactions at one end and full mergers at the other.

This study rejects the notion of theory verification, whereby one would develop objectives, deduce hypotheses which are thus subjected to some form of empirical testing. Instead, it has concentrated its efforts on the discovery of concepts which lead to theory on the development and implementation of strategic alliances between small and large companies in the computer industry. Since there exists a relatively thin theoretical base concerning cooperative agreements between large and small companies in the literature, a core objective of this study was to integrate a number of phenomena which has been observed in practice by managers. The result of this is a descriptive model of a complex system of inter-related issues which determine the development of cooperative relationships between large, established and small, evolving firms.

Chapter One explores the concepts and theories developed by previous authors concerning aspects of strategic alliances. The chapter

commences with an examination of factors which have forced change into the environments of most organisations. This is followed with the search for a definition of an alliance and a review of the different aspects of the strategic alliance. The chapter is completed with particular emphasis on alliances between large and small firms.

In the Second Chapter, a strategic review of the software industry in Ireland is developed. It examines the industry by dividing company types into two subsections - indigenous and foreign-owned. Forces of change which influence the industry are examined and key trends are identified. A discussion on strategic alliances in the industry completes this chapter.

The Third Chapter examines the changing perspectives of marketing research methodology over the years. It debates the scientific nature of marketing and thus, marketing research. It explores areas of ethnography and phenomenology and proffers the notion of the case study as a legitimate research tool.

Chapter Four presents the research design where core objectives are discussed and propositions are developed. The choice of the case study is justified and advantages and limitations of the chosen methodology are discussed. The process of data collection and analysis are described.

In Chapter Five the case history is presented which is based on information gathered over a one year time period. It commences with some background on Dascom - the Irish software company under investigation - which is followed by some background market information. Relationship agreements are then outlined and the different decisions and behaviours associated with strategic alliances are documented. The chapter concludes with the situation, as it stands, at the present time.

The Sixth Chapter presents an analysis of the case using cause mapping to analyse the streams of decisions and behaviour occurring through the phases of initiation, implementation and development of strategic alliances.

In Chapter Seven the author develops a theoretical model, based on the causal map presented in the previous chapter. An explanation is offered and the key research objectives and propositions addressed. Based on the model developed and the conclusions derived, a number of managerial implications are deducted. Finally, further research recommendations are proposed.

Chapter 1

LITERATURE REVIEW

1.1.0 Introduction

This chapter explores the concepts and theories developed by previous authors concerning aspects of a strategic alliance. It is an attempt, not to develop categories for further measurement and quantification, rather, to help the author understand the substantive area under investigation. The literature is used mainly for informing rather than as data for analysis. Its usefulness is often under-estimated by researchers. Glaser and Strauss (1969) draw an interesting parallel between library procedures and field work:

> There are some striking similarities - sometimes obvious although often overlooked - between field work and library research. When someone stands in the library stacks, he is, metaphorically, surrounded by voices begging to be heard. Every book, every magazine article, represents at least one person who is equivalent to the anthropologist's informant or the sociologist's interviewee (p.163).

The chapter commences with an examination of factors which have forced change into the environments of most organisations. This is followed with the search for a definition of an alliance and a review of the different aspects of the strategic alliance. The chapter completes with particular emphasis on alliances between large and small firms.

1.2.0 Forces of Change

Wealth is no longer measured primarily in terms of ownership of fixed physical assets, but rather in terms of time-critical access to needed resources and to knowledge-intensive value-added operations. The value-added dimension, moreover, will be the deciding source of the comparative advantage required for industrial competitiveness. This shift in the basis of wealth formation is a major break with the past, a discontinuity that is driven by accelerating forces of change (Merrifield, 1992, Sako, 1993).

One of these forces involves a rapid expansion in technology which has created about 90% of all scientific knowledge over just the last 30 years (Merrifield, 1992). This knowledge base is likely to double again in the next 15 years, reducing product and process life cycles often to

less than 5 years, and rendering facilities and equipment obsolete long before their currently estimated useful lives can be realised. Nothing on this scale with such profound effects has ever happened before (James, 1985, Nueno and Oosterveld, 1988).

An important element of the technology explosion is an exponential increase in ease of communications. Information, technology and capital can now flow with the speed of light to wherever they are needed and impact on both first and third world. As a result, the lesser developed countries have now become aware of, and aspire to, the quality of life they see in the developed countries. About 88% of world population live in the lesser developed countries, which are currently abruptly entering global markets and capturing market share in existing industries with low-cost labour and natural resources. This leads to overbuilding world capacity in basic businesses. Subsequent price erosion then results in government subsidies to preserve jobs, and in trade barriers to protect local production, however, it also tends to destroy the business for all global competitors.

A few developed nations have adopted 'targeted industry' strategies, which assemble vertically integrated consortia. These are designed with heavy government subsidies (essentially a zero cost of capital) to capture market share in selected industries with predatory pricing i.e., dumping. Loss of competitiveness in these industries is an inevitable consequence for many established companies, particularly those where entrenched bureaucracies resistant to change, impede the ability to adjust in time.

The recession of the late 1970s and early 1980s has had a profound impact on the business environment. High growth turned into stagnating demand for many products and services and companies were faced with increasing levels of competition in the fight to secure market share in conditions of low growth or declining demand. Survival or growth under such conditions depend on the ability of firms to take business away from competitors, to protect existing business from competitive attacks, and to deter competitors from aggressive acts.

The costs of competing in an increasingly complex environment have escalated. A period of sustained inflation; the heavy expenditure required to develop and bring to market new technology, processes and products; the growth in and complexity of regulatory compliance; the need to compete on an international basis and the increased marketing costs with competing in a mature market have combined to increase business expenses (James, 1992).

Political intervention in business has increased. While much early legislation was aimed at curbing business abuse, legislation in the 1970s was triggered by political concern of the effects of business activity on the environment, health and safety and corruptive practices. In the 1980s the significant trade imbalances particularly between the West and Japan began to trigger a round of protectionism designed to safeguard indigenous companies in the United States and Western Europe. These legislative changes have not only made the operating environment of the firm more complex but also costs of regulatory compliance have risen substantially adding to the expense spiral.

1.2.1 Mergers - an Organisational Panacea

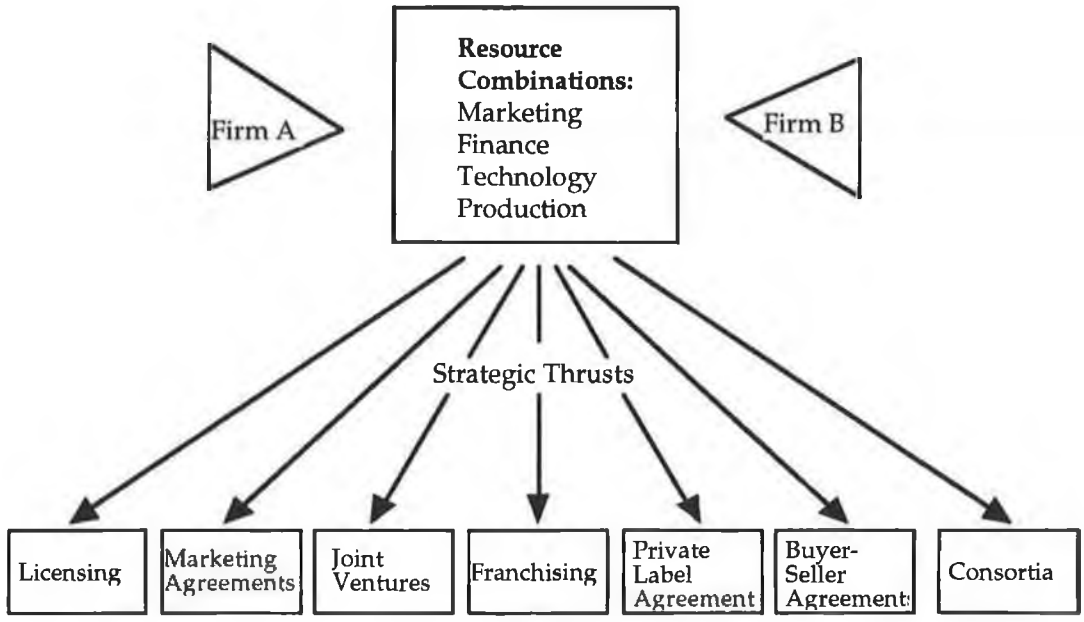
Many corporate executives, concerned about sustaining growth and staying competitive, consider merger an organisational panacea. Economists and organisational researchers have been trying for years to discover why business mergers are so attractive to business executives. Yet, most research has indicated that mergers are not an attractive investment relative to other opportunities (Lubatkin, 1983).

During the course of a merger, the employees of both firms will suffer from unrest. Combined strategies need to be formulated and implanted; power and control issues need to be resolved. Often the expectations of the management of both companies are not realised (Feinstein, 1986). Many companies are acquired at a premium (which perhaps exceed 100 per cent) over the previous market values. If the market price is an accurate predictor of firm value, as most economists will argue, then any premium over market value paid by the acquiring firm is waste (Harrison, 1987).

Interest expenses are only one part of the cost of new debt that is usually necessary to finance a large merger. New debt increases the leverage of the merged corporations, thus increasing financial risk. The image of a company can suffer greatly before, during and after a take-over. Many people resent large companies or fear that they have too much power. Others do not like the idea that a giant firm is able to engulf a smaller firm against its will. An unwilling target company can capitalise on these feelings through press releases and public interview, which increase the bad image of the acquiring firm.

The most frequently cited reasons for engaging in mergers are growth in sales, growth in earnings, investment of excess cash, reduction of dependence on one business area and improved management of the acquired firm. However, companies do not have to resort to merger to achieve such results. Some of the alternatives may be seen in Figure 1.1

Figure 1.1 Alternatives to Merger



Source: James, 1985, p.77

1.3.0 Strategic Alliances

Alliances between companies have long been a *modus operandi* in business. Until recently, business alliances were exceptions to normal operations since they were formed on an *ad hoc* basis to deal with specific situations generally linked to product access and market control. Due to the significant changes occurring in the business environment, the focus on strategic alliances has moved to a point where they are becoming the rule rather than the exception. As Figure 1.1 shows, alliances offer numerous alternatives to the traditional option - and most frequently used - mergers.

To management nurtured on the long-run success of the 'big-is-best' school of strategy, reliant on go-it-alone organic growth, the move to strategic alliances was a major change in direction. For most companies the actualities emerging by the mid-1980s were continuously diminishing margins brought about by escalating costs, increasing competition as well as other forces of change. This increased vulnerability began to focus management attention on less orthodox strategic approaches aimed fundamentally at reducing risk and emphasising survival.

For other companies, the motive was, literally, to stay in business. Years of producer-driven strategies, despite the shakeout following the recession in the early 1980s, had left many companies with layers of hidden costs which had severe effects on competitiveness. The growth of foreign direct investment in new plant, equipment and working practices with consistently high quality products at lower prices than indigenous manufacturers began to threaten almost every industry. At the same time, it was discovered that companies were undervalued; the break-up value of firms was often far above the market value of the company, and low productivity, inefficiency and overstaffing had become prevalent. In between more efficient new competitors and financial predators, strategic alliances appeared to many managements as a major opportunity to simultaneously fight both. The move to collaborate and cooperate through strategic alliances is a managerial response to both change and uncertainty, and to the realisation that

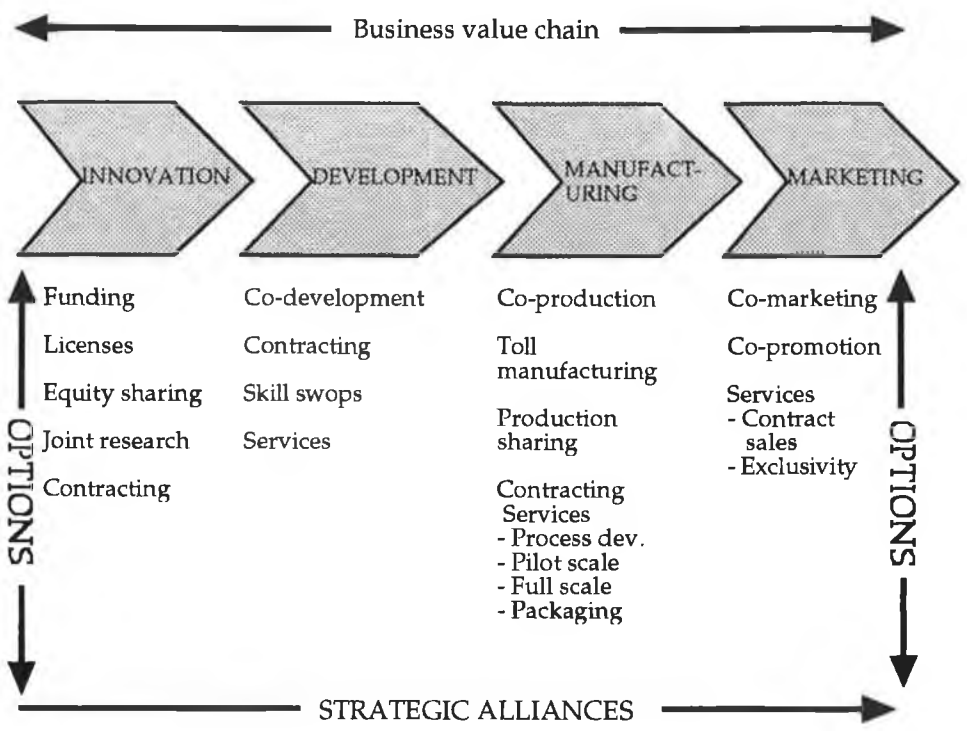
even in domestic markets and low technology businesses, no company can now compete on an individual basis (James, 1992).

James (1992) suggests that two factors enabled management to quickly translate the concept of alliances into reality. Firstly, while much can be done to make the typical organisation structure a more effective and efficient developer, producer and marketer by rationalising production, streamlining administration and increasing sales productivity, companies are becoming much less reliant on a fully vertically integrated organisation structure to provide global reach. With the exception of financial resources, there is no longer any part of the process from finding creative new ideas based on advanced technology through to the physical marketing of the final finished product, where the extra weight of an integrated organisation structure is a decisive factor. Virtually every activity can now be contracted out or developed with other companies. By decoupling the fixed system and outsourcing upstream and downstream activities and functions with alliances, a company can now overcome many of the built-in obstructions to creating value throughout the system (Figure 1.2). A decoupled system introduces the opportunity to overcome the widely fluctuating demand for skills, builds flexibility into fixed-cost structure, helping to move ideas faster and cheaper from concept to market. By improving performance at each stage of the business process, companies can not only capture significant savings but also improve their competitive position by optimising size, avoiding the need to build inflexible structures. The new decoupled system, even at the function level provided the perfect vehicle for introducing strategic alliances.

Secondly, many companies recognised the need for strategic alliances almost simultaneously. As well as experiencing the same type of problems at the same time, there were sufficient capabilities available to match a diverse range of technology, product, marketing, finance and geographic needs. The large range of capabilities and needs available provided firms with the flexibility to use alliances to augment core strategies or use alliances themselves as core strategies. The ability to access with ease, a wide variety of vital skills and markets without taking the more costly, uncertain and final step of acquisition or

merger powered the rapid introduction of alliances as an orthodox strategic approach to business.

Figure 1.2 The Value Added System



Source; James, 1992, p.69

1.3.1 An Alternative Paradigm for Multinational Operations

Cooperative arrangements are numerous enough to suggest that the stereotype of the multinational corporation may need to be changed. Traditionally, it has been seen as a monolithic entity, controlling or owning its inputs and outputs, and expanding alone into foreign markets, based on its technological, managerial, and marketing dominance (Caves 1971). It could be seen as a transnational chain of control, 'internalised' within the firm (Buckley and Casson 1976). In this view, the corporation reserves for itself the gains from vertical and/or horizontal integration.

In many situations, the international firm is better seen as a coalition of interlocked, quasi-arms-length relationships. Its strategic degrees of freedom are at once increased by the globalisation of markets (Levitt,

1983) and decreased by the need to negotiate cooperative arrangements with other firms and governments. In linking up with an other firm, one or both partners may enjoy options otherwise unavailable to them, such as better access to markets, pooling or swapping technologies, enjoying larger economies of scale, and benefiting from economies of scope. As a corollary, each partner is less free to make its own optimising decisions on issues such as product development, transfer prices, territorial scope, and retention of earnings versus dividend policy.

1.3.2 Definition

The use of strategic alliances has become an increasingly important management tool (Lorange and Roos, 1991). In parallel, the area of alliances has received a large amount of research interest over the last few years. Yet, a uniform definition of strategic alliances does not exist. Other phrases such as cooperative agreements, interfirm relationships, joint ventures, interfirm cooperation have all been used when describing an alliance. Harrigan (1985), for example, focuses much of her work on joint ventures, as do Geringer (1991), Contractor and Lorange (1988), Lyons (1991), Lyles (1987), Kent and Hellriegel (1991), Anderson (1990), Kogut (1988), Killing (1983), Gomes-Casseres (1988), and many others. Bleeke and Ernest (1991) examined 49 strategic alliances which varied widely in size, location, industry and structure. Lyles (1987) surveyed four multinational firms with experience in international joint ventures to determine what mistakes they had made while joint venturing. Geringer (1991) concentrated much of his work on the strategic determinants of partner selection criteria in international joint ventures, examining 81 joint ventures. Niederkofler (1991) examined various types of strategic alliances investigating the evolution of these alliances. Much of his work focused on cooperative partnerships in high technology industries and 6 case studies were developed. Morris and Hergert (1987) attempted to identify trends in international collaborative agreements defined a collaborative agreement as:

> ...a linkage between companies to jointly pursue a common goal; a collaborative agreement may be viewed as an intermediate position along a spectrum of inter-firm dealings, encompassing arms-length transactions at one end and full mergers at the other (p. 16).

They believe that collaborative agreements may be categorised by four attributes: shared responsibility, maintenance of individual identities, continual transfer of resources and indivisibility of project. Parkhe (1991) examined interfirm diversity, organisational learning and longevity in global strategic alliances. He defined global strategic alliances as:

> ...the relatively enduring inter-firm cooperative arrangements, involving cross-border flows and linkages that utilise resources and/or governance structures from autonomous organisations headquartered in two or more countries, for the joint accomplishment of individual goals linked to the corporate mission of each sponsoring firm (p. 581).

This definition delineates global strategic alliances from single-transaction market relationships, as well as from unrelated diversification moves, while accommodating the variety of strategic motives and organisational forms that accompany global partnerships. Hagedoorn (1990) acknowledges that many studies refer only to joint ventures and assume that other forms of cooperation share identical features. He attempts to provide a classification of modes of cooperative agreements in terms of their organisational interdependence (as do Contractor and Lorange 1988a). Lei and Slocum (1991) focus their research on three broad types of strategic alliances, i.e., licensing arrangements, joint ventures and consortia. Knight (1991) examined the area of strategic partnerships as used by 110 small innovative, high technology firms. In this study, strategic partnerships were defined very broadly as a "cooperative agreement in which two or more businesses are actively involved in the management of a venture" (p. 572). Lewis (1990) simply defines strategic alliances as a "situation where two or more firms with mutual needs cooperate and share risks to reach a common objective" (p. 1).

However, many authors agree that strategic alliances between two or more firms include equity and non-equity arrangements. A joint venture, the most common form of equity arrangement "implies the creation of a separate corporation, whose stock is shared by two or more partners, each expecting a proportional share of dividends as compensation" (Contractor and Lorange 1988a, 7). Other alliances that represent non-equity forms of cooperation between two or more firms include supply agreements, licensing, marketing agreements,

exploration consortia, research partnerships and coproduction agreements. However, both the equity and nonequity forms of alliances represent long term relationships that provide individual firms with the means to broaden the scope of a firm without expanding the firm. Equity and nonequity alliances also allow a firm to share activities without the inherent risks of going it alone (Porter, 1985).

For the purpose of this study, a strategic alliance will be defined using the definition established by Morris and Hergert (1987), i.e.,:

> ...a linkage between companies to jointly pursue a common goal; a collaborative agreement may be viewed as an intermediate position along a spectrum of inter-firm dealings, encompassing arms-length transactions at one end and full mergers at the other (p. 16).

1.4.0 Aspects of Strategic Alliances

Many aspects of the phenomenon of strategic alliances have been investigated, among them: strategic motivations for alliances; structure and performance of strategic alliances; strategic alliance management; organisational learning and transfer of know-how between alliance partners, partner selection criteria; culture; and exit strategy. The specific problems of strategic alliances between large, established firms and small companies have not received sufficient attention, however, with the recent exceptions of research by Doz (1988), Knight (1991), Peridis (1992) Niederkofler (1989).

1.4.1 Motivations for Strategic Alliances

The profound transformation of the world economy within the last two decades has placed increasing pressure on firms to achieve performance targets. Thus, as many firms scan the environment and assess their own resources and capabilities, they often discover a gap between what they would like to achieve and what they are capable of achieving. Their strategic goals, such as a certain market share or a competitive position, are often unattainable in the continuously changing environment of global competition. This concept is commonly referred to as a 'strategic gap'. The size and importance of the firm's strategic gap are primary factors in its motivation to enter into a strategic alliance. The greater the size of the gap and the

perceived importance of filling it, the more likely the firm will desire to form an alliance with another firm. Research on cooperative partnerships emanated from the strategic management field, and thus, many studies have addressed the strategic motivations for alliances. Killing (1983, pp.6-7) identifies four main motives for the formation of joint ventures: government insistence; spreading the financial risk; access to complementary skills; and achieving satisfactory economies of scale in research and development, production or marketing. Harrigan (1985, pp.24-33) classifies the benefits of joint ventures into three groups: internal benefits such as cost and risk sharing, obtaining financing, corporate intelligence and innovative managerial practices; competitive benefits which strengthen current strategic positions for example, influence industry structure's evolution, preempt competitors and gain access to global networks; and strategic benefits which augment strategic position through the creation and exploitation of synergies, technology transfers and diversification.

Contractor and Lorange (1988, 4) believe that in the broadest terms, joint ventures, licensing, and other types of cooperative arrangements can achieve a number of objectives which provide the rationale for such ventures. These are risk reduction; economies of scale and/or rationalisation; technology exchanges; co-opting of blocking competition; overcoming government-mandated trade or investment barriers; facilitating initial international expansion of inexperienced firms; and vertical quasi-integration advantages of linking the complementary contributions of the partners in a value chain.

Culpan and Kostelac (1993) also explain the rationale behind cooperative ventures through the use of the value chain. They believe that the motives of participating firms in a cooperative venture may vary according to their resource dependency and involvement in certain activities in the value chain. They argue that some firms form alliances because they face too much risk in their competitive environments or possess too few internal skills to cope with these challenges alone. Culpan (1993) combines a variety of reasons for strategic alliances into two principal motives which are resource pooling and risk/cost reduction.

Hergert and Morris (1988) identified the strategic rationale behind international collaboration as: joint product development production, marketing production and/or marketing, development and marketing, and a combination of all of them. They argue that "cooperative behaviour begins to occur very early in the product-development cycle" (p.107), because it is easier to manage at this stage than during the marketing stage. Gentry (1993) supports the idea that strategic alliances between purchasers and suppliers are gradually replacing the adversarial relationships of the past. The motives behind these relationships are, she postulates, achieving superior quality conformance, cooperating on cost reduction programmes with a minimisation of risks and finally, sharing information, expertise and new technology.

1.4.2 Structure of Strategic Alliances

As aforementioned, much research in the cooperative alliances has been concentrated on joint ventures i.e., where a separate entity has been established and ownership is shared (for example, Harrigan 1985, Killing 1983). These arrangements are regarded as the purest form of cooperation, where problems can be expected to be most pronounced due to the nature of a joint venture. Joint ventures have more than one parent, whom, unlike the shareholders of a widely held public company, are visible and powerful and have the opportunity to disagree with any decision taken. For example, at the board level, where members comprise representatives from each parent, differences in priorities, direction and even values usually emerge, which may result in confusion, frustration and possibly bitterness and a resulting delay in decision making.

Between the two extremes of spot transactions undertaken by two firms, on the one end, and their complete merger, on the other hand, lies several types of strategic alliances and cooperative arrangements. These arrangements differ in the formula used to compensate each partner (the legal form of the agreement) as well as in the strategic impact on the global operation of each partner. Contractor and Lorange (1988a) rank these arrangements in order of increasing inter-organisational dependence which is generally, but not necessarily, correlated with strategic impact: technical training, start-up assistance

agreements; production, assembly, buyback agreements; patent, licensing; franchising; know-how licensing; management, marketing service agreement; nonequity cooperative agreements in exploration, research partnership and/or development and coproduction; and equity joint venture. They indicate how interorganisational dependence increases as one proceeds from simple one-shot cooperative agreements to ongoing formal joint ventures.

Although Harrigan (1985, 4) concentrates much of her research on joint ventures, she does examine other types of agreements: those with full equity ownership of assets and skills: mergers and acquisitions or programs for internal venture development; those with partial equity control of resources: minority investments and operating joint ventures; and those with contractual control only: research and development partnerships, cross-licensing or cross-distribution agreements and other joint activities and cooperative agreements.

In his discussion on international cooperative arrangements, Root (1988) proposes a number of taxonomies that classify such arrangements into types or categories:

1. Nationality and the degree of interfirm cooperation
2. Contractual agreements and contribution from the value-added chain
3. Mission and geographic scope
4. Fiduciary risk and environmental risk exposure
5. Relative bargaining power, ownership and control.

Knight (1991) in his study of strategic partnerships as used by smaller innovative firms proposes a typology in which the interaction and interdependence between the two organisations usually increases as one progresses through the list: subcontracting, licensing, consortium, strategic alliances, joint ventures and acquisition.

Borys and Jemison (1989) in discussing what they refer to as 'hybrids' define a number of key types of intercompany agreements:

1. Mergers are the complete unification of two or more organisations into single organisations

2. Acquisitions involve the purchase of one organisation by another, such that the buyer assumes control over the other
3. Supplier arrangements represent contracts for the sale of one firm's output to another
4. Joint ventures result in the creation of a new organisation that is formally independent of the parents.

Lorange and Roos (1990/91) view strategic alliance options in terms of the degree of initial interdependence between the parent firms at the time of initiation. They list five types of alliances in an increasing interdependence: ad hoc, informal co-operative venture; recurring, formal co-operative ventures; project based joint venture; joint ownership; and mergers and acquisition. While, Nueno and Oosterveld (1988) concentrate their study on technological alliances which they divide into two categories. Firstly, technological alliances which are 'vertical', where the main purpose is to get access to a technological capability, and secondly, 'horizontal', where the main purpose is to secure access to a market. They also develop criteria to differentiate alliances in these categories: objectives, level at which the decision is made, time horizon, number of partners, impact on the value added chain, evaluation of risk, existence of frameworks and finally, stability of the alliance.

1.4.3 Performance of Strategic Alliances

Although strategic alliances are the object of intense interest, remarkably few publications address performance assessment. Most of them offer reasons for establishing an alliance, descriptions of the creation of specific ventures, or guidelines for selecting a partner. In short, the possibilities of alliances seem to generate more attention than their results. One might believe that an alliance should be evaluated like a division of the parent. But this leads to a number of problems. Firstly, which parent should the alliance be evaluated under. Secondly, what if the alliance is a success but at the expense of a parent's interests. Furthermore, alliances are especially likely to be used in risky, uncertain environments. In such an environment, any business is difficult to evaluate because profit is a long term proposition and because there are no performance baselines for comparison. Also, many alliances are not intended to fill standard

business objectives (such as making profit). Instead, they are created to learn a technology or for research and development purposes, for example. It is very difficult to assess how well an alliance meets qualitative objectives, such as these.

Performance measurement remains a cloudy issue. Harrigan (1988, 207) measures performance by considering three indicators - venture survival, duration and sponsor-indicated assessments of success. However, survival and duration do not indicate success if an alliance is terminated because it has fulfilled its purpose (for example, technology transfer). Sponsor-indicated assessments may not be reliable as managers may not be willing to admit failure. Bleeke and Ernest (1991, 130) define success if an alliance passes two tests: both partners achieve their ongoing strategic objectives and both recover their financial costs of capital.

In his study on the assessment of joint venture performance Anderson (1990) has found that many firms typically rely on the same methods they use to evaluate internal divisions with unambiguous goals that are operating in stable, low risk environments. Imposing a formidable amount of paperwork on the venture, the parents typically evaluate performance using financial reports, supplemented by whatever can be gleaned from informal visits by parent executives. Even though they realise that this approach is not appropriate for most joint ventures, firms often use such standard methods for lack of an operationally feasible alternative.

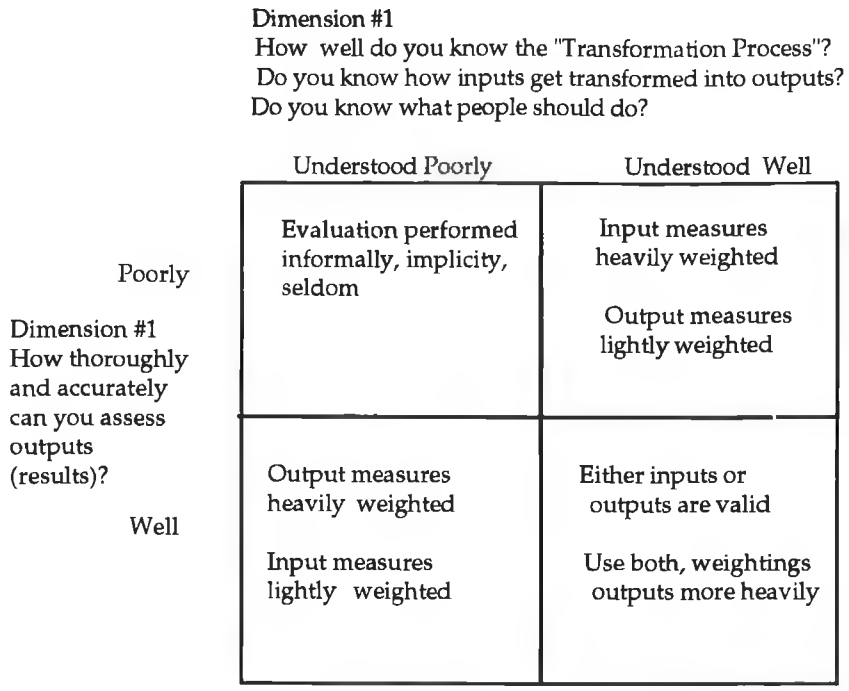
Anderson (1990) puts forward a number of arguments as to why joint ventures should not be evaluated using the standard operating procedures that corporate headquarters applies to wholly owned divisions with conventional business objectives. Firstly, the interests of the joint venture and the parents are often in conflict; parents who evaluate joint venture performance on the same basis of self interest as is applied to their own subsidiaries risk alienating their partners. Secondly, the organisational politics of a joint venture are much more complicated than that of wholly owned divisions. For example, joint ventures are particularly easy to criticise with impunity because venture managers simply cannot be as visible to a parent as most

subsidiary managers are. Thirdly, while they may be used for many purposes, joint ventures are especially popular in risky uncertain situations, for it is there that firms are most likely to concede some control if that will spread risk and expand expertise. But when risk and uncertainty are high, profitability by itself is a poor measure of the joint venture's value. For start-up, high risk businesses, profits, if any, are in the future, and high costs are in the present.

Anderson (1990) offers a number of guidelines in assessing joint venture performance. He believes that the most basic issue in joint venture performance evaluation is the question of whose performance to assess. He argues that joint ventures should be evaluated primarily as stand-alone entities, seeking to maximise their own performance, not the parents'. He classifies performance measurements along a continuum ranging from input to output measures. At the output extreme are the 'results' measures that most people use to assess current performance; these are financial measures, of which profitability is the most commonly used.

At the input extreme are indicators of states (e.g., high morale coordinated actions). Using these notions and Ouchi's (1979) approach to performance assessment, Anderson (1990) classifies joint venture along two dimensions (Figure 1.3). Most joint ventures must be given considerable time before they are ready to be judged on traditional output measures, yet many parent firms evaluate immature ventures too formally, with too much emphasis on financial criteria and not enough on input measures. The results are likely to be premature termination or a cutback in commitment before a venture has had time to realise its potential.

Figure 1.3 Performance Assessment

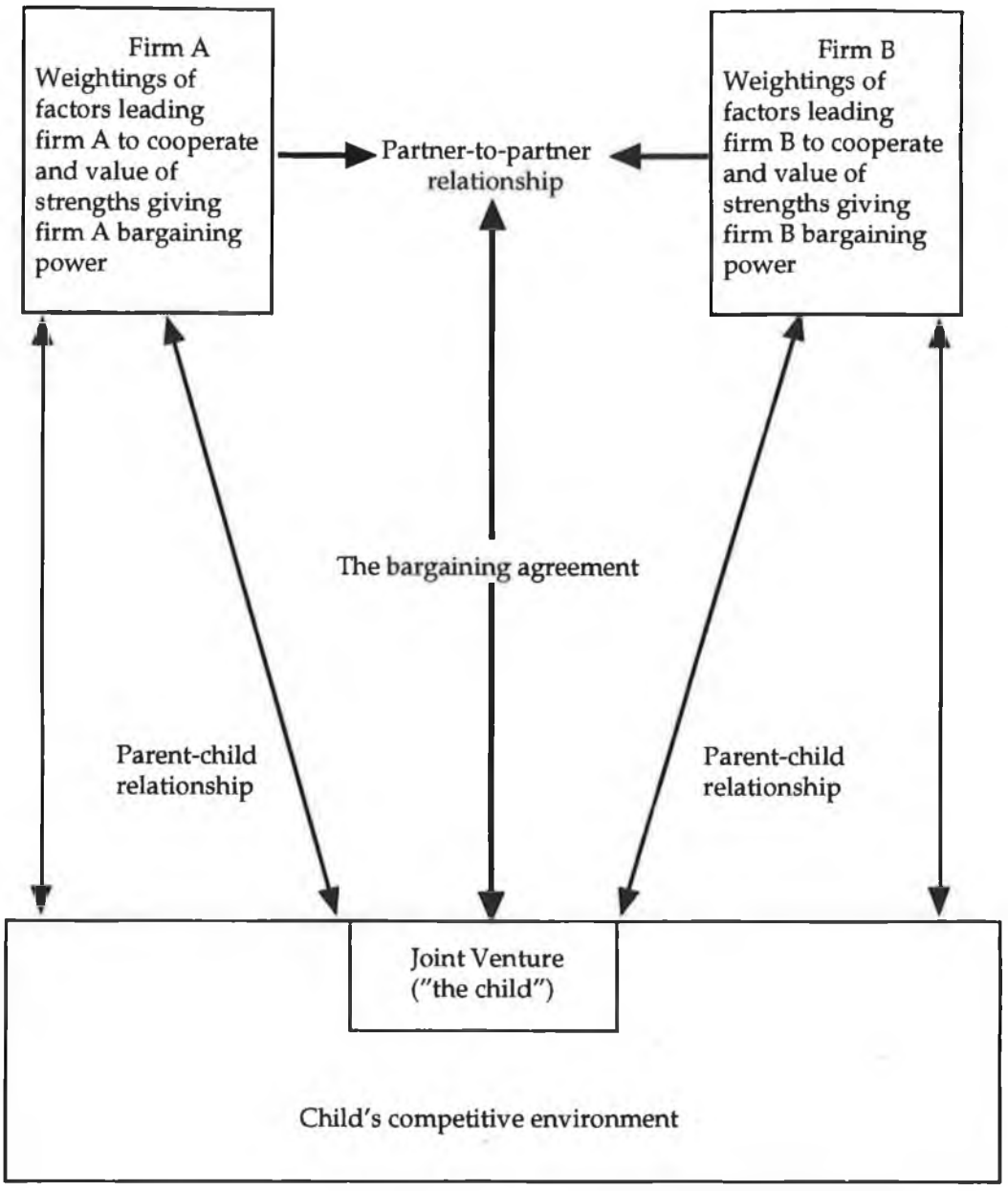


Source: Anderson, 1990, p.26

1.4.4 Strategic Alliance Design

Alliances are just one of a range of business development routes which a firm may follow to improve or change its competitive position. It is essential that before choosing the alliance, it has been analysed in the light of the company's overall corporate objectives and other strategic alternatives. The potential risks and benefits must be identified and deemed acceptable. Harrigan (1985) examines the planning process involved in the formation of joint venture. The framework presented in Figure 1.4 illustrates partner-to-partner relationships in creating a joint venture. The resources and attributes parent firms will share with their 'child' affect both their willingness to form joint ventures and each parent's relative bargaining power therein.

Figure 1.4 Partner-to-Partner Relationships Creating a Joint Venture



Source: Harrigan, 1985 p.50

Lorange and Probst (1987) argue that any organisation, in order to be successful, must possess self-organising properties in order to cope with evolutionary pressures. They hypothesise that the reason for many joint venture failures is that they have not been designed with sufficient adaptive properties to cope with the emerging environmental turbulence. It has been previously argued that many alliances take place in high risk environments, thus reflecting the

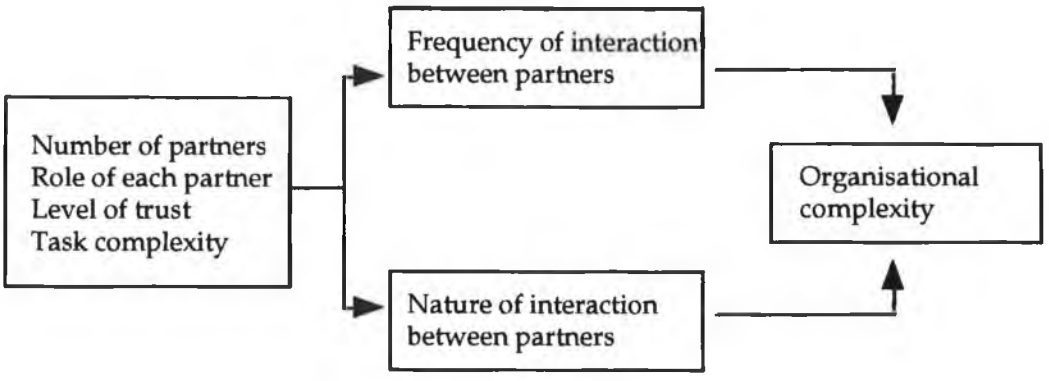
importance of establishing self-organising properties in the planning stage. Lorange and Probst (1987) delineate four critical criteria for establishing self-organising systems. Firstly, it is imperative that the joint venture's structure and organisation be designed in such a way that it can execute its strategy and realistically be able to cope with its environment. Therefore, it is essential to incorporate sufficient flexibility in a joint venture. The complexity of the joint venture system needed to achieve this depends on the requisite variety in its environment. The difficulties lie in making the system complex enough to adapt to its environment but simple enough to be managed. Secondly, the successful continuity of a joint venture will depend significantly on its ability to maintain a degree of internal coherence while it readjusts to the environment. As the joint venture evolves, the roles of various stakeholders involved will change - some may become more active, visible and powerful - others may eventually withdraw. Moreover, these realignments must be commonly shared, understood and accepted through the self-referencing process. Thirdly, self-organising systems must be autonomous. The interrelations and interactions defining a system as an entity should only involve the system in question and no other system. A joint venture should depict a certain degree of free-standing independence within its environment to survive the long run. There are potentially more resources, management capacities and processes embedded in the system than strictly are needed. This gives the system added flexibility to adapt and evolve. A joint venture should be set up to have alternative ways of carrying out its value creation tasks if something should go wrong.

By understanding and adapting the relationship of the joint venture to one or both of its parents, in the light of these properties, Lorange and Probst (1987) maintain that more appropriate organisational forms and more effective management processes can be chosen, which lead to better performing joint ventures and improved long term success. Theses are critical issues which must be addressed in the planning stage of a joint venture, or indeed, any other type of strategic alliance.

Killing (1988) argues that complexity is a key consideration in the design of strategic alliances. The complexity of an alliance will have very distinct implications for the management and success of that

alliance. Thus, in the planning stage, parents must create an alliance that is simple enough to be manageable. Alliances that undertake complex tasks do not always need to be organisationally complex. Although task complexity impacts an organisational complexity so do a number of other factors (Figure 1.5) such as the level of trust between parents, and the role played by each partner in the alliance.

Figure 1.5 Factors Affecting Organisational Complexity



Source: Killing, 1988, p.61

Firms wishing to create an alliance to undertake a complex task should first enter a simpler alliance with their chosen partner, in order that a degree of mutual trust may be established, prior to the formation of the more complex alliance. These issues must be addressed in the planning stage of an alliance.

Badaracco (1991) studied many alliances created by General Motors and IBM Corporation in the 1980s. He has found that critical factors for success are leadership, trust and commitment. Many success factors must be fostered in the planning stage of the corporate venture. Firstly, managers considering an alliance must have a clear strategic understanding of their company's current capabilities and the capabilities it will need in the future. Secondly, they must consider a wide range of possible alliances. Thirdly, before committing their company to an alliance, managers must scrutinise the values, commitment and capabilities of prospective partners. Furthermore, they must understand the risks of opportunism, knowledge leaks and obsolescence. Also, managers must plan to structure and manage

alliances like separate companies. Knight (1991) emphasises the importance of the selection, negotiation and the initial planning stages of a partnership. In his study, he found that the importance of having a clear understanding of the objectives before entering a partnership was viewed to be crucial for the success of that partnership. Managers in the study believed that partnerships entered simply for the sake of entering a partnership without specific, realistic goals and objectives were certain to fail.

1.4.5 Management of Strategic Alliances

Corporations are often reluctant to engage in any type of strategic alliance because of their perceived management difficulties. As well as recognising the obvious cultural differences between corporations, one must also acknowledge the differences in management styles. For example, differences in attitudes toward risk might result in conflict between partners - with one partner willing to take risks toward seeking high returns, while the other insists on greater security. Another example of differences in management styles is attitudes towards subordinate participation in decision making. Such differences lead to conflicts over what is appropriate leadership. Killing (1983) believes that there are two specific areas where joint venture management problems are most prevalent. Firstly, on the board level, "differences in priorities, direction and perhaps values will emerge. The result can be confusion, frustration, possibly bitterness and a resulting slowness to take decisions" (p.9). He quotes the example of a board of directors consisting of American and British managers, continually disagreeing about the amount of data required before a decision could be made. This problem meant that either the Americans had to agree to proceed with what they considered to be insufficient information, or the British had to incur a delay and additional expenditure collecting information which they did not feel was necessary. Secondly, on the operating level, a pursuit of self interests without the consideration of the partner and a lack of trust can destroy the relationship and thus the management process. The lack of clarity which typically surrounds a joint venture's objectives and the fact that there is often a degree of conflict between the objectives of the venture's parents means that the allegiance of the

venture's general manager plays an important role in determining the operational management of the venture.

Devlin and Bleackley (1988) highlight the difficulties in managing a strategic alliance. They place particular emphasis on the necessity of planning the management of an alliance, which in itself has inherent difficulties since an alliance will bring two (or more) organisations together with different cultures, management styles and policies. To increase the potential for successful management, they propose a number of guidelines for senior management involved in strategic alliances. The strategic alliance should be given high priority within the minds of the senior management who should receive regular reports on the performance and progress of the alliance. It is essential that an organisation structure which has clear lines of accountability and responsibility be established. Informal channels should be established so that what is learnt is fed effectively into the relevant decision-making centre of the parent companies. Senior management should hold a very positive attitude towards alliances. Finally, they must recognise the limitations of an alliance.

Lorange and Roos (1992) believe that the growing diversity of strategic alliances has important implications for the management of human resources. They view human resources as a strategic resource which should be managed in an explicit pro-active manner. They focus on six issues that they have found to be particularly crucial for management of human resources and core competencies within strategic alliances. The six issues are:

1. assignment of managers to strategic alliances: who should be assigned where
2. the human resource transferability issue: who controls a particular manager
3. the trade-off in time-spending between operating and strategic tasks among various managers involved in the strategic alliance
4. judgement calls regarding the performance of the human resource in the established strategic alliance: how to avoid biases
5. human resource loyalty issues: the strategic alliance versus parents
6. individual managers' career planning issues: how they can achieve career progression through strategic alliance assignments.

1.4.6 Organisational Learning and Transfer of Know-how

A primary use of strategic alliances is to obtain access to the partner's skills and know-how, transfer them to one's own organisation and use them there (Killing, 1983; Harrigan, 1985; Contractor and Lorange, 1988; Kogut, 1988). Lyles (1987) believes that while organisational learning is not synonymous with change, it involves organisational adjustment triggered by an impetus or force for change or continuity. Through her study, she found that a key distinction between successful and unsuccessful joint ventures was that successful firms were willing to learn from their mistakes and take corrective actions. In another paper, Lyles (1988) states that learning occurs on two levels in joint venture situations. On the lower level, partners learn to develop successful management systems based on past experiences. Therefore, experienced joint venture partners are less inclined to incur common joint venturing problems. On the higher level, partner firms adjust their internal system of norms and values as an effect of learning which, in turn, allows them to become more flexible, more risk-tolerant and to initiate organisation change.

Westney (1988) links the need for organisational learning to the fact that many industry boundaries are shifting:

> A firm whose activities are beginning to cross industry boundaries must acquire knowledge from its environment or, more precisely, from other organisations in its environment; knowledge about new technologies and markets as well as knowledge about how to manage its own operations in adding value to the technology and in dealing with the markets. In this context, cooperative strategies can become an indispensable mechanism for learning (p.339-340).

However, there is an obvious concern about technology leakage and black-box protection in the majority of strategic alliances. Where this is extremely prevalent, partners may become fierce competitors, leading to an unsatisfactory alliance.

Badaracco (1991) suggests that managers involved in all types of strategic alliances must be open to the fact that core knowledge and capabilities flow between partners. Indeed, he argues that many relationships have been fostered primarily to combine such capabilities and knowledge of partners. Thus, each partner is expected to learn a

certain amount about the other's capabilities, and accept that channels of communication have opened between them.

Hamel (1991) proposes two mechanisms for obtaining value from a strategic alliance: bargaining over the economic benefits that result directly from the successful execution of joint tasks, and internalising the skills of partners, i.e., interorganisational learning. He argues that firms should be willing to learn from their partners and failure to do so is likely to ultimately undermine the competitiveness and independence of a firm.

1.4.7 Partner Selection

One critical success factor of a strategic alliance is the selection of compatible partners. The main reason a company will pursue an alliance is that it is the best way to fulfil an objective. Therefore, partner choice will build on a precise definition of the company's priority needs and what is most important to meet them. While no firm will make a perfect match, each one must satisfy its basic requirements and adjust to the rest. For an alliance to become a success, there must be a strong level of strategic match between the partners. Partner selection is a very important factor in the formation and operation of a strategic alliance, because the specific partner chosen will partly determine the mix of skills and resources, operating policies and procedures, and overall competitiveness of the strategic alliance.

Harrigan (1985, 1988) has undertaken extensive research in this area. She proposes that firms which are equal in size, venture experience level, resource and managerial capabilities, and which possess complementary corporate missions are more likely to create a successful strategic alliance. These and other attributes create a strategic fit in which the bargaining power of the venture's parent firms is evenly matched. However, in her 1988 study, Harrigan has found that since 1975, many alliances have been formed where there are variations in partners' experience level and asset size. Yet, the results of this study suggest that alliances last longer between partners of similar asset sizes, venturing experience levels and cultures. The study further suggests that an alliance may last longer when its activity is

related (in products, markets, and/or technologies) to both its sponsors' activities.

Geringer (1991) has undertaken extensive research examining partner selection criteria in international joint ventures. This study attempts to improve understanding of the partner selection process and how firms proceed in selecting partners. A typology of selection criteria is proposed in which a distinction is drawn between task and partner related dimensions of selection criteria.

> This typology explicitly acknowledges those requirements which are common to both international joint ventures and other forms of organisations (i.e., the task-related dimensions), as well as those which are unique to multi-partner organisations (i.e., the partner-related dimensions) (Geringer 1991, p.56).

Further, Geringer (1991) has found that the relative importance of a particular task-related selection criterion is closely related to three variables which are associated with a parent firm's strategic context. These variables include the managerial perceptions of three factors; firstly, the extent to which that dimension was critical to the venture's performance; secondly, the parent's current competitive position vis-a-vis that critical success factor dimension; and finally, the anticipated future level of difficulty to be encountered in internal efforts to achieve a viable competitive position on that critical success factor dimension. Thus, management must undertake a thorough analysis of its own company, compare its current and potential capabilities to those deemed necessary for a successful alliance and then decide what additional task-related capabilities are needed.

Bleeke and Ernest (1991) support Harrigan's (1988) findings relating to variations in the strength of partner firms. They found (in their study of 49 strategic alliances) that alliances between strong and weak companies are rarely successful. Such alliances fail to provide the missing skills and capabilities (i.e., Geringer's (1991) task-related skills) necessary for optimum growth and performance. Where an alliance is formed between a strong company and a weaker company for reasons such as the strong company seeking to control the venture or the weak company seeking to compensate for its lack of skills, it is very likely that such alliance strategies will not work.

Devlin and Bleackley (1988) accentuate the importance of partner selection and point out that many senior executives fail to recognise the significance of partner selection and therefore, do not undertake an adequate search for the right partner. They also develop the concept of strategic fit between firms wishing to enter into an alliance and maintain that the firm should investigate the reasons why the partner firm wishes enter such an alliance. According the Lyons (1991) "...even when the 'ideal' partner(s) is 'obvious', companies are advised to conduct a formal appraisal of all options that could be taken before commitments are made". When choosing a partner it is essential to take a long-term outlook as well as looking at the more immediate benefits:

> In choosing a company with which to form a strategic alliance, senior executives must be aware that what may seem to be a short-term operational benefit arising out of the alliance may, in fact, lead to the eventual loss of the company's strategic position, either to its alliance partner or to one of the company's competitors (Devlin and Bleackley, 1988).

Lyles (1987) delineates the long term implications of partner selection. To build a successful alliance, it is essential to maintain partner rapport. Partners must have a mutual respect for each other and recognise the potential long-term effect of a mistake on partner rapport. Careful selection of partners can reduce the chances of such a mistake occurring. Kulkosky (1989) believes that a good match requires a mix of product compatibility, viability of both partners, similar goals, corporate cultures that blend well and commitment. He also feels that a thorough evaluation of all potential partners must be undertaken before choosing the partner. Lei and Slocum (1991) further acknowledge the necessity of careful selection and evaluation of prospective partners in terms of partners who appear to share the same values, working styles and philosophies as the firm seeking a partner. Lewis (1990) postulates that when a firm is searching for a partner, there are three categories under which a potential partner should be examined: combined strength, compatibility and commitment.

Lee et al. (1993) hypothesise that the decision criteria used to select a partner are strategic and resource fitness; strategic fit includes strategic vision, strategic importance of the project and pressures such as other

options open to the company; resource fit incorporates the level of previous experience in strategic alliances, the technological, managerial and financial resources and finally the level of managerial commitment.

1.4.8 Culture

The influence of society's culture permeates all aspects of life within the society, including norms, values and behaviours of managers in companies. Cross-cultural interactions experienced in strategic alliances bring together people who have different patterns of behaviour and belief and different ways of interpreting the world (Parkhe, 1991). Culture and cultural differences have a very deep impact on the management of strategic alliances. In some cultures, problems are actively solved where managers must take deliberate actions to influence the environment and affect the course of the future (the basis for strategic planning). In contrast, in other cultures, life is viewed as a series of predetermined situations that should be accepted as being inevitable. Strategic alliance partners will have different views on such areas as technology development, production and sourcing, market strategy, marketing and so on. For example, in some cultures conflict is seen as a healthy, natural and inevitable part of relationships and organisations. Indeed, Cosier and Dalton (1990) suggest the programmed or structured conflict should be used as a method of enhancing the effectiveness of strategic decision-making. Yet in other cultures, vigorous conflict and open confrontation are deemed distasteful. In this instance, either party will actively seek to avoid embarrassment and loss of face by talking indirectly and ambiguously about the areas of difference until common ground can be found. Firms wishing to engage in strategic alliances must develop an understanding of the different cultural modes of thinking and behaving. It is necessary (and cost-effective) for such companies to invest in formal intercultural awareness programmes, yet, Black and Mendenhall (1990) have found that strategic alliances lack such formal training programmes.

Strategic alliances are also affected by the national context within which they exist, i.e., surrounding industry structure and institutions, and government laws and regulations (Parkhe, 1991). Effective

collaboration will be hampered by the extreme diversity which exists in the national contexts of strategic alliances. Parkhe (1991) examines the national context of the world's three main trading areas:

> *Japanese context.* In Japan, companies have a long history of cooperating in some areas while competing in others, a practice that can be traced primarily to two factors: direction from the Ministry of International Trade and Industry (MITI) and keiretsu, or large industrial groups of firms, representing diverse industries and skills... *U.S. context.* In the U.S., the federal government has traditionally viewed cooperation between companies with suspicion, particularly if they competed in the same methods... *European context.* In Europe, interfirm cooperation historically has been hampered by fragmented European markets, cultural and linguistic differences, diverse equipment standards and business regulations, and nationalist and protectionist government policies (pp.586-587).

However, Parkhe (1991) also acknowledges that most governments now see the potential advantages of strategic alliances and they are attempting to narrow the gap which exists in national contexts.

The individual culture of an organisation is a key factor in the development of successful strategic alliances. The culture of an organisation is:

> ...that set of beliefs, customs, practices and ways of thinking that they (i.e., those within the organisation) have come to share with each other through being and working together. It is a set of assumptions people simply accept without question as they interact with each other. At the visible level the culture of a group of people takes the form of ritual behaviour symbols, myths, stories, sounds and artefacts (Stacey, 1993, p. 41).

Harrigan (1988) argues that corporate culture homogeneity among partners is even more important to strategic alliances that symmetry in national origins. However, Parkhe (1991) proposes that corporate culture differences will be negatively related to alliance longevity.

Hull et al. (1988) in their study of strategic partnerships between technology-based entrepreneurs in the U.S. and large corporations in the U.S. and Japan have found that an alliance between firms with different structures and cultures are unlikely to be successful because the innovative potential of the smaller firm may be stifled by the overpowering bureaucratic structure and influence of the larger firm.

Doz (1988) emphatically believes that while national cultural differences between parties are important, such challenges are overshadowed by interorganisational disparities.

Lyles (1987) acknowledges that cultural differences have received much discussion in the literature. In her study, none of the firms mentioned cultural issues as the nature of a major mistake or failure, although a thorough understanding of the problem was mentioned as important for a successful relationship and partnership. Lewis (1990) believes that alliances should be designed to reduce cultural conflict. Factors such as limiting cultural distance, shaping interactions to reduce conflict and reducing uncertainties to limit confusion should be considered in the early stage of the formation of an alliance. In doing so, both partners are actively working together in an attempt to reduce cultural conflict.

1.4.9 Exit Strategy

As the interests of each partner diverge over time, it may ultimately lead to the break up of the alliance. As such, exit mechanisms should be planned from the outset. If such strategies do not exist, the end of a relationship can be very costly, not only in monetary terms, but also in terms of invisible assets such as lost reputation. Certain practices can reduce the possibility of this occurring. Partners may agree to set a fixed time interval after which the partnership must be re-evaluated by both sides. Another possibility is to give either partner an option to buy out the other partner at specified times. Harrigan (1986) describes a method, whereby the firm which wants to resolve the relationship has to state a price at which it would be willing to buy out the partner. This party then has a choice of either accepting the price or paying the same price to buy out its partner. The offering price will not be higher than the value to the offering firm and will not be lower than the assessment of the value the partner attaches to the relationship.

1.5.0 Strategic Alliances Between Large and Small Firms

Research has suggested (Knight, 1991) that smaller independent firms often lack the resources to bring their innovative products or services to their full potential. These firms tend to be technically or

operationally oriented, while lacking the general management skills, the ability and resources to manufacture, market and distribute their products. Other firms, while possessing some of these necessary management skills and resources, reach an impasse when trying to expand their operations to foreign markets or new market segments (Taylor and Fosler, 1994). At the same time, large corporations are not the ideal vehicle for generating entrepreneurial ideas, but hunger for new innovative products and services with which to expand their firms. The past ten years has seen a phenomenal increase in the number of strategic alliances between small and large companies. This represents a major change in the direction of strategic alliances. Traditionally, the literature suggests that alliances are more successful between firms of the same asset size (for example Harrigan, 1985). Strategic alliances can offer large firms a channel to tap into the innovative and entrepreneurial potential of small companies and an opportunity to overcome some of their own rigidities. The small firm will gain the ability to reach world markets quickly, without having to build their own global distribution system or to negotiate complex agreements with a number of agents. They will also have access to the extensive knowledge of the large company in areas such as volume manufacturing, marketing, costing and so on. Hull et al. (1988) accentuate the need for other resources (as well as money) to be brought into an alliance:

> Money is not enough! Many small firms also need access to markets, manufacturing know-how and managerial expertise which can best be provided by a cooperative relationship with a large corporation. Thus, a new era is dawning for "strategic partnering"... Resources for new ventures are often discussed in financial terms even though intangible assets and informal exchange may be equally important (pp. 445, 448).

Large firms are becoming increasingly unwilling to acquire the smaller firms for a number of reasons. The smaller firms will usually command a high price, but even more important, as a result of the acquisition, the innovative and entrepreneurial potential of the smaller firm can be diminished.

Forming a strategic alliance with a large company is often the only way to reap the benefits of a timing advantage, specifically in high-technology industries. Frequently a window of opportunity exists for

marketing the product before competitors move in or the product or the technology incorporated in it become obsolete. An established partner with extensive distribution capabilities may help to recoup initial investment fast and realise the full benefits of each product introduction. Innovations are typically imitated within a short time, thus, small firms need to take full advantage of the large firm. The short time span before competitors introduce a similar product can be used to build up market share and reputation and potentially to skim the market with a technologically superior product.

1.5.1 Problems for Small Firms in Technology-based Industries

The technology-based industry and marketplace are characterised by long lead times from basic research to industrial application, short lead times in commercialisation, and accelerated obsolescence under global competitive pressure of new product and process introductions. For example, the cost of developing a software tool is £450,000 - £500,000 before packaging and marketing costs. Small indigenous companies find it very difficult to meet such working capital requirements for a sustained period of time (Mulcahy, 1993). Market opportunities are often short-lived and technological breakthrough can quickly wipe out the success achieved by a pioneering firm.

Litvak (1992) proposes a number of guidelines for successful entrepreneurial companies. These guidelines are based on a critical examination of the competitive experiences and strategies of 29 small technology-based companies. Small firms are compelled to pursue a global marketing strategy. Firms need immediate access to large markets to increase the potential for recovery of up-front investment because local markets are too small to sustain an efficient size of operation. They should concentrate corporate efforts and resources on products for which competitive advantages can be sustained and enhanced. Product market specialisation is an optimal strategy for small firms because of the large initial research and development investment requirements.

Improving product flexibility and cost efficiency through subcontracting arrangements and increased investment in advanced manufacturing systems will allow small companies to compete with

companies that benefit form economies of scale in production and distribution. Company strategic plans should incorporate both product and process technology plans. Small technology-based companies need to foster the ability to tie together the company's research and development and marketing strategies, and the ability to manage the transition from a research orientation (i.e., product innovation) to a development/manufacturing orientation, where the concentration lies with process innovation and profit maximisation.

Firms should not hesitate in filing for patents in OECD countries to strengthen international marketing niche strategies and to enhance the company's credibility as an innovative organisation. Small high technology-based firms should recognise the opportunity to promote corporate growth through strategic alliances involving vertical or horizontal related business. Finally, he emphasises the importance of formulating a mission or vision for the company that captures the owner's strategic intent, involving the participation of key employees, i.e., undertaking strategic planning.

Litvak (1992) believes that small technology-based companies can survive if:

> they concentrate(d) corporate efforts in areas of comparative advantage, pursue(d) a global niche strategy, emphasise(d) the applied and marketing side of the technology chain and possess(ed) the ability to adapt to and take advantage of the business/government climate in which the operate(d) (p.51).

Peridis (1992) documents the problems encountered by small technology-based companies. Firstly, small companies are lacking in management depth. Entrepreneurial-minded firms are often very reluctant to relinquish control over either strategic or tactical:

> The entrepreneurs indicated that they were too busy managing their companies, handling unscheduled crises and responding to competitors' incursions to devote much time or resources to producing futuristic documents. They saw little merit in having a wish list of goals to be realised three to five years down the road (Litvak 1992, p.51).

Secondly, small companies constantly experience the problem of inadequate financial resources. In high technology industries a

substantial investment is in intangible assets such as researchers salaries and perishable materials rather than fixed assets. This is an obvious problem experienced by small software companies in Ireland, the majority of which are undercapitalised. Due to the lack of fixed assets, they encounter difficulties in financing their research and development and products are often brought to the market prematurely (McLoughlin, 1993). Thirdly, small firms lack the ability to protect proprietary knowledge. Litvak (1992) states that the inability to protect proprietary knowledge further inhibits the strategic planning process:

> ...because of their general concern with secrecy and the ever-present threat of a key employee becoming a competitor, the entrepreneurs were unwilling to disclose the necessary financial and marketing data to make formal strategic planning a purposeful management activity (Litvak, 1992, p.51).

Finally, small companies experience many problems with government bureaucracies. The majority of small technology-based companies receive direct government assistance for their activities. However, the multitude and complexity of relevant rules and regulations create tremendous frustration for small firms.

1.5.2 The Role of the Large Firm in the Strategic Alliance

Niederkofler (1989) has found that the primary rationale for small technology-based firms to cooperate with larger firms was to gain access to distribution channels, to achieve credibility with banks, customers and suppliers and to source capital to finance high growth rates. Cooperative relationships with larger companies help the smaller firms to grow and establish a defensible position in a shorter space of time than they could achieve independently.

A large corporation can bring finance into a small entrepreneurial firm but so can independent venture capitalists. The unique contributions that larger partners make to smaller partners lie in many areas. Young technology-based companies frequently experience problems with credibility. To a certain extent, the entrepreneur's personal reputation in an industry determines relations with suppliers and industry organisations. But for nonmembers of an industry such as end-users, the age and size of a business may be the most important measure of

credibility (Baatz, 1992, Niederkofler, 1989). For example, few customers would wish to purchase computer equipment from a new firm which may not be in existence in a year or two. However, a visible relationship with a large established company may lend credibility to a new venture and assist in overcoming acceptance barriers.

A large company can be an invaluable source of industry know-how and contacts, both on the customer side and on the supplier side. Established firms may also have preferential access to restricted supply resources. Giving access to a distribution system is one of the primary roles of the large partner. Many software companies are focused on product development and have neither the resources nor the management expertise to build up their own distribution system. Instead, they search for an established corporation to take over the marketing and distribution of the product. In turn, these firms are compensated with a royalty on sales.

Litvak (1992) and Peridis (1992) have both found that small entrepreneurial firms are lacking in management depth. As they outgrow the stage of direct control by the owners, they need to develop different management procedures and structures. Entrepreneurial firms generally lack middle-level management. As the firm grows, the accounting system becomes increasingly more complicated, a customer information system may need to be installed, and the organisation may require some degree of formalisation for efficiency reasons. In being partners, large firms are in a position to provide ready models for learning the skills required and actively assist in the implementation of new procedures and structures, such as quality control systems and costing structures.

The larger firm will also allow the smaller firm to access efficient large scale manufacturing facilities. This is especially relevant in the capital-intensive and scale-sensitive production and research such as software development where the actual per-unit costs of production are very low. By cooperating with the larger firm, the small firm is able to significantly reduce capital investment and yet be able to take advantage of high quality, low cost manufacturing. Cooperation with a

larger firm will give the small company access to complementary technical know-how. Frequently, the success of the smaller firms is built on the combination of existing technical know-how rather than on its creation of new knowledge. Thus, the link with the larger partner will provide the smaller firm with access to critical resources and assets. Without these, the smaller firm would not be able to pursue the opportunity it has chosen as the most attractive.

1.5.3 Success Factors in Strategic Alliance Between Large and Small Firms

The issues involved in the success of strategic alliances between large and small companies are multiple and complex. Doz (1988) categorises three sets of issues which are critical to success.

The Convergence of Purpose

In order that a partnership will succeed, a minimum set of operational goals and a high degree of mutual understanding are necessary. Even if individual purposes are different, they must be sufficiently compatible on specific terms to allow for common operational goals. However, there are a number of factors which inhibit successful convergence purposes. Firstly, interorganisational differences will have a detrimental effect on an alliance:

> Typically the larger firms are slow, ponderous, and consensual in their decision making, both in entering a partnership and subsequently with respect to the specific decision to be made over the life of the partnership. When they are not, this usually reflects hasty top management commitments which are opened to questioning, change, or mere foot dragging, if not outright sabotage, by operating levels. In the larger firms, decisions typically span multiple levels, with intermediate levels playing a key role. Top management not being knowledgeable of the specifics of all businesses, commitments at intermediate levels in the hierarchy are necessary. Smaller firms are more agile, fast footed, and nimble in their motives, with strong informal horizontal and vertical communications. They are also driven more tightly from the top. Furthermore, the formality and the clarity of hierarchies and the perceived social distance between levels are greater in the established firms than in the entrepreneurial ones (Doz, 1988, p. 320).

Such fundamental differences must be recognised and dealt with in the planning stage of a strategic alliance in order to overcome cultural

distance. Knight (1991) advises that small companies should expect such differences and plan for them from the initiation of the alliance. Secondly, uncertainty and misunderstandings may exist in the alliance because of difficulty for the larger firm to clearly comprehend exactly what the smaller firm's technology or innovative idea can provide. This problem will occur because the technologies are unclear and not developed far enough yet or because the analysis of complementary and competitive aspects of the partnership is not carried far enough. Also the capabilities of the larger firm may be overrated by the small firm. Finally, there exists in both partners, a natural reluctance to divulge information. Partners find themselves in a complicated situation whereby if they contribute too little to the partnership, it will fail, while if they contribute too much too openly, their partner will gain the upper hand in the implicit or explicit bargaining power balance in the alliance.

Consistency of Position within the Large Firm

Large firms experience difficulties in establishing and maintaining a consistent position relative to their smaller partners. Large organisations are made up of several levels of management and different personalities. It is likely that within a large corporation, some people will stand to gain from a partnership while others may stand to lose. Thus while an alliance may offer solutions and opportunities to some, it presents problems and threats to others:

> Vested interests in the large firm are important mainly in that they make reaching an honest assessment of the partnership difficult - the analysis is partisan analysis. Top management - at divisional or corporate level - may have a strong influence but not the ability to create or impose a single unitary view. Furthermore, the intrinsic technological and market uncertainties of many partnerships, encourage vested interest. Positions are often more a matter of judgement and belief than a matter of well-defined analysis (Doz, 1988, p. 327).

Top management in the larger firm may develop expectations of success rather than a balanced view of risks and advantages. This may lead to an overemphasis on the merits of the agreement in the early stage of the strategic alliance. However, most alliances are formed in high risk environments and the results are long-term rather than short-term returns (Anderson, 1990). Unless this is clearly understood

from the outset, it is likely that a degree of overpessimism about the success (or lack of success) of the strategic alliance will be present within the senior management of the large firm. This could lead to a reduction in the resource commitment. An obvious solution to this problem is to ensure that sufficient communication takes place within the large firm. This communication should occur on both a vertical and horizontal level.

Interface

The operating interfaces between two partners must be planned and not simply assumed. Cultural gaps are again a factor in this situation. A strategic alliance brings together two (or more) companies which are quite different, have no way to understand each other's operating mode and no understanding of managers' roles and positions in the other organisation. It is vital to attempt to fill these gaps in the very early stage of the alliance through close cooperation and coordination. It is essential to clearly understand where the small company's contribution 'fits' within the large company. The individuals dealing with the alliance should be chosen very carefully, "...most of the individuals successfully involved in making the partnership work, had entrepreneurial skills that set them apart from their colleagues" (Doz, 1988, p. 335).

Doz (1988) concludes that an alliance is more likely to fail due to managerial rather than technical reasons. If both firms recognise and attempt to overcome the issues identified, they are moving towards achieving a successful strategic alliance.

1.6.0 Conclusions

This chapter identifies the critical issues involved in strategic alliances and partnership agreements. While in the past, the average success rate of strategic alliances was low, they are becoming cornerstones of new venture strategies. In a world of increasing environmental turbulence and competition, survival and growth are made possible through innovative capabilities and organisational flexibility. Strategic alliances allow small firms access to some of the larger firms' resources and

assets, such as marketing and distribution channels, and an established reputation, while large firms benefit from the innovative nature of smaller companies. Such partnerships help firms to compensate for their idiosyncratic weaknesses by giving access to the partner's resources, skills and capabilities. While cooperation is not the only strategy available to companies responding to an increasingly competitive environment, they cannot afford to ignore cooperation as an instrument to protect or enhance competitive advantage.

The following chapter proffers a review of the software industry in Ireland with particular emphasis given to strategic alliances in the industry.

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Chapter 2

A STRATEGIC REVIEW OF THE SOFTWARE INDUSTRY IN IRELAND

2.1.0 Introduction

This chapter develops a strategic review of the software industry in Ireland. It examines the industry by dividing company types into two subsections - indigenous and foreign-owned. Forces of change which influence the industry are examined and key trends are identified. The chapter closes with a discussion on strategic alliances in the industry.

The modern economy is governed by computers and information technology to a much greater extent than most people realise. Computers are necessary for every sector of the economy - agriculture, manufacturing and services - and may never be considered as a separate sector, in isolation from the rest of the economy (Murphy, 1993a). Despite having one of the fastest growing markets in the world, the computer industry is subjected to much volatility and unpredictability. Failure to adjust to these conditions has created a paradox whereby the large, dominant companies of a few years ago are now bordering on collapse, while recent start-ups become multinational entities. For example, the market capitalisation of Microsoft is now equivalent of that of IBM, a development unforeseen, while many other software companies have grown at rates even faster than did IBM and Digital in their peak growing stage (Murphy, 1993). This changing phenomenon, whereby the revenue of software companies is surpassing that of hardware companies, is further evidenced by the fact that all the large computer manufacturers have expressed their intention of earning over fifty percent of revenues from software and services in the future (Cullen, 1993).

Few companies in any industry have had the strategic foresight to fundamentally transform business models that have led to success. However, new technological and economic forces demand such a stance because the computer industry is experiencing a profound strategic inversion driven by the relentless advance of its own technology such as more powerful microprocessors, the integration of more functions into fewer chips, and less expensive, more efficient manufacturing. The implication of this is successful computer companies will be those that focus on inventing new markets rather than building new products. Value is derived from scarcity and in the industry, scarcity resides in the

gap between power, i.e., what computers and their underlying semiconductor technologies are capable of doing, and utility, i.e., what human imagination and software engineers are capable of enabling the computer to do. The technologies which bridge this gap include microprocessor architecture, operating systems, user interfaces, databases and applications software.

2.2.0 The Software Industry - An Appraisal

Software, a general term for computer programs, comprises a set of instructions for performing a particular action. While the market for computer hardware has slackened somewhat in recent years, the demand for software remains undiminished. The software industry will continue to grow, so long as computer programmers continue to develop new applications to perform a multitude of different tasks. Yet, since 1991, when the overall computer industry experienced its first real recession, expansion in software was reduced concurrently. The software industry is one of the fastest growing industries in Ireland and is among the top five exporting sectors in the country, accounting for 10% of all exports (National Software Directorate, 1992). Although a relatively new phenomenon - twenty years ago, it was virtually nonexistent - the software industry is presently undergoing a number of changes. The pace of change in the industry is relentless; the structure is changing, the nature and demands of its markets are changing and finally, the technologies with which the industry must deal are changing. Continuous change to this degree causes great difficulty - especially for small companies - in keeping informed of the relevant changes. The challenge is further intensified by the need to not only be capable of keeping informed, but to possess the ability to adapt to change, to anticipate it and ultimately to convert it to gain competitive advantage.

2.2.1 Key Trends

A number of key trends are identifiable within the industry and its markets which are having a profound influence on the design developments and sale systems and thus, on the success or demise of software companies (Cullen 1993a). Multinational user companies are increasingly tending toward sourcing global solutions from one vendor.

Globalisation, continuously increasing standards and a trend toward facilities management will lead to the emergence of a small number of very large companies who, as systems integrators, will dominate the IT service sector by offering a global mix of hardware, system software, networking, communications, application software, and add-on services in a "one-stop shop" approach. The influence of the U.S. on the global software industry is intensive; the U.S. is the largest single market for software and its products lead the world in almost every market and more frequently, products originating elsewhere must succeed in the U.S. before gaining widespread acceptance in other world markets. As in most other product markets, the customer has emerged as the decisive influence and companies, in order to succeed, must get close to the end user and listen to what they request. This information (just like people, capital and physical assets) is becoming a vital business resource, and successful companies now access data quickly and selectively via user-friendly interfaces.

Major changes have occurred in distribution channels in recent years, especially in the P.C. market, due primarily to huge decreases in the price of hardware. Manufacturers deal directly with end-users instead of having a long distribution chain comprising manufacturer, distributor, and dealer or VAR (value added reseller). They manufacture to order, using JIT, (just in time production scheduling), holding no finished stock and minimum raw material stock levels. This approach is now being adopted by software manufacturers. The increasing growth of standards in the I.T. industry has a direct effect on the software development process. Many users are beginning to set their I.T. procurement policies around key standards. While large companies, e.g., Oracle, Sybase, Informix, or Progress, are capable of covering all options, smaller companies must choose a particular methodology, effectively cutting off sizeable market segments. Quality is now the central focus of almost every industry, and the software is no exception. Many end-user companies are certified for a recognised quality standard - such as ISO9000 - and in order to maintain this status, need to deal with quality suppliers. Customer regularly specify an approved quality certification as a prerequisite in tendering for their business. With decreasing life cycles on new products and increasing difficulty sustaining competitive

advantage, the continuous pursuit of quality can be one differentiator which is sustainable in the long-term.

2.2.2 Implications for Small Companies

Globalisation can cause severe problems for small companies which do not have the size or the international network to be credible in the eyes of large multinationals requiring global solutions from one vendor. The dominance of large systems integrators leads to many difficulties for small companies competing in international markets. They are likely to, at best, assume a subcontractor role with one of the larger companies. In this situation, strategic alliances may be the ideal option for the small company. Changes in the distribution channel offer a number of opportunities for small companies. However, they require multilingual, technically - literate telemarketing personnel to be able to deal with foreign customers directly. Standardisation presents huge challenges to small companies insofar as, if they select a particular tool, they are making themselves inaccessible to a large part of the market. Small companies are also faced with the challenge of spiralling quality standards reflected in customer demands for quality suppliers.

2.3.0 Profile of the Irish Software Industry

The software industry in Ireland is viewed as the sector with the greatest potential for industrial development and job creation. In just over one decade, the industry has gone from a state of almost nonexistence to becoming a vital part of the economy and among the top five exporting sectors (Oram, 1992). Over 8,900 people are employed in the software industry which produced revenue of £1.992 billion in 1993 of which £1.842 billion was export revenue. Even in the midst of a recession, it continues to provide well-paid and challenging jobs for a mostly graduate workforce. Digital's decision to retain its software centre in Galway, while it closed its computer systems factory has been widely seen as an indicator that Ireland's future in information technology is in software rather than hardware (Trench, 1993). Murphy (1991) highlights that the software industry is a very valuable asset to the Irish economy for a number of reasons:

1. It is a labour intensive industry

2. It requires highly skilled, highly paid personnel
3. The overseas software companies, in particular, source a substantial amount of products and services in this country e.g., packaging, documentation, computer disks.

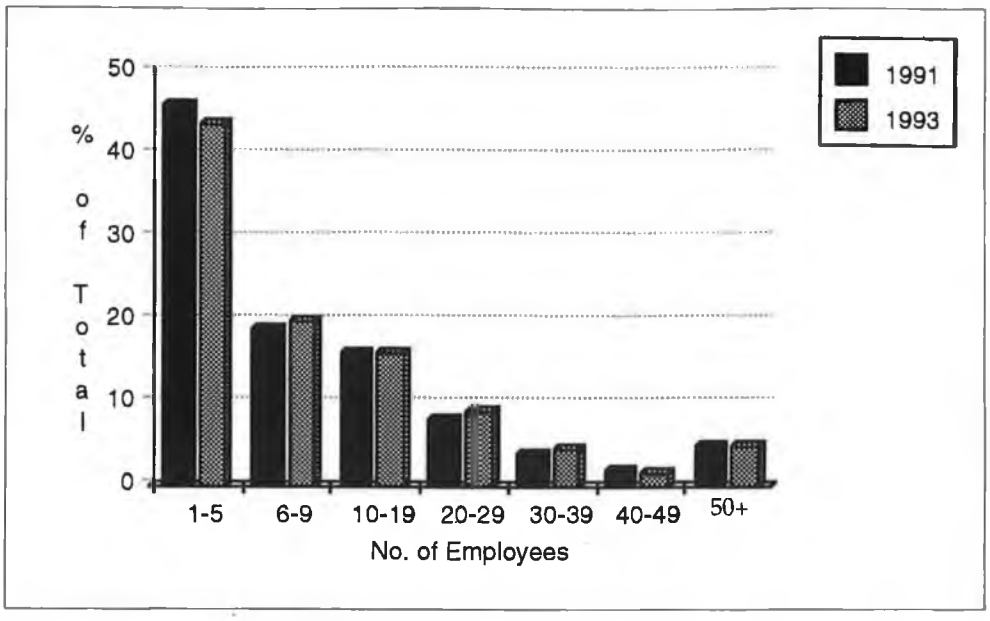
2.3.1 Structure

The indigenous software industry is highly fragmented with 44% of companies employing less than 6 people (see Figure 2.1 for a breakdown of the indigenous sector by company size). Some people see this as an inherent weakness of the sector. However, others support the notion that since many indigenous companies are set up by entrepreneurs with a creative idea, immense drive and determination to succeed and frequently with experience of a particular industry, this will lead to the emergence of a small, highly creative, highly motivated team of people determined to succeed. Although there are many new start-ups, there is a strong nucleus of well established companies with a broad range of technical and commercial skills, capable of penetrating huge export markets. A total of 64% of Irish owned companies employ less than 10 people and in comparison to Europe as a whole, this figure is substantially high. In Europe as a whole, only 36% of software companies employ fewer than 10 people. Yet, according to the National Software Directorate (1992), the number of large indigenous companies is increasing. In 1989, only four companies employed more than 50 people, while in 1993, this figure has risen to 17. Furthermore, the number of companies employing 20 people or more has increased by 80% over the same period.

Coupled with the issue of size is that of management development. As previously discussed, most managers come from a technological background. There is a general reluctance in software companies to attract general management talent and to use non-executive directors. According to the National Software Directorate (1992), there exists evidence, which suggests that software companies are more susceptible to stagnation and at an earlier phase than firms in alternate industries. It suggests four reasons for this occurrence:

1. Size: As a company grows, it may lose its dynamic qualities
2. Short life cycle of products: A company can rapidly lose its competitive

Figure 2.1 Size of indigenous Sector (n=291 (1991), n=336 (1993))



Source: National Software Directorate, 1993

edge unless there is constant and tightly focused research and development

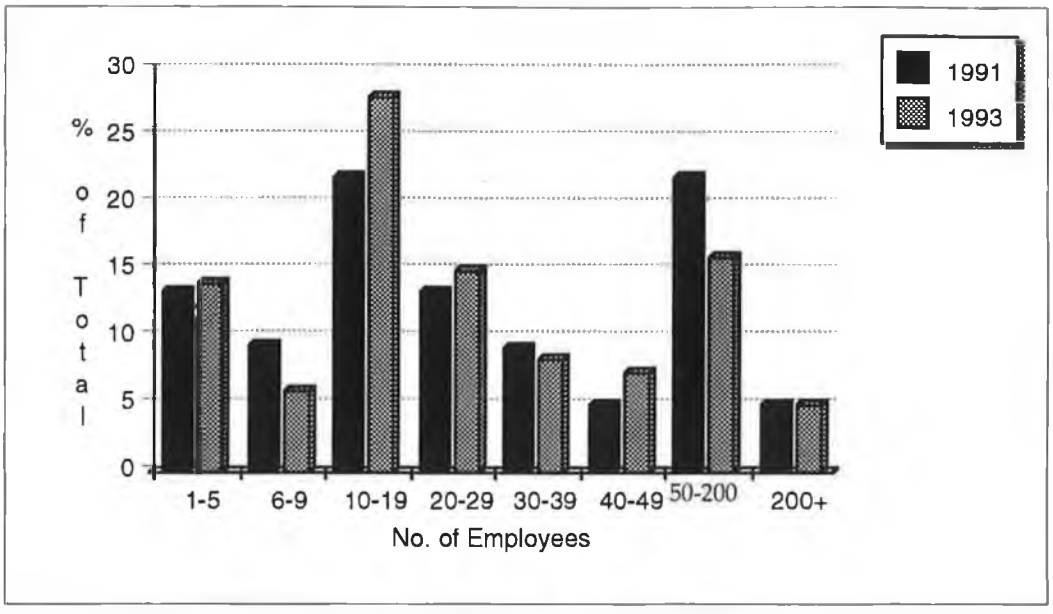
3. Pace of technological change: A software company may discover it is on the incorrect platform or has not invested adequately in training for new technologies

4. Erosion of technical validity: As the primary technical people are promoted to management positions, they may lose touch with their specialism and stop developing technically, thus eroding the overall technical competency of the company.

The foreign-owned sector provides a direct contrast to the size profile of the indigenous group. Ireland has become a world centre for software localisation activity and manufacturing, and has developed a complete infrastructure for these functions. This has important connotations for the Irish economy. Significant opportunities have evolved in the printing and packaging industries, evidenced in their quick response to demands to upgrade their quality and expand their facilities. Even more importantly, companies who originally established localisation centres in the country are now attaching software development units. A primary example of this is the Lotus Corporation who decided to develop all its Unix-based products in Dublin rather than in the U.S. In 1993, there was

a total of 81 foreign owned companies in Ireland. As Figure 2.2 demonstrates, 80% of these companies each employ 20 or more people. Although the number of overseas companies represents slightly less than 20% of the total amount of software companies, they provide employment for almost 50% of those working in the industry. The top four companies account for 45% of total employment in this sector.

Figure 2.2 Size of Overseas Sector (n=74 (1991), n=81 (1993))



Source: National Software Directorate, 1993

2.3.2 Revenue and Exports

Of the 417 firms in the software sector, 336 are indigenous and 81 are foreign-owned. The indigenous companies produced revenues of £.236 billion in 1993 which was a 57% increase on the 1991 figure (£.15 billion); 49% of this revenue was export revenue (£.116 billion). In contrast, 98% of revenue generated by foreign-owned companies is export revenue (£1.726 billion). In all, 79% of indigenous companies, and 86% of foreign-owned companies are active in export markets (see Table 2.1).

Yet, while some Irish companies have established offices overseas, the majority rely upon their ability to sell directly into overseas markets, or use agents and distributors. Only 36 companies have established offices in the U.K., 21 elsewhere in Europe, and 9 in the U.S.A.

Unlike most of Europe, where service companies dominate, the Irish software industry is predominantly product-based. 66% of indigenous companies are engaged primarily in the development of end-user application products, while 34% of the same earn most of their revenues from the supply of services and specialist systems such as tools, communication software and software for dedicated hardware devices.

Table 2.1 % of Revenue Earned Through Exports

	Indigenous		Overseas	
% of Revenue earned from Exports	**% of Companies**	**Cum. %**	**% of Companies**	**Cum %**
100	7	7	34.5	34.5
90-99	11	18	34.5	69
80-89	7	25	2	71
70-79	5	30	0	71
60-69	5	35	0	71
50-59	5	40	2	73
40-49	5	45	2	75
30-39	4	49	2	77
20-29	5	54	2	79
10-19	13	67	2	81
1-9	12	79	5	86
0	21	100	14	100
	100%		100%	

Source: National Software Directorate (1993)

2.4.0 Issues of Importance

The National Software Directorate (1992) has undertaken a study which identified a number of weaknesses within the indigenous sector which must be addressed if continued growth and development is to be attained. The study suggests the continued growth within this sector is dependent upon the industry becoming more export oriented, better managed, product led, profitable, and quality conscious. However,

negative factors are prevalent in the industry and are prerequisites to achieving growth.

2.4.1 Marketing

Irish companies are innovative and technically competent, yet there is a major weakness in the marketing structure of most indigenous companies. "The 'nerd' engineer may well remain vital to any software house, but increasingly, the commercial side is also looming large" (Daly, in Fitzgerald, 1993). Most companies lack basic information on the size of their market, of their own market share, and more importantly, they lack the knowledge necessary to develop appropriate market entry strategies. They face major difficulties in choosing between direct approaches or operating via distribution channels. Indeed, very few software companies employ qualified marketing personnel. People are the primary asset of any software company. However, a neglect among the indigenous sector in investment in the ongoing training and development of employees is evident. Lack of management expertise is an ongoing problem since most managers come from a technical background and to not posses the necessary managerial skills to develop the company into a larger operation.

Attempts are being made to establish a special management development course for senior managers of software companies with emphasis on finance, business strategies, delegation and presentation skills (National Software Directorate, 1992). The Information and Computing Services Association has also identified marketing, and specifically international product marketing as being of critical importance to firms in this industry. The Association emphasises the importance of nurturing marketing functions within software companies and providing aid in marketing and distributing their products in order to facilitate continued development in the software industry (Sunday Business Post, July 4, 1993).

2.4.2 Funding

Funding has been, and continues to be a major weakness in the Irish software industry. The majority of companies find it extremely difficult to source venture capital or seed funding, whilst capital remains a critical fact in the growth and development of a successful capital (Fitzgerald,

1993). With the exception of state agencies and certain BES funds, their is minimal venture or seed capital available in Ireland. Financial institutions - banks, venture capital companies - view software companies as high-risk investment particularly since they usually do not have high value physical assets. Indeed, in many small software companies, the biggest asset is the software developer(s). The lack of venture capital is a major problem in Ireland. In the U.S. in 1990, 15.7% ($420m) was invested by venture capitalists in the software industry. The equivalent figure in Europe (figures are not available for Ireland as a separate entity) was $294m, which is a mere 3% of the total invested by venture capitalists.(National Software Directorate, 1992).

Lack of capital means that many software companies commence undercapitalised, relying on loan and overdraft facilities. The long term inference is that many companies are forced to concentrate their energies on generating revenue for day-to-day expenditure and are unable to invest in product research and development and the strategic requirements of the business. As an illustration of the implications of this, consider that the typical cost of developing a low price software tool is approximately £450,000 and a high price application product is around £600,000. This does not include and marketing or commercialisation costs. Therefore, a company faces a negative revenue of at least £500,000 before any revenue is generated (McLoughlin, 1993). It is very difficult to fund such expenditure with short term funding. Where companies experience such a degree of undercapitalisation, they find it extremely difficult to afford the management experience necessary to take a product to an international market (which, due to the nature of the industry, is critical to the success of a product).

A recent example of the effect of lack of funding in Irish software companies is the case of Glockenspiel (Irish Computer, 1992). Glockenspiel became the first company to offer a commercial implementation of C++ in 1986. It had adopted C++ as its primary development language and secured rights from AT&T to further develop and market C++ under licence. However, in 1992 the company was acquired by an American company - Computer Associates International Inc. - when it was forced to apply for examinership due to lack of

funding. According to Adam Winkelmann who was General Manager of the company (cited in Irish Computer, 1992):

> Contrary to rumours of investment of software in Ireland, there is simply little or no private development capital available here despite our worldwide technical reputation.... You cannot ever dominate the market without money. You are in the hands of the people who distribute the money (p.5).

McLoughlin (1993) has suggested that the most successful companies are either partially funded by clients in the development stage, or they develop an alliance with an international third party who funds ongoing research and development. The National Software Directorate (1992) also advocates the formation of strategic alliances with a bigger international company. The Directorate has further recommended that a high-tech venture capital fund be established, with an initial budget of £10m for investment in software and other high-technology industries.

2.4.3 Quality

As previously discussed, quality is now the central focus of almost every industry, software being no exception. In Ireland, a significant gap exists in quality standards between a large majority of overseas and indigenous companies. In a survey carried out by the National Software Directorate in 1993 it was found that 39% of overseas companies have a recognised quality management system, while only 9% of indigenous companies do so. Although 41% of indigenous companies are in the process of implementing a quality management system, 50% have yet to begin implementing such a system. The quality status of many indigenous companies is very poor and this is affecting the industry as a whole. According to the National Software Directorate:

> There is a real gap between the overseas companies and the indigenous companies and it is growing. Overseas companies tend to have a very formalised approach to software development and treat it as an engineering discipline with emphasis on quality an professionalism. They also usually benefit from the imposition of a corporate methodology and use of prescribed tools. The indigenous sector tends to treat software development more like a cottage industry than a precise engineering discipline. (National Software Directorate, 1992, p.3-8).

It further highlights the effect of lack of funding on quality, whereby many companies are operating on very low profit margins and therefore, their

actions and culture are dominated by immediate issues rather than being guided by medium or long term strategies. McLoughlin (1993) also emphasises this point that the lack of funding from institutions forces some companies to perform less than the necessary amount of market research at the user requirement stage of the development stage which severely impinges on quality procedures during this stage.

In summary, the most critical and immediate issues which must be addressed throughout the Irish software industry are the lack of marketing, funding and quality in indigenous companies. Without these functions in place, Irish companies will grow at a slow rate and fail to achieve a sufficiently strong market position.

2.5.0 Strategic Alliances

Companies in the software industry, like those in many other high technology industries, have experienced major structural reorganisation due to a continuum of change over the years. Advancements in technology which lead to products having a shorter product life cycle, escalating costs and increased competition are factors which have forced companies in high technology industries, software not being an exception, to develop strategic alternatives to reduce expenditure and risk and to increase their chance of survival and success. Probably the most profound development in the software industry is the increased number of strategic alliances and their ready acceptance as an alternative to the traditional organisational structure. For large companies, strategic alliances are a means of reducing cost and risk, developing new products, and enhancing technology. For small companies, they offer channels into markets which would be inaccessible to such small companies on an individual basis.

Jones (cited in McColgan, 1993) purports the primary reason for the increasing development of strategic alliances in the software industry, is the evolution of the industry. He believes it may reach a point where there will be difficulty distinguishing between a hardware and a software company, and the primary reason for this is, he believes, users' demands for both types of companies to work together.

According to Murphy (1994) and Dixon (1994), many small, indigenous software companies are now becoming involved in some form of strategic alliance - many, licensing agreements - primarily with a larger international company, such as hardware vendors and systems integrators. The National Software Directorate (1992) comments that alliances are more likely to succeed if the Irish company has an innovative product, is quality driven and confident in its ability to maintain a competitive edge. The Directorate also highlights the advantage of establishing informal agreements with hardware manufacturers such as IBM, and using their offices in other countries to facilitate marketing and sales functions. According to Murphy (cited in Davis, 1993):

> Every company in the business including the very major companies like IBM, Novell and Lotus are accepting that they cannot do everything and are entering into strategic alliances. They are prepared to acquire companies to acquire the technology. There is a definite mood in the world of partnering, and one of the things driving it is that the window of opportunity is dwindling. You do not have the luxury of saying I will tackle the British market this year and the US market a year later. You have to move fast when establishing your product. The ability to stay ahead and retain a competitive edge is extremely difficult.

Tables 2.2 and 2.3 illustrate examples of strategic alliances in the computer industry worldwide, and the software industry in Ireland. On a worldwide basis, many computer manufacturers are reducing the size of their workforce in an attempt to reduce their costs, e.g., in 1990, IBM reduced its workforce by 14,000, Unisys reduced its total workforce by 5,000 and in 1990/91, Digital decreased its total workforce by 6,000 people. This trend is set to continue whereby the size of the workforce will diminish and the number of alliances and partnerships will increase. In Ireland, strategic alliances offer the many under-capitalised, small indigenous companies the opportunity to expand their market beyond the boundaries of what they could finance on an individual basis. Indeed it has been cited that every successful indigenous software company has initially exploited an alliance or partnership of some type - most often with a hardware manufacturer - to gain access to overseas markets which would otherwise have been impossible for the company to penetrate (National Software Directorate, 1992).

Table 2.2 Examples of Strategic Alliances in the Computer Industry

Date	Partner	Partner	Technology
1983	IBM	Microsoft	OS/2
1984	Microsoft	Apple	Mac Os
1987	IBM	Lotus	1-2-3/m
1987	Microsoft	3Com	LAN
1991	IBM	Lotus	OfficeVision
1991	IBM	Apple	Object-Oriented Hardware-Ind. Operating Env.
1992	Groupe Bull	IBM	Microchip

Source: Compiled by author from various sources

Table 2.3 Examples of Strategic Alliances in the Software Industry in Ireland

Date	Partner	Partner	Technology
1990	SoftCo	DIT AS	SoftLink
1992	Dascom	StorageTek	Online Tape Archival System
1993	EirTrade	PostGem	EDI
1993	Phimac	Office Integrated	RULER
1993	Softco	Oki Systems	DOC-IT
1993	Vector Software	ESRC	Financial SW
1994	Iona Technologies	SunSoft	CORBA

Source: Compiled by author from various sources

2.6.0 Chapter Summary

The software industry is one of the fastest growing industrial sectors on a worldwide basis and offers enormous potential economies. The Irish software industry comprises a large amount of small indigenous companies and a limited number of large multinational organisations. Difficulties in sourcing capital funding, insufficient levels of investment in marketing, lack of international business experience among senior management and failure to recognise the importance of international standards of quality are key weaknesses among the indigenous sector on the software industry.

Identifiable trends include multinational user companies increasingly tending toward sourcing global solutions from one vendor; an emergence of a small number of very large companies who will dominate the market; major changes in the distribution channels; and, quality becoming the central focus of the industry.

Indigenous companies are increasingly becoming involved in some form of strategic alliance, primarily to enter markets currently inaccessible to them as a small company.

The following chapter reviews methodological issues in marketing research and in particular, organisational research.

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Chapter 3

CHANGING PERSPECTIVES ON RESEARCH METHODOLOGY IN MARKETING

3.1.0 Introduction

This chapter examines the changing perspectives of marketing research methodology over the years. It debates the scientific nature of marketing and thus, marketing research. It explores areas of ethnography and phenomenology and proffers the notion of the case study as a legitimate research tool.

Marketing scholars have, for many years, debated the scientific status of marketing (for examples of the arguments see Alderson and Cox, 1948, Buzzell 1963, O'Shaughnessy and Ryan, 1979 and Anderson, 1983), the nature of marketing as a science, or perhaps more accurately, the type of science that marketing should become. While the issue has been argued considerably, relatively few answers have been given to the question of marketing's scientific credentials. Popper (1962) referring to the search for criteria that separate science from nonscience as the "problem of demarcation", believes that its solution would be "the key to most of the fundamental problems of the philosophy of science" (p.42). The problem of demarcation is inextricably linked with the issue of scientific method. Hunt (1976) argues that positivistic marketing adopts the perspective of attempting to describe, explain, predict and understand the marketing activities, processes and phenomena that actually exist and in doing so, qualifies as a science.

3.1.1 Positivist versus Humanistic Thought

Inherent in this central argument is the question concerning the types of methods used by market researchers. Market research traditionally has taken two distinct paths, one following positivistic philosophies, while the other approaching humanistic philosophies. Positivist science is premised on axioms that assume a single, tangible reality consisting of discrete elements; the division of discrete elements into causes and effects; independence between researcher and phenomenon; the possibility and desirability of developing statements of truth that are generalisable across time and context; and the possibility and desirability of value-free, objective knowledge discovery (Hunt 1983, Hirschman 1986). This is the customary postulate upon which marketing is based and thus, market researchers have spent many years measuring, quantifying and testing variables, placing marketing firmly within the boundaries of the physical

sciences. Conversely, humanistic research suggests that, rather than standing apart from the system being studied, the researcher integrates within it (Hirschman, 1986). A fundamental belief of humanistic inquiry is that human beings construct multiple realities which are realities that can be comprehended only as gestalts, i.e., holistically. Further, the researcher and the phenomenon under study are mutually interactive. The researcher cannot "distance" the self from the phenomenon nor can the phenomenon be understood without the personal involvement of the researcher. The aim of research inquiry should be the development of an idiographic body of knowledge consisting of tentative statements about a particular phenomenon. That is the researcher should strive to construct a "thick description" (Geertz, 1973) of the phenomenon under study, which describes its complexity, and internally constructed meaning. Because phenomena are engaged in a process of continuous creation, it is meaningless to designate one set of phenomenal aspects as "causes" and another set as "effect". Research inquiry is inherently value-laden because researcher values inevitably influence the choice of phenomenon, choice of method, choice of data and choice of findings. Research inquiry is a social construction, resulting from the subjective interaction between the research and the phenomenon. Thus knowledge is subjectively attained; knowledge is constructed, not discovered.

These axioms, contrary to a myriad of marketing thought place marketing (and thus marketing research) into a social science rather than a physical science context. Practitioners are finally beginning to understand the benefits of viewing market research from a humanistic angle as opposed to taking a positivistic stance. To fully appreciate the potential richness of such an approach to market research, it is beneficial to examine some areas of ethnography and phenomenology, approaches which are commonly used in areas of the social sciences.

3.1.2 Phenomenology

Phenomenology takes a directly opposite stance to that of positivism. It starts with the concept that reality is socially constructed rather than objectively determined. Therefore, the social scientist should aim not to gather facts and measure how often certain patterns occur, but rather, to attempt to appreciate the different constructions and meanings that people place upon their experience. Thus, it is more beneficial to try to

understand and explain why people have different experiences, rather than search for external causes and fundamental laws to explain their behaviour. Within the phenomenological viewpoint, there are several direct attacks on the assumptions of positivism. Keats (1981) disregards the idea of "scientism" which postulates that the only knowledge of any significance is that which is derived from the use of objective measures. Another criticism centres on the view that science itself should be based only on data that can be observed and measured directly. However, one of the strongest attacks on positivism has been on its assumptions of value-freedom. Habermas (1970) has strongly argued this case, pointing out that any form of knowledge is an instrument of self preservation. Human interests inherently condition the methods of inquiry and the constructions of knowledge used by researchers. Yet positivists claim that research methods used are independent of values and interests.

Melville Dalton (in Easterby-Smith et al, 1991, p. 29) carried out one of the pioneering studies using a phenomenological perspective. He studied the behaviour of managers when working himself within the organisation as a manager. While working in the company, he gathered data from his own observations and from those of a number of informants. Interestingly, although much of his data was qualitative, he was not averse to collecting a certain amount of quantitative data such as details of the salaries. Dalton did not commence the research with any clearly preconceived set of hypotheses and theories to test; his research grew out of his own questionings and thought. Rather than trying to formulate explicit hypotheses and guides for his work, he contented himself with framing simple questions about events that were taking place which he did not clearly understand.

Burgoyne and Hodgson (1983) used a similar approach to collecting data about managers' experience of their work and how they learn naturally from everyday experience. Their data consist of a number of episodes from the working lives of eight managers. Their data collection involved a general "context" interview; observation and recording actual events from their work lives, where possible, having managers "think aloud" during such events; after the event occurred, having managers recall their thoughts and feelings; and finally, a number of months later, conduct a follow-up interview. Within a strict phenomenological approach, the

realm of experience was the basic focus of research, and descriptions of this constituted the data for analysis.

Taylor and Bogdan (in Gummesson 1991) sum up the ideals of phenomenology in their definition. According to them:

> the phenomenologist is committed to understanding social phenomena from the actor's own perspective. He or she examines how the world is experienced. The important reality is what people perceive it to be (pp.149-50).

3.1.3 Ethnography

> Ethnography is a method for both data collection and analysis, each irrevocably mated to the other. It is based upon achieving a conscious and systematic interpretation of the culture system operating for those the ethnographer observes to those who may eventually take in the ethnographer's end product... most commonly, a book (Rosen, 1991, 1).

In ethnographic studies, the researcher becomes the research tool and collects data through living among those who are the data. The ethnographer becomes part of the situation being studied in order to feel what it is like for the person in that situation. Many view ethnographic studies simply as an art of description or masses of useless and uninterpretable information, yet huge amounts of data will be recorded, filed, stored, checked and rechecked and thus organised according to one of several interpretative styles.

From the body of ethnographic literature, Sanday (1979) categorises these styles into three taxonomies:

Holistic Style

Although differing viewpoints exist within this style, essentially it is concerned with describing and interpreting culture as a whole rather than a number of individual units.

Semiotic Style

The centrality of the semiotic style lies in the search for the "native's point of view". "The whole point of a semiotic approach to culture is to aid us in gaining access to the conceptual world in which our subjects live in order that we can, in some extended sense of the term, converse with them" (Geertz in Sanday, 1979, 532-33). Within this interpretative style, Geertz

(1973) sees the possibility to make "thick description" as being the essential task of theory building.

Behaviouristic Style

Behaviourism involves the "formulation of deductive propositions" (Sanday, 1979, 536). The main objective of this approach is to "uncover covarying patterns in observed behaviour" (p. 537).

Rosen (1991) proposes the use of a framework for analysis developed by Spooner (1983 in Rosen 1991). This entails the use of one or a combination of three fundamental forms, based on establishing the:

> appropriateness of the reported data to human needs (functionalism); the tendency of the reported data to reinforce social and cultural equilibrium (structural-functionalism); or the consonance of the data with presumed meta-patterns of thought (structuralism) (p.2).

Van Maanen (1979) further emphasises the importance of analysis, since much confusion surrounds the types of empirical data gathered through ethnographic studies. He emphatically states that the fieldworker must continuously be separating operational and presentational data for analytic purposes, which is not a simple task:

> ... the fieldworker may find it difficult to generalise (to develop second-order concepts) from specific practices (operational data) without merely parroting back the normative abstractions (presentational data) used by members of the studied group to both describe and account for their behaviour (pp.543-45).

While most ethnography is written about general forms of organisations and general ways of thinking in particular contexts, organisational ethnography is "predominantly concerned with those social relations coalesced around a subset of goal-oriented activities" (Rosen, 1991, p.3). Anthropologists have traditionally studied kinship and community organisations whereas organisational ethnography differs in that the focus is on the formal administrative organisation. Historically, the primary concern in anthropology lies within how one comes to understand - if such understanding can be attained - the understanding of others. Organisational ethnography, on the other hand, is concerned not with comprehending isolated and "exotic" communities, but rather apprehending a local subject and transforming that which is culturally familiar into a subject upon which to interpret understandings. There are

a number of problems attached to conducting organisational ethnography. Initially the researcher must make a choice between conducting research as an employee of the company or as an outside observer. In becoming a direct participant, the researcher would hope that by being what the members of the organisation are he would be able to give a more incisive account of the organisational social processes and structure than by being merely an observer. However, a number of issues must be raised. An observer has less access than a participant to the technical expertise and emotional feelings which derive from doing a particular type of job. The role selected by the ethnographer will have a direct correlation with his access to organisational policies, directions, records and other organisational secrets and without the correct clearance, much of this information may be inaccessible. If an ethnographer becomes a participant and plays a particular role within the organisation, he may not be trusted by others located in the same political arena, whereas, employees may be more likely to trust, and be more open with, an outside observer. As a direct participant, the ethnographer is undertaking a dual role which can lead to confusion, for both him and the employees. He is firstly playing the part of an employee where he shares the group's framework of values and beliefs and is there to work. But secondly, he is there as an ethnographic researcher, and must pursue such activities as asking extensive questions concerning social and cultural relations, recording information while in the workplace, and so on.

Although many problems and myths exist in the use and application of ethnographic research, this type of research lends itself to answering a number of questions in the area of theory generation. Van Maanen (1979) maintains that within social research, one tends to theorise well in advance of the facts thus allowing for the possibility that the facts that emerge from research studies are distorted to fit a given theory. The present lack of a body of organisational ethnographies slows the refinement of theoretical formulations (Rosen, 1991). Geertz (1973) postulates that such studies build on one another in a slow and staggered manner:

> ... studies do build on other studies, not in the sense that they take up where the others leave off, but in the sense that, better informed and better conceptualised, they plunge more deeply into the same things... Previously discovered facts are mobilised, previously developed concepts used, previously formulated hypothesis tried out; it is from an

> awkward fumbling for the most elementary understandings to a supported claim that one has achieved that and surpassed it. A study is an advance if it is more incisive - whatever that may mean - than those that preceded it, but it less stands on their shoulders than challenged and challenging, it runs by their side (p. 19 in Rosen).

3.2.0 The Qualitative/Quantitative Paradigm

Qualitative research methods have become an increasingly important mode of inquiry within the social sciences. Having been long dominated by methods borrowed from the physical/experimental sciences, the social sciences now have their own collection of research methods including anthropology, ethnoscience, ethnography and ethnology. Yet the phrase qualitative methods does not have an exact meaning and can include ethnography, case studies, role playing, cartoon completion, projective techniques, participant or unobtrusive observations, focus group interviewing and indepth interviewing; it is:

> ... an umbrella term covering an array of interpretative techniques which seek to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world (Van Maanen, 1979a, p.520).

However, scanning the literature confirms that in the world of research, qualitative data are frequently designated *soft*, whilst quantitative data are held to be *hard*. As Halfpenny (1979) notes, positivist researchers in the nomothetic tradition either do not gather qualitative data or, should they acquire such information, spend much effort and time transforming it into figures. Humanistic researchers, in the other hand, regard softness as being of the essence and reject the necessity to convert such data into figures and equations. For many positivists, measurement preceded existence; for ethnographers and phenomenologists measurement may well preclude access to the essence of any particular situation or relationship.

Qualitative research methods combine the rational with the intuitive approach to knowledge; "the focus in many qualitative studies typically is on the unfolding of *process* rather than the *structure*" (Das 1983, p.301). In contrast, quantitative researchers will focus on social structures. Qualitative research approaches allow for a broader and more holistic

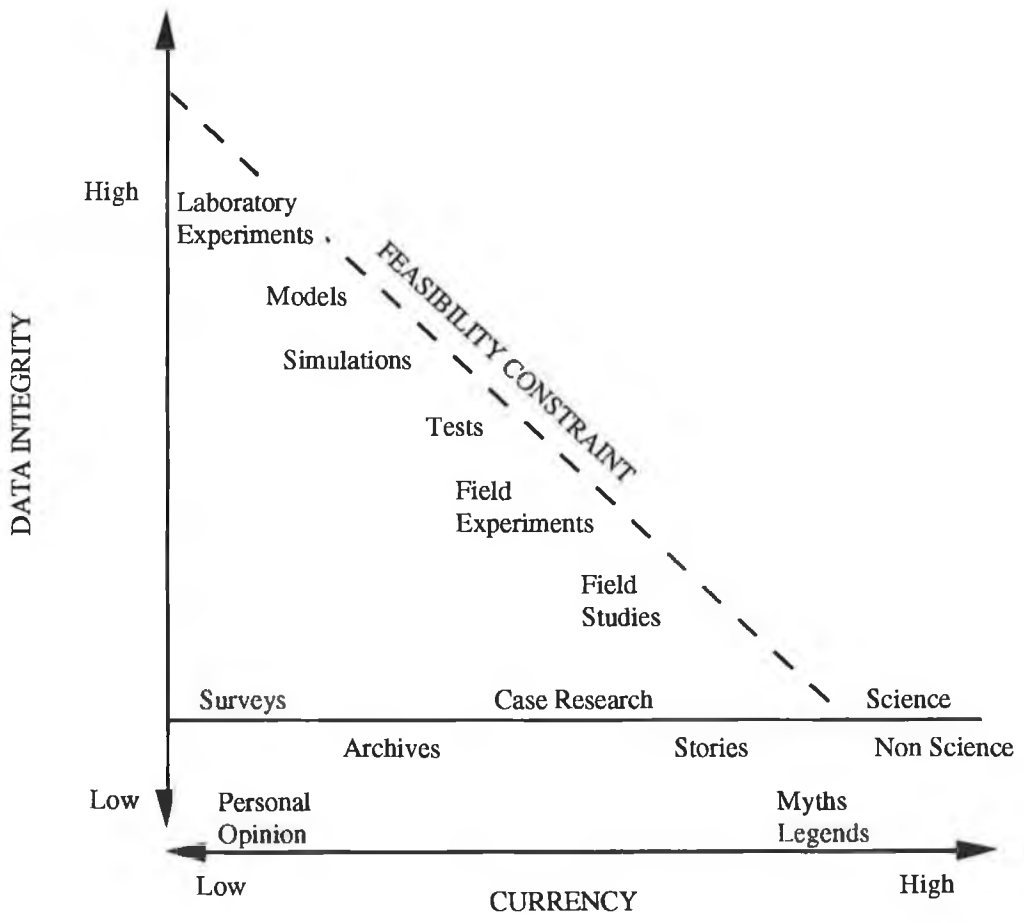
perspective to be taken, than do quantitative tools - a perspective which is often ignored by organisational researchers (Whittington, 1992). Conclusions emerging from qualitative research are impressionistic rather than definite in which the personal experiences of the researcher are often key elements to be understood and analysed as data (Sampson 1972 and Van Maanen, 1979a, 520). It is in the nature of qualitative research to develop explanations rather than predictions of the subject under investigation, through eliciting data which consists of detailed descriptions of events, situations and interactions between people and things (Das 1983, Fineman and Mangham, 1983, Kydd and Oppenheim, 1990).

Qualitative and quantitative data both have their place in organisational research. The determination of which approach to take should only be decided within the context of a particular research setting; in other words, methodologies are neither applicable or inapplicable until they are related to a specific research problem. A dilemma often arises between *objective* and *subjective* measures (Downey and Ireland, 1979); objective measures referring to tabulation of events or objects within an organisation and its environment, while subjective measures refer to any measure that seeks to use participant's perceptions of their organisation's environments. Downey and Ireland (1979) argue that using such descriptions of these terms, it is not surprising that researchers would hold a distinct preference for objective measures. This objective-subjective categorisation they reason, has had a number of effects on organisational research. The objective-subjective dilemma has equated objectivity with quantification. As a direct result of this, qualitative studies have been avoided by organisational researchers because of the possibility of appearing "unscientific". Conversely, subjectivity has been equated with the measurement of perceptions and much confusion lies in the argument over whose subjectivity is involved.

Although there are strong links between qualitative and quantitative research, both approaches to the study of organisations tend to be mutually exclusive. According to Van Maanen (1979a) "perhaps Gresham's Law is at work in organisational studies wherein the programmed research is driving out the unprogrammed". There are a number of reasons why this may be so. Bonoma (1985) believes that in

methodological decisions in research, choices must be made between *data integrity* and *currency*. Data integrity refers to a combination of elements of research that affect error and bias in results including internal validity and reliability. The term currency, on the other hand, is used in the sense of "has currency" and relates to generalisability of results. "Specifically, it (currency) refers to the characteristics of research that affect the contextual relevance of findings *across* measures, methods, persons, settings and time" (Bonoma, p.200). It is a combination of what is usually referred to as external validity and ecological validity. Although researchers will seek to maximise both properties, Bonoma (1985) suggests that when researchers choose a particular methodology, they must trade one characteristic for another. He represents this dilemma in graph form with data integrity on the vertical axis and currency on the horizontal axis (see Figure 3.1).

Figure 3.1 A Knowledge-Accrual Triangle



Source: Bonoma, 1985, p.200

As Figure 3.1 suggests, within any individual research method, exists the inability to simultaneously maximise data integrity and currency. For example, a study seeking a high degree of data integrity tends towards a positivistic approach and requires a relatively large sample size and quantitative data for statistical analysis. Whereas, a study requiring high currency generally takes a holistic approach where large samples, quantitative measures and control, in practise are problematic. Optimally, researchers will wish to simultaneously achieve high levels of data generalisability and validity by adopting triangulation strategies which lend to replication and/or corroboration of results across methods within a single research study. Triangulation is broadly defined by Denzin (1979, p.291) as "... the combination of methodologies in the study of the same phenomenon". While this multimethod approach appears ideal, in practice it is rarely used due to the technological and expense barriers within any one research study.

In deciding which approach to take, Bonoma (1985) suggests that one should consider two characteristics of research problems: the purpose of the research and the nature of the phenomenon under study. Looking at the purpose of the research, one must determine at what point along the hierarchy of study types the research study may be placed. The hierarchy comprises of a number of sequential steps: description, classification, comparison, measurement/estimation, establishing association, and determining cause and effect. As one proceeds along this path, it is assumed that the proceeding types of studies have been undertaken. For example, unless a situation has been adequately described, it is futile to attempt any type of statistical classification or measurement. Studies tending towards the description end of the continuum are associated with theory building (and thus a holistic approach), whereas those at the other end of the spectrum i.e., near the cause and effect end are more often used for theory disconfirmation (and therefore warrant a positivistic approach). Thus, the arguments used in the positivist versus holistic approach to marketing (and market research) could also be applied in this circumstance. Within a particular study, if there is a large amount of existing knowledge, then the methods oriented toward the lower-right apex of Figure 3.1 may be purposeless and the researcher should view the

study further up the hierarchy, and thus consider methodologies oriented toward the upper-left apex of the graph. However, where this body of knowledge does not exist, the study lends itself towards theory building rather than verification or extension. In this situation, the tasks of description, classification and comparison become relevant; the methods toward the lower-right apex of Figure 3.1 being most efficient for this research purpose.

Two key points are related to the nature of the phenomenon under study; one relating to whether or not the phenomenon can be researched effectively outside its natural setting and the second is whether it is amenable to quantification. For example, areas such as the coordination of marketing activities with other business functions and "best marketing practice" are in the early stage of theory development and are nonquantifiable as it is impossible to know what to count. This premature application of theory-testing (positivistic) methods to phenomenona where theory building (holistic) methods are more appropriate is a constant source of concern across the social sciences, and in particular, the marketing field. When respondents express difficulties in verbalising the underlying cause of a particular behaviour or where a phenomenon, due to its complexity, cannot be operationalised meaningfully in quantitative data, clinical judgement based on qualitative data is required. Although this leads to a reduction in the data integrity, such approaches should not be deemed unscientific; rather these methods will be guided by the same principles as most quantitative methods. The main disparity is that qualitative approaches will use inductive, theory-building technology, whereas quantitative approaches use deductive theory-testing technology (Bonoma, 1985, Martinko and Gardner, 1990).

Hirschman (1986) criticises the ideas put forward by Bonoma (1985) because she believes that although he advocates the increased use of qualitative research methods in marketing research, he measures their worth using positivist criteria such as objectivity and quantifiability. Since the determination of cause and effect are assumed by him to be the highest point on the hierarchy of study types, and data integrity is equated with the control made possible by laboratory experimentation context, humanistic methods such as the case study would be viewed as

tainted by researched subjectivity and measurement bias. According to Hirschman (1986):

> Such a characterisation perpetuates long-held stereotypes about the nature and utility of humanistic methods - that they are good for generating ideas, but inadequate for rigorous theory-testing applications. More importantly, it obfuscates the very real divisions between humanist and positivist science. Methods such as the case study derive from the humanistic metaphysic. They are a complete and internally consistent approach to the theory construction, testing and revision process when used competently by a researcher. They are neither inferior to nor dependent on positivist methods. Rather, humanistic inquiry provides a *parallel path* in relation to the positivist method for acquiring marketing knowledge (p.239).

Yin (1984) postulates that research strategies should not be arranged hierarchically. He rejects the notion that case studies are appropriate for the exploratory phase of an investigation, that surveys and histories are appropriate for the descriptive stage and that experiments are the only way of determining cause and effect. He prefers to view research strategies in a pluralistic light where any one strategy may be beneficial for either exploratory, descriptive or explanatory purposes.

3.3.0 Trends in Organisational Research

Despite the conflicting views on the approaches to qualitative methods, all authors agree that over the past number of years, there has been a huge surge towards this type of approach to research (for example, Spender, 1993, Jeffcutt, 1994). There are a number of reasons for this trend. Organisational strategists have begun to realise that while much is written about strategy formation, little is known descriptively about how managers engage particular strategies under real-world pressures. The traditional research bias towards methods which preserve data integrity at the expense of currency, have impaired the development and testing of sound theories (Bonoma, 1985). Also, organisational researchers are viewing, with increasing distrust, quantitative approaches (such as the formal interview, statistical survey) (Van Maanen, 1979a). Organisation behaviour is currently approached from a holistic viewpoint where organisational researchers have a preference for examining the gestalt of the behaviour of the unit under study:

> The holistic approach assumes that the whole is different from the sum of its parts and hence any serious discussion of a phenomenon can happen only if its contexts (of occurrence) are carefully described and studied. Thus it is felt that a phenomenon (such as leadership) cannot be adequately understood by focusing only on a few variables such as the task structure, the leader's personality and the subordinate's goals, but rather has to be understood as a complex, situational phenomenon influenced by these and other variables (Das 1983, 303).

Laboratory experiments and surveys on areas of organisational behaviour are now being rejected and replaced by an increasing preference for naturalistic studies (for example, Willmott, 1987). Mintzberg (1979), a leader in studies involving structured observation, has always firmly believed that in order to examine organisational phenomena, it is essential to go out into the organisation:

> Measuring in real organisational terms means first of all getting out into the field, into real organisations. Questionnaires often won't do. Nor will laboratory simulations, at least, not in policy research. ...The evidence of our research - of interruptions and soft data and information overload - suggests that we do not yet understand enough about organisations to simulate their functions in the laboratory. It is their inherent complexity and dynamic nature that characterise phenomena such as policy making. Simplification squeezes out the very thing on which the research should focus (p.586).

The theoretical frameworks used in organisational behaviour research have grown in complexity at a phenomenal rate. As a result of this increased complexity, the application of such research methodologies as surveying and experimentation has, one could argue, become obsolete. Researchers now look for other tools - ethnographic studies, longitudinal, in-depth studies - which go beyond the traditional quantitative designs, to describe, understand and eventually theorise the intricate dimensions of organisational behaviour; phenomena which are not susceptible to quantitative measurement tools.

3.4.0 Formulating a Research Strategy

The arguments for and against any one particular research approach have been widely documented and commented upon in the literature. All authors agree that a researcher should not decide to do a qualitative study

and then search for a research problem, particularly where many researchers are under the misconception that qualitative research is the easier option. Researchers must design their study according to the research questions they wish to answer. Marshall and Rossman (1989) suggest that survey and experimental research (high data integrity approaches) are appropriate for unambiguous and tightly defined variables with high levels of reliability. If, on the other hand, the researcher finds through reviewing the appropriate literature, that previous research has raised many questions, variables are ambiguous and unclear, or that the context in which the phenomenon under investigation is contained has more important domains which demand further exploration, then a descriptive study will yield more important and richer results. Bonoma (1985) has previously supported this argument for undertaking case study research.

Yin (1989) opposing this hierarchical viewpoint, agrees that the first and most important step in deciding between the various research strategies is to identify the type of research question being posed. He classifies the types of questions into five categories: who, what, where, why and how. Basically, "what" questions, if exploratory, could pertain to a research strategy, concerning prevalence, and would favour surveys or the analysis of archival records; "how" and "why" questions are likely to favour the use of experiments, case studies or histories; and "who" and "where" questions are likely to favour survey strategies or the use of archival records. Yin (1989) draws a further distinction among strategies through the extent of control and access the researcher has over actual behavioural events. For example, if the researcher has almost no access or control, histories would be the optimal strategy. Whereas, if examining a contemporary event or phenomenon, where one does not wish to manipulate the relevant behaviours, Yin (1989) advocates the use of the case study. He discriminates between history and case study techniques by pointing out that the case study uses two additional sources of evidence: direct observation and systematic interviewing. Experiments are preferable in a situation where the researcher can "manipulate behaviour directly, precisely and systematically" (Yin 1989, p.20). However, he acknowledges that particular situations may arise where a number of (or all) research strategies may be relevant. When this is the case, he advocates the use of triangulation.

3.5.0 Case Study

Bonoma (1985) states that where there exists a relatively thin theoretical base, or complex observational task, case study research is the most beneficial research strategy. Platt (1988) also suggests that a case study may suggest hypotheses, interpretations, empirical uniformities for further (quantitative) investigation. Others have rejected this notion of a void in theory building. Markus and Anderson (1989) believe that it is more common for any given phenomenon to have too many theories. They propose that case study research should be used for theory testing and in doing so allows for the possibilities of "generating theoretical alternatives or refinements on those frequent occasions when the tested theory is partially or totally disconfirmed" (p.21). Yin (1989) commends the use of a number of different strategies in any given study, yet, he believes that certain situations exist where a specific strategy has a distinct merit. He proposes the use of the case study when a "how" or "why" question is being asked and distinguishes between four different applications for the use of the case study in research: explain, describe, evaluate and explore. A case study can be used to explain cause and effect links in situations too complex for experimental or survey strategies. Secondly, the descriptive case study is an attempt to describe the "real-life context in which an intervention has occurred" (p.25). Thirdly, the case study approach may be used to explore situations where the phenomenon being investigated has no clear outcome. Gummesson (1991) divides case studies into two types, those attempting to derive general conclusions from a small number of cases and the single case striving towards specific conclusions. Although acknowledging the views of Yin (1984), he strongly advocates the case study approach for its opportunity to ascertain a holistic view of the situation:

> The detailed observations entailed in the case study method enable us to study many different aspects, examine them in relation to each other, view the process within its total environment and also utilise the researcher's capacity for "verstehen" (understanding). Consequently, case study research provides us with a greater opportunity than other available methods to obtain a holistic view of a specific research project (p.76 , explanation added).

McClintock et al (1979) recommend the use of the case study when the objectives of the study are to develop a frame of reference and definition

of the phenomenon under study; to engage in a detailed examination of an organisational situation; or to determine factors which allow for greater understanding of causality.

3.5.1 Definition

Yin (1989) in searching for a "technical" definition of a case study proffers the following:

> A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used (p.23).

He argues this definition is useful in that it not only offers an understanding of case studies, but also clearly distinguishes them form other research strategies such as experimentation or surveys. Bonoma (1985) uses a very simple general definition: "a case study is a description of a management situation" (p.203). However, he offers a number of points to further clarify this definition. Case construction infers the use of multiple data sources, and very importantly, should reflect the *context* within which the phenomenon (a management's act, for example) is occurring and be sensitive to the temporal dimension through which the situation unfolds, i.e., incorporating the gestalt of situations. Further, case studies require direct observation of the behaviour under investigation by the researcher who concurrently applies his own interpretation of the ongoing events, and attempts to understand the actions of those in the situation, i.e.,:

> ... case method is concerned basically with the researcher's interpretation of management's signification of events, information, and reality - that is, it depends on the researcher's perceptions about management's *meanings*, not on some 'objective reality' (p.204).

3.5.2 Data Collection

Case studies, although they are deeply embedded in the qualitative, holistic approach to research, do not preclude the use of quantitative data. Yin (1989) suggests six different sources of data, upon which case studies can be based: documentation, archival records, interviews, direct observation, participant observation and physical artefacts. Each data source may be maximised if the researcher follows three principles: use

multiple sources of evidence; create a case study data base; and maintain a chain of evidence. Bonoma (1985) also advocates the use of multiple sources of data. He further embellishes the use of quantitative data sources. He proposes that such sources serve as a means of "perceptual triangulation" and furnish a more complete picture of the phenomenon under investigation:

> The notion of 'perceptual triangulation' raises the point that, in all qualitative research, knowledge depends heavily on the perceptions of the actors and of the observer (or case compiler). Following Geertz, however, knowledge can only be considered knowledge within the confines of *someone's* perceptual framework, which is called 'signification. The fact that we know so little of how *managers perceive* marketing realities is a major concern (p.203).

McClintock et al (1979) put forward informant interviews, participant observation and archival analysis as the primary sources of data for case study research. They propose that the advantages of using informant interviewees when developing case studies of organisations are that such people can think in terms of the organisation as a whole (i.e., holistically) as well as various settings within it. They are able to keep the researcher in continuous contact with the environment and they can be used repeatedly to obtain data about a broad range of situations. They emphasise the importance of selecting informants who are knowledgeable and accurate.

3.5.3 Single versus Multiple Case Study Design

As a research strategy, the case study focuses on understanding the dynamics present within single settings. Case studies can involve either single or multiple cases, and numerous levels of analysis, including an embedded design i.e., multiple levels of analysis within a single study (Yin, 1989, Thomas and Trevine, 1993).

3.5.4 Rationale for Single Case Design

If a single case represents the "*critical case*" (Yin 1989, 47) in examining a well-formulated theory, it may be appropriate to use only that particular case. The case may be used in the examination of the theory's propositions and the generation of alternative explanations. Further if the case represents an "*extreme or unique case*", (p.47) single case study design is appropriate (commonly used in clinical psychology). Yin (1989) also suggests that a single case design may be suitable when it is the "*revelatory*

case" (p.48). This occurs where the research has the opportunity to observe and analyse a situation previous inaccessible to scientific investigation.

A single case study does not necessarily imply only one unit of analysis. If the case study is examined in a global sense, a holistic design is appropriate and here is only one unit of analysis. This design is advantageous if no logical subunits can be identified within the study and if the underlying theory is of a holistic nature. However, this viewpoint can lead to the entire study being undertaken in an abstract manner, lacking any clear direction, measures or information. Campbell (1975) argues for capitalising on the richness of detail within a single case by searching for multiple implications of the theoretical concepts being examined; thus, the single case becomes a set of diverse manifestations of theory, and each manifestation (as opposed to each individual case) can be thought of as a unit of analysis. This embedded design, while overcoming a number of problems, also presents its own questions. The central weakness with this design is that the case study may tend to focus only on the subunit level and fail to return to the larger unit of analysis. If this occurs, there is the danger that the complete study may loose the richness and thick description potential of such a research approach.

3.5.5 Multiple-Case Design

When approaching a multiple case design, Yin (1989) suggests that replication rather than sampling logic should be used in the analysis of this approach. He proposed that each case is selected so that it either "predicts similar results (*a literal replication*)" or "produces contrary results but for predictable reasons (*a theoretical replication*)" (p.53). He rejects sampling logic being applied to case studies for a number of reasons. Firstly, case studies are not usually used to measure the incidence of phenomena. Secondly, a case study covers not only the phenomenon under investigation but also its context, thus resulting in a large number of potentially relevant variables, which in turn, requires a very large number of cases. Finally, many types of research, inherently cannot be applied to the sampling logic.

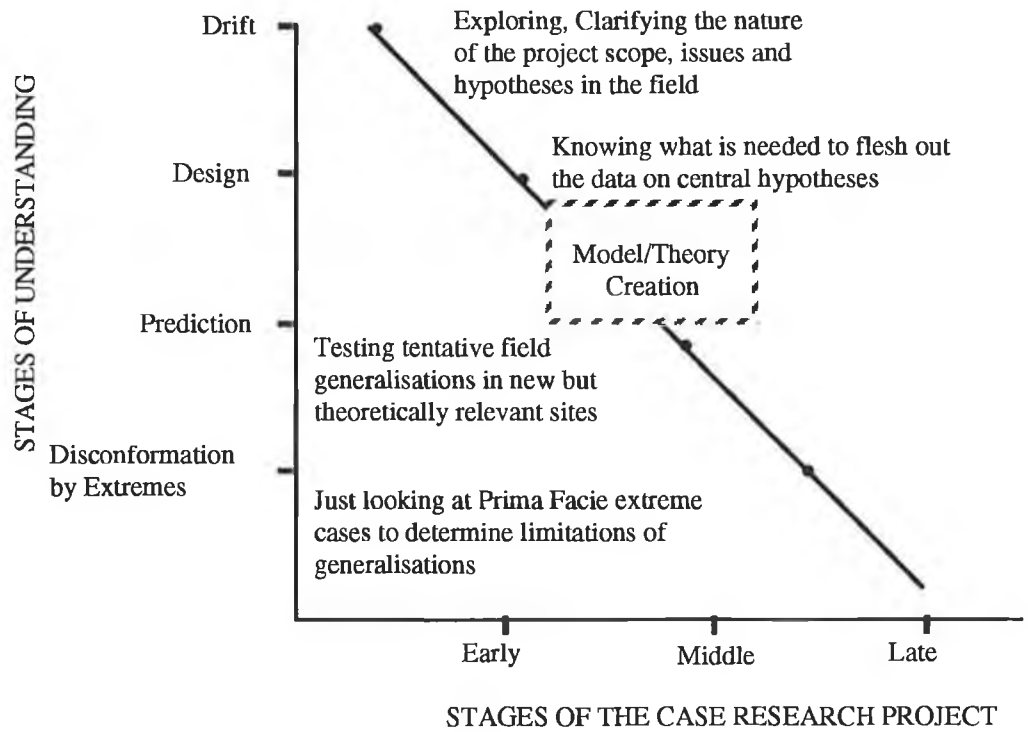
Eisenhardt (1989) proposes that the sampling of cases from a chosen population is unusual when building theory from case studies. She

supports the reasoning that cases may be chosen to replicate a previous study or to extend emergent theory, or to provide examples of extreme polar types and fill theoretical categories. When developing a multiple case study design, the emphasis is not on achieving the goals of statistical sampling procedures but rather in choosing cases which are likely to replicate or extend the emergent theory.

3.6.0 Case Study Process

Bonoma (1985) suggests a four-stage process for the development of a case study. He represents this process in graphical form, classifying the four stages in the process as "drift", "design", "prediction" and "disconfirmation".

Figure 3.2 A Process Model for Case Research



Source: Bonoma, 1985, p.205

The first stage - drift - incorporates the researcher's attempt to familiarise himself with the concepts, insight and understandings of the

phenomenon under investigation. Within the broad spectrum of qualitative research approaches, there are conflicting views on the level of preunderstanding an investigator should have when starting the study. Phenomenologists, for example, argue that an investigation should be undertaken without any preconceptions of the situation under study i.e., 'bracketing':

> .. means suspending as much as possible, the researchers' meanings and interpretations, and entering into the world of the unique individual who was interviewed" (Hycner in Tesch, 1990, 92).

Glaser and Strauss (1967) suggest that "an effective strategy is, at first, literally to ignore the literature of theory and fact on the area under study" (p.37). Eisenhardt (1989) states that while it would be ideal to enter a theory building study with a "... clean theoretical slate" (p.536) in reality it impossible to do so. She acknowledges the necessity of *a priori* specification of constructs to shape the initial design of such research, but she accentuates the importance of the researcher avoiding extensive reference to specific relationships between variables and theories, particularly at the commencement stage, as such thought may bias or abate results. Yin (1989) argues that in order to remain focused, the investigator must have a firm understanding of the issues (both theoretical and policy) involved. He highlights the fact that collecting data for case study research does not only involve *recording* data in a mechanical fashion (as is the case with highly structured, quantitative questionnaires). In contrary, the investigator must have the ability to simultaneously interpret the data and for example, be able to identify contradictory information and the need for additional evidence or data.

Marshall and Rossman (1989) advocate the use of the literature review, prior to the execution of the primary research as a means of ensuring the researcher is thoroughly knowledgeable about the subject and the intellectual traditions that surround the study. McCutcheon and Meredith (1993) distinguish between the types of cases being researched when establishing a perspective on a priori knowledge. If the research is intent in building theory, they feel it may be optimal to limit theoretical assumptions. If, on the other hand, a theoretical background to the phenomenon is very well developed, they suggest that this extensive theory may be useful in the generation of hypotheses, prior to conducting

primary research; such cases are likely to be explanatory studies. Bonoma (1985) opines that this stage is extremely significant, not for its contribution toward hypotheses generation, but rather in the development of a priori notions about the phenomenon and its contexts. Yet, he acceded the importance of the researcher, at this stage, suspending a priori bias, and being "ready to learn from naturalistic phenomena as they present themselves" (p.205).

The design stage embraces the formation of a tentative explanation, where the investigator has collected a number of divergent observations. At this stage, the importance of methodological design flexibility is at the forefront. Data collection is now focused to assess and refine the main areas of inquiry suggested by the preliminary framework. For instance, some findings may require clarification or demand peripheral studies. Following the precepts of grounded theory development, the case study may be expanded in an iterative fashion as theory is developed and understanding increased.

The notion of grounded theory development was arrived at by Glaser and Strauss (1967) when they rejected the overemphasis in sociology on the verification of theory which was prevalent at the time, which resulted in a de-emphasis on the prior step of discovering what concepts and hypotheses are relevant for the area that is under research (p.1-2).

The researcher may be confronted with new concepts or situations and it is of extreme importance that he has the capability to allow further (and maybe new) data be collected and allow thought to recycle back to the drift stage if original conceptualisations do not correspond.

The third - predictive - stage of the case research will usually occur in the middle/late stage of the investigation. The researcher will now have a model proposing generalisations for testing and a firm understanding of the factors on which field data may be grouped. Generalisation may be achieved through compiling further cases (i.e., multiple design) from situations that are different from, but conceptually similar to, those situations used to determine the model.

The fourth and final stage - disconfirmation - is concerned with further tests of generalisation. Here, the researcher should aim for polar type cases where generalisations' limits could be surpassed. This concept is explored further by Yin (1989) in his proposed multiple case study design. This stage is analogous of falsification procedures in positivistic (deductive) approach. The process now takes upon itself a theory/data/theory validation cycle, an iterative evaluation, the goal being to achieve understanding and depth of knowledge (in essence, thick description).

3.7.0 Quality of Research Design

The research design represents the logic that links the data, and as such, should be exposed to a number of tests to determine its quality. Yin (1989) suggests four tests which are relevant for case studies and indeed other types of social research - construct validity, internal validity, external validity and reliability.

Construct Validity

Construct validity is concerned with establishing correct operational measures for the concepts being studied. This can be a particular problem in case research. Case study researchers are often criticised in their tendency to use *subjective* judgements when collecting data rather than developing operational measures. However, advocators of this methodology argue that the amount of variables under investigation is too great to be operationalised; further, if they were to do so, they risk losing the richness and real-life context, which is, in effect, the essence of the case study approach. Yin (1989) suggests three tactics which will increase the construct validity in case studies: use multiple sources of evidence; establish chain of evidence; and have key informants review draft case study report (pp.41-42).

Internal Validity

Internal validity exists when causal relationships are consistent. Inferences which are involved in a case study every time an event cannot be directly observed must be airtight and correct. It is vital to acknowledge and consider rival explanations and possibilities. Thus this logic is inapplicable to descriptive or exploratory studies as these types of

investigations are not concerned with making causal statements. It is difficult to develop tactics which will address this problem. Yin (1989) suggests the use of specific analytic techniques: pattern-matching, explanation-building and time-series analysis.

External Validity

External validity involves the degree of generalisability of results beyond the initial investigation. Critics find major problems in case study research, stating that single cases offer a very weak basis for generalising. But they make such criticisms by contrasting the situation with survey research which does rely on statistical generalisation. Case studies, on the other hand, rely on analytical generalisation, where the researcher strives to generalise a set of results to some broader theory. To enhance external validity, (generalisation is not automatic), Yin (1989) advocates the use of replication logic in a case study design.

Reliability

Reliability is high in a study if an exact repetition of the same study arrives at the same findings and conclusions. In order to reduce the reliability problem, one should make each step as operational as possible, and conduct the research as if a third party is continuously overseeing the situation. Specific tactics for case studies suggested by Yin (1989) include the use of a "*case study protocol* to deal with the documentation problem and the development of a case study data base" (p.45).

Hirschman (1986) rejects these measures of quality, on the basis that such criteria are more applicable to studies within positivistic sciences; factors such as internal and external validity are derived from metaphysical underlying positivist science and should not be applied in the evaluation of research developed from humanistic metaphysics. She proposes a different set of criteria more appropriate to humanistic investigations - credibility, transferability, dependability and confirmability.

Credibility

In removing the metaphysical basis of positivist science, the internal validity criterion becomes functionless. Humanists reject the discrete causal process composition of the world and propose the possibility of multiple constructed realities, thus there is not in existence, a concrete

benchmark for validating results and interpretations. An alternative approach suggested is for the researcher to give the interpretation of the phenomenon to those individuals upon whom it is based, and ask their opinions as to its authenticity.

Transferability

This is an analogue of the criterion of external validity. Humanists suggest that within their research methodologies one should not be concerned with the generalisability of a particular finding, but rather with the "transferability of one manifestation of a phenomenon to a second manifestation of the phenomenon, recognising implicitly that no two social contexts are ever identical" (Hirschman 1986, p.245). It is only possible to assess the transferability of any one interpretation by comparing it with interpretations constructed in other contexts, an assessment which is only possible on a *post hoc* basis.

Dependability

This is an approximate analogue of the concept of reliability in the positivistic approach. Traditionally, reliability measures are based on the dependency of developing a research instrument which will be both stable and consistent. However, in humanistic inquiry, the research instrument is not some five-point scale, but human beings i.e., the researchers themselves. Thus the problem exists of how to assess the dependability of the research. The solution offered is to use multiple human instruments - though in humanistic inquiry, one does not expect perfect correlation between multiple interpretations.

Confirmability

Confirmability is almost equivalent to the notions of objectivity in positivist science. Here, the researcher is not assumed to be emotionally neutral and distant from the subject or situation under investigation. Conversely, he will be intimately involved with the topic of study and immersed in interpreting its meaning:

> ... the interpretation generated by the researcher is not assumed to be disinterested or value-free, as in the positivist approach. Rather, it is expected to be supportable from the data as gathered by the inquirer, to represent a logical set of conclusions given the reasoning he or she employed during the interaction, and to be a nonprejudiced,

nonjudgemental rendering of the observed reality (Hirschman, 1986 p.246).

3.8.0 Analysis

It has been clearly documented in the literature that qualitative research generates large amounts of nonstandard data, the analysis of which is problematic and not well formulated. While quantitative data have clear conventions which can be used in analysis, the analyst of qualitative data has very few guidelines as to what is correct. Generally authors spend much time on matters such as gaining access, interview techniques, choice of informants and very little on analysis tools.

Grounded theory development (Glaser and Strauss, 1967) solves the central cognitive problems of qualitative data analysis through bringing them out into the open. Various aspects of the research data are converted into a manageable form - through setting them out on cards - and can thus be analysed by means of consciously adopted strategies. It is essential to have two sets of files to undertake comprehensive qualitative data analysis (Turner, 1983). Firstly, field data should be organised in a chronological order which is readily retrievable. Secondly, categories should be devised within which features of the data can be defined as the analysis progresses. The concepts which emerge are the basis for the growing theoretical understanding of the phenomenon under investigation. Turner (1983) - disagreeing with Bonoma (1985) - believes that as such theoretical propositions are extracted, they should not be subjected to quantitative, statistical testing, rather, the concepts may be expanded to take into account a range of variations (multiple-case studies, Yin 1989, polar-types, Eisenhardt 1989) and confirmed by cross linkages to other studies of the same area and replication studies.

The analytic procedures of grounded theory are designed to build rather than only test theory; it gives the research process the rigour that is required to make the theory "good" science. Grounded theory aids in the break through of biases and assumptions brought to, and which develop during, the research process. Finally, this procedure provides the grounding, builds the density and develops the sensitivity and integration required to generate a rich, tightly woven, explanatory theory that closely approximates the reality it represents (Strauss and Corbin, 1990). Thus

the structure used for analysis has first to be derived from the data collected and rather than forcing data into preconceived categories, grounded theory generation is successful because it is derived from concepts and categories used by those under investigation to interpret and organise their world.

Glaser and Strauss (1967) maintain that when developing grounded theory, the researcher must be open to what the site under investigation has to offer, and slowly evolve a coherent framework, rather than imposing one from the start:

> Soon categories and their properties emerge which fit and work and are of relevance to the processing of the problem. The researcher must have patience and not force the data out of anxiety and impatience... He must trust that emergence does occur and it does (Glaser, 1992, 4).

Miles (1979) advocates the use of a rough framework at the start of fieldwork, acknowledging that it is not a "self-binding framework" (p.591) and will be revised several times over the life of the study. He proposes the use of data reduction as a preliminary analysis tool which "refines, iterates and revises frameworks, suggests new leads for further data collection, and makes data more available for final assembly into case studies and cross-site analyses" (p.593). He has found that much analysis is undertaken in the mind of the fieldworker while carrying out the study (highlighting one of the major differences between qualitative and quantitative thought).

An alternative analytical approach, cause mapping, is a form of content analysis which isolates the key assertions within a document - such as a detailed case research report - and includes proposing linkages of causality among signals, events, decisions and activities (Woodside and Elstrott, 1993). The links among decisions, activities or events, and the interactions among persons can be summarised through time within cause maps. Coding schemes are used to indicate causal and definitional relationships among the linkages in the causal maps, e.g., + positively affects. A map may be constructed - from thick description data - by connecting specific events, decisions and interactions of people with a symbol for the type of relationship or phenomenon under investigation. Using Axelrod's (1976) and Barr et al. (1992) approach to mapping strategic thought, Woodside and Elstrott (1993) define cause mapping as

"... a form of content analysis that isolates the key assertions within a document, such as a detailed case research report;... includes proposing linkages of causality among signals, events, decisions and activities". Given that strategic decisions are made in the context of a situation which is usually characterised by incomplete information, which may be ambiguous and even contradictory, a crucial task facing an organisational researcher is one of comprehending the manner in which the strategist in the organisation uses interpretation and judgement to formulate strategy (Ennis, 1994). Developing cause maps should be viewed as data-condensing and data-sorting exercises rather than as rigorous multivariate analyses. They do not oblige the analyst to draw univocal conclusions from distributions and partitions. The primary objective for doing a cause map is to force a more inferential level of analysis that pulls the data together in a single summarising form (Miles and Huberman, 1984).

A range of different coding schemes which have been derived from the original creator of the system (Axelrod, 1976), can be utilised, for example, Huff et al (1990) or Fahey and Narayanan (1989). The coding categories, which were used in this study, are outlined in Table 3.1, and are similar to those used by Ennis (1994).

Table 3.1 Coding Categories in Cause Mapping

Symbol	Definition
+	Positively affects
-	Negatively affects
a	May or may not be related to
m	Affects in a non-direct manner
=	Is equivalent to
c	Choice criterion
e	Is an example of

Source: Ennis (1994) p.339

3.9.0 Chapter Summary

This chapter attempts to draw together some of the ideas from the literature regarding the nature of market research. It rejects the notion that marketing researchers should concentrate on measuring, quantifying and testing variables which firmly places marketing in the boundaries of the physical sciences. Instead, the humanistic approach is suggested as an alternate the traditional positivistic stance and places marketing within the social sciences. Such an approach should not be viewed as 'unscientific' or 'soft', rather it should be appreciated for its potential to generate 'rich' data.

The next chapter applies these ideas to the present study, clearly states core objectives and propositions, outlines the research methodology and determines the unit of analysis and the analysis technique used.

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Chapter 4

RESEARCH DESIGN

4.1.0 Introduction

The previous chapter examined changing perspectives in the approaches to marketing research. In this chapter, core objectives are discussed and propositions developed. The research methodology is outlined for this study and its advantages and limitations discussed.

A research thesis usually conveys an orderly, linear process of knowledge development. Normally objectives are developed and hypotheses deduced which are then subjected to some form of empirical testing. However this study rejects the notion of theory verification and has concentrated its efforts on the discovery of concepts which might lead to theory on the development and implementation of strategic alliances between small and large companies in the computer industry. This has entailed an iterative and fragmented process of knowledge accumulation.

Various different research methods are available in the social sciences, e.g., surveys, archives, experiments, simulations, tests and case research. A researcher may investigate a situation at one point in time or he may concern himself with development and change of a situation over time (longitudinal research). Research may be used to test existing theory, or to further the creation of theory. All research methodologies have relative strengths as well as weaknesses and the choice of a specific research method will always depend on the original research objectives or propositions (Yin, 1989).

4.2.0 Core Objectives

This study seeks to answer two basic questions which have become the central objectives of the research:

> *Why* are cooperative agreements between large and small companies initiated?
> *How* are such relationships initiated, implemented and developed over time?

4.2.1 Propositions

The propositions, which are based on ideas and concepts derived from both empirical and theoretical evidence are as follows:

1. The small firm will enter into a strategic alliance because it does not have direct access to certain assets which are most likely to be marketing and distribution channels
2. The large firm will enter into a strategic alliance to gain access to technological know-how or a technological advancement it does not possess
3. Organisational culture conflicts will occur
4. Trust and goodwill are achievable over time through developing a good working relationship between partners.

It is not claimed that this is a finite number of propositions, but rather the opposite. It is envisaged that a number of other propositions will emerge during the course of the analytical stage of the research. The above propositions are speculative in nature and will be confirmed or disconfirmed during the course of the study.

4.3.0 The Domain of Grounded Theory

There exists a relatively thin theoretical base concerning cooperative agreements between large and small companies in the literature. In the absence of a solid theory, the objective of this study was to integrate a number of phenomena which has been observed in practice by managers. The result of this exercise is a descriptive model of a complex system of interrelated issues which determine the development of cooperative relationships between large, established and small, evolving companies.

Since the intention was to build rather than verify theory, it was of primary concern not to confine thinking to any pre-existing categories, structures, models or theories. Rather than force reality into a preformulated theoretical design and ignore some of the important issues which may not fit into such a model, it appeared more appropriate (and valuable) to design and redesign a model firmly based on empirical observations which would reflect as much of the 'real world' as possible.

This decision resulted in an iterative process of formulation and reformulation of theory, each time adapting theory to the empirical observations which had been made in the meantime.

Thus, as far as possible, this research has followed a number of Glaser and Strauss' (1967) postulations on the development of grounded theory. While they do not dismiss the use of past and current literature, they strongly recommend that the researcher should not become so blinded by what already exists (categories, theories, models, etc.) that he is nonreceptive to forthcoming theories or new categories:

> ... our focus on the emergence of categories solves the problems of fit, relevance, forcing and richness. An effective strategy is, at first, literally to ignore the literature of theory and fact on the area under study, in order to assure that the emergence of categories will not be contaminated by concepts more suited to different areas. Similarities and convergences with the literature can be established after the analytic core of categories has emerged (Glaser and Strauss, 1967, p.37).

4.4.0 Quasi-longitudinal Design

This study attempts to understand particular strategic processes, i.e., those which lead the cooperation and those which determine the development of the cooperative relationship. In order to develop an understanding of these processes, a longitudinal research design was required, which tracks developments as they take place. However, since an alliance agreement may extend over many years, it was necessary to rule out a 'real-time' longitudinal study. A real-time study would entail studying a phenomenon from its commencement until its completion, which was not feasible in this instance. Instead, a quasi-longitudinal approach was chosen whereby real-time data covering one year was combined with retrospective data collection in the form of interviews and archival data analysis.

4.5.0 Case Study Design

Bonoma (1985) advises that where there exists a relatively thin theoretical base, or complex observational task, case study research is the most

beneficial research strategy. Yin (1989, 19) believes that 'Why...?' and 'How...?' questions can be best resolved using the case study method. The development and implementation of cooperative agreements are phenomena embedded in a hugely complex set of interrelated variables, such as organisational strategies, structures and cultures. Thus, following both Yin's (1989) and Bonoma's (1985) advice, it seemed logical to use the case study methodology. The case study allows the researcher the possibility to study issues within a rich context, and to make a multitude of inferences between complex sets of variables; "...the distinctive need for case studies arises out of the desire to understand complex social phenomena" (Yin, 1989, 14). Hirschman (1986) has written at length on the subject of humanistic inquiry whereby a fundamental belief of this type of inquiry is that human beings construct multiple realities which are realities that can be comprehended only as gestalts, i.e., holistically. One of the primary advantages of using the case study methodology is that it is possible to capture and retain such multiple realities within a research study:

> ...the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events - such as individual life cycles, organisational and managerial process, neighbourhood change, international relations and the maturation of industries (Yin, 1989, 14).

Furthermore, case study is an obvious, though not necessarily exclusive, vehicle for grounded theory development, as it can be used to allow theory emerge from the data, rather than imposing a preconceived theoretical framework on reality. This is the main differentiating factor between case study and surveys. Surveys are restricted to a very limited set of relationships between variables and the questions asked usually impose categories on the interviewee and ultimately reflect the researcher's preconceived interpretation of the research question.

The potential of case study methodology to generate an intimate understanding of one or a small number of situations, although being its biggest strength, may also be regarded as a principal weakness. The lack of generalisability is often viewed (particularly by those who base their premise on positivistic philosophies) as a major drawback of this kind of research methodology. However, case study researchers are not concerned with demonstrating the validity of an argument for statistical populations or universes, rather, they aim to create and expand rich

theoretical frameworks. Such frameworks are concerned primarily with analytical as opposed to statistical generalisation. Opponents also express concern over the lack of rigour in case study research. "Too many times, the case study investigator has been sloppy, and has allowed equivocal evidence or biased views to influence the direction of the findings and conclusions" (Yin, 1989, 21). This addresses the question of reliability which has already been discussed in the previous section of this chapter.

Before data collection commences, the researcher must decide whether a single-case study or multiple cases are going to be used to address the research questions; the rationale for both approaches has been discussed in the previous section of this chapter. In this study, it was decided to use single case study design. It was felt that the research was exploring an area - alliances between large and small companies - which had received very little prior attention and, indeed, virtually none in an Irish context. Although the phenomena may not have been previously inaccessible to scientific investigation, few researchers had taken the opportunity to observe and analyse such a complex set of variables. For these reasons one may view the case as a revelatory case.

Mintzberg's (1979) view on organisational research further reinforced the choice of a single case:

> The field of organisation theory has, I believe, paid dearly for the obsession with rigour in the choice of methodology. Too many of the results have been significant only in the statistical sense of the world. ...**What, for example, is wrong with samples of one?** Why should researchers have to apologise for them? ...Given that we have one hundred people each prepared to do a year of research, we should ask ourselves whether we are better off to have each study 100 organisations, giving us superficial data on ten thousand, or each study one, giving us in-depth data on one hundred (Mintzberg, 1979, 583-584, emphasis added).

4.5.1 Unit of Analysis

A fundamental difficulty in undertaking case study research is defining exactly what the 'case' is - it may be an individual, an organisation, an event or a number of situational variables. Yin (1989) offers a general guideline which entails defining the unit of analysis in relation to the way the initial research questions have been defined. In this study the case

was an event which incorporated a number of different situational variables. The 'event' was the initiation, implementation and development of a cooperative relationship, which in turn became the unit of analysis.

What is understood by a single case is sometimes misconceived. Yin (1989) makes clear that a single case approach may involve "more than one unit of analysis" (p.49). Essentially this gives the researcher the option of using an *embedded case study design* or a *holistic design*. An embedded case study design is applicable when, within a single case, attention is also given to a subunit or a number of subunits. The alternative - a holistic design - involves examining the case study in a global sense and is applicable when no logical subunit can be identified and when the relevant underlying theory is itself of a holistic nature. An embedded design is advantageous when logical subunits can be identified. In this study the unit of analysis has been defined as the initiation, implementation and development of a cooperative agreement. Since the Irish company used in the final case has been involved in a number of strategic alliances it was felt that an embedded design would be applicable and this was confirmed as the research progressed. Each of its alliance experiences was examined as an individual subunit. However, much attention was given to avoiding the pitfall of focusing only on the subunit level and failing to return to the larger unit of analysis.

4.6.0 Data Collection

In order to develop an understanding of the area, two main sources were used optimally. Firstly, extensive literature was consulted incorporating various subject areas such as strategic alliances (which covered a huge range of topics, e.g., partner selection criteria, motivation factors, performance measurement), the software industry, and social science research methods. The purpose of this was not to develop theoretical categories for examination but rather to familiarise herself with the areas under investigation and to use the literature in the analysis stage of the study, (Glaser and Strauss' (1967) comparison groups which will be discussed later). Secondly, in-depth interviews were carried out with

experts in a number of fields such as the software industry and partnership agreements. The purpose of these interviews was twofold. They provided a further understanding of a number of issues involved in the area under investigation, and they assisted in building a pool of potential cases for examination.

Eventually a list of thirteen strategic alliances in the software industry was developed, all of which were candidates in the early stage of the study (see Appendix B for full list). This inventory was developed with the aid of a number of industry experts and through articles in computer journals and national newspapers. Each was an Irish-owned software company which was involved in various types of strategic alliances. Initially, the managing director of each company was written to and a preliminary interview arranged with each of them (see Appendix A). The purpose of this was to select a company which could be used in the main body of the study. This selection was made on the basis of two criteria. First, the case selected must be capable of producing information that was rich enough. In some cases, preliminary interviews showed that the interviewee was not willing to discuss intimate details and problematic situations in the cooperation. In contrast, other interviewees yielded in-depth candid discussion. It was felt that these would be especially valuable in giving insights into the difficulties and problems, as well as the many benefits, encountered in cooperative agreements. Second, the alliance must have been in existence for a period of time long enough to yield substantial experience. For example, one company was rejected because it was less than one year old and it was felt that it had not yet accumulated enough experience in the area for investigation. Two companies were identified had been in existence longer than five years; were small companies (the Small Firms Association in Ireland defines a small firm as one having less than 100 employees); and had extensive partnership experience.

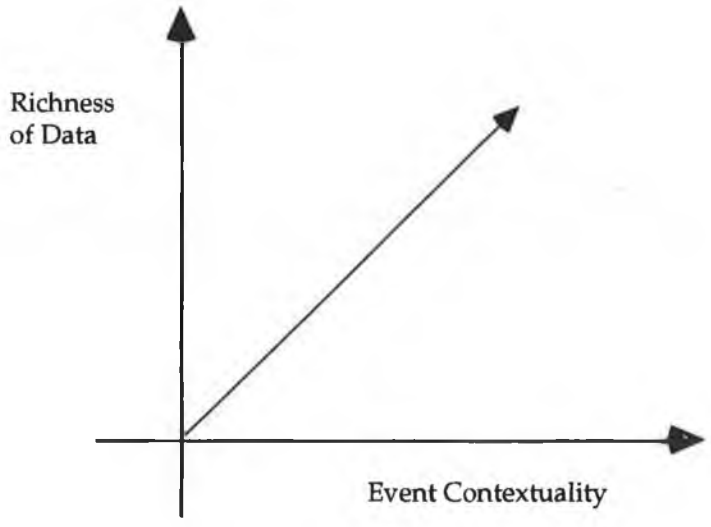
The challenge to identify a case which would yield 'rich' information may be paralleled with Bonoma's (1985) notion of *currency* in research studies:

> ...it [currency] refers to the characteristics of research that affect the contextual relevance of finding *across* measures, methods, persons, settings, and time. ...a study which seeks high currency typically demands situationally unconstrained operationalisations of variables to allow cross-setting generalisation, and observations within natural,

> ecologically valid settings - "noisy" settings - where large samples, quantitative measures, and control are more difficult to achieve (Bonoma, 1985, 200-201).

As well as enhancing richness of data, it was important to consider 'event contextuality' (refer to Figure 4.1). Event contextuality is coined by the author to suggest that certain times or periods can witness a considerable stream of relevant dynamic happenings which impact on the case history. The cliche 'we live in exciting times' evokes this notion of event contextuality. Event contextuality would have a big influence on the richness of data (richness relies on more than the openness of interviewees). Thus, the aim was to identify a company who had extensive partnership experience within the current economic and technological climate - a climate of immense technological advancements, turbulent economic environments and increased complexity.

Figure 4.1 Event Contextuality



Source: Developed by Author

A pilot case study was constructed using one of the companies. This was developed following a number of in-depth interviews with the managing director of the Irish company and the marketing director of the larger partner firm. This pilot case provided very useful 'learning curve' effects to underpin the main case study carried out on the second firm. The second firm chosen for the main case was used because it had potential to

produce vast amounts of rich data and also, its partnership experiences evolved around the many forces of change.

The case presented in this study has been constructed on the basis of field research carried out over one year. A number of data collection techniques were used which are typical in this type of organisational research. These include observation (sitting in on company meetings and general day-to-day activities of the company), desk research (examining existing documents such as company literature, fax messages, memos, reports, video presentations etc.) and interviews (which included personal and telephone interviews, though primarily personal). Interviews took place vertically and horizontally across the firms. Such interviews typically ranged in length of time from one to four hours, had from one to three interviewees and were all conducted in person. In line with some of the precepts of grounded theory, the interviewer purposely did not structure the interview or offer categories for answers. Instead the interviewees were simply asked to describe their experience and the interviewer took a seemingly passive role. However, the interviewer did provide a broad guidance to keep the conversation within the two core research questions:

Why did your company get involved in this relationship?
How has the relationship been developing over time?

Other than this, the role of the interviewer was to listen and ask the interviewees to clarify certain points or to make interpretations from their point of view. The range of interviewees was very broad and included directors, software developers, salespeople, and receptionist in the small company and the marketing director and other marketing and sales personnel in the large company. Different interpretations of various events occurred throughout the interview stage which were subsequently addressed in later interviews. For the majority of interviews, tape recording was made to assist memory. However, due to the sensitive nature of some of the material, all interviewees were given to option of switching off the machine at any time. As well as tape recordings, the interviewer undertook extensive note-taking. As far as possible, interviews were transcribed during the same day or the following morning.

Since the research was conducted over a one year period, there was the opportunity to follow the evolvement of the relationship in 'real time' and to participate in a number of meetings directly related to the cooperative relationship. The case narrative and history, as well as its analysis and cognitive framework, were set down in various draft forms and circulated to the key personnel in the partner companies. This process was repeated until as full a clarification as possible was achieved.

4.7.0 Analysis

As the empirical data were collected, they were simultaneously analysed and emerging theoretical conceptions were constantly adjusted. Glaser and Strauss (1967) describe this technique as the constant comparative method. It centres around a proposition that in order to firmly base theory on data, observations constantly need to be analysed and reconciled with theory as they are collected. Data collection should continue until clear patterns have emerged and additional data will no longer add to the refinement of the emergent theoretical concepts. This infers that the theoretical framework will continuously change and this is what happens. Over a period of time, previously unlinked observations start to fall into place and the overall picture emerges. It is not claimed that any theory is a completely accurate reflection of the 'real world', yet theory is based on abstraction from the complex network of interrelated factors which determine outcomes in reality. Thus, it is the aim to recognise the most critical factors within a system (of interrelated variables) and to record their interconnection in a model. This leads to a theory which develops a predictive ability which will be of interest to both researchers and practitioners.

One problem which has been associated with case study research (and indeed, many other qualitative research methodologies) is the lack of clear-cut procedures and methods for analysing and interpreting case study data. Field work which spanned over a one year period generated large amounts of nonstandard, irregular data.

Leavy (1990; 1994) has proposed four ways to generate theory from descriptive-inductive research data. Using Pettigrew's (1979) notion of

"letting the data speak for themselves", the analyst should allow almost pure induction from the data; secondly, by converging diverse literature, he can generate a synthesis; the analyst can explore existing theory, highlight its inadequacies and generate alternative theory; and finally, he can combine any of the aforementioned techniques.

Probably the most difficult part of a qualitative research study is making the 'creative leap'. Mintzberg (1979) describes the creative leap (i.e., generalising beyond one's data) as a vital stage in induction:

> The fact is that there would be no interesting hypothesis to test if no one ever generalised beyond his or her data. Every theory requires that creative leap, however small, that breaking away from the expected to describe something new. There is no one-to-one correspondence between data and theory. The data do not generate the theory - only the researchers do that... (Mintzberg, 1979, 584).

Cause mapping was utilised to sort data and to develop a more inferential level of analysis which aided in the development of the final model.

4.8.0 Chapter Summary

This chapter has outlined the research methodology used in this study, describing how data were collected and analysed. Using ideas and concepts discussed in the previous chapter, it was decided to take a humanistic approach to this study and thus, it was decided to use a single case. As far as possible, postulations on the development of grounded theory were followed.

The case study, which traces the development of relationship agreements in a Irish software company, is presented in the next chapter.

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Chapter 5

CASE STUDY

5.1.0 Introduction

This chapter presents the case study which was written based on information gathered over through field research carried out over a one year period. In each interview, respondents were given a broad guidance to keep conversations within the two core research questions:

Why did your company get involved in this relationship?
How has the relationship been developing over time?

5.2.0 Company Background Information

Dascom Group was founded in 1984 by Bill Shaughnessy, when John Sisk Building Group dropped its in-house computer and management information services and contracted out this activity to Shaughnessy, who had been the information technology manager at Sisk. The Group specialises in providing application software and services for the IBM mainframe, midrange and client server platforms. Since its foundation, the Group has achieved dramatic growth with number of employees increasing from four initially to a present figure of 70 computer professionals in Ireland, Belgium and the U.K. Its consultants have broad international experience working on multi-vendor platforms. In-house hardware includes IBM 43XX, 308X, AS/400, S/36, RS/6000, P.C. and a complete Unix environment consisting of IBM AIX, SCO, SunOS, Hewlett Packard HPUX, Intergraph CLIX, Sequent PTX, and DEC MIPS Ultrix.

Dascom Group comprises three companies- Dascom Services (IRL.) Ltd., Beacon Management Services (U.K.) Ltd. and Dascom Services International S.A. Dascom Services (IRL.) Ltd. has its headquarters in Dublin and specialises in supplying I.T. facilities and services to the IBM Irish marketplace. The range of services it supplies includes facilities management, applications development, project management, package implementation, systems programming, capacity planning, network planning, packaged software, bureau services, SE support, management consultant, software selection consultancy and hardware selection constancy. Beacon Management Services (U.K.) Ltd. (established in 1981) is a strategic acquisition by the Dascom Group to service the U.K.

marketplace in the IBM midrange arena. Beacon is an IBM agent and provides numerous services that include AS/400 Business Systems, IBM midrange systems support services, application support, consultancy, contingency planning, systems support, specialist services, and education - business systems and technical. Dascom Services International S.A. was incorporated in March 1993 and is an amalgamation by the Dascom Group of the Dun & Bradstreet range of AS/400 midrange software and Dascom Midrange Company which was founded in 1991. Located in Brussels, this company supports the Dascom Group European customer base.

(Unless otherwise specified, Dascom Services (IRL) Ltd., will be referred to as Dascom.)

5.3.0 Background Market Information

The computer industry has always been dominated by IBM which has a current turnover of $60 billion. Its size, power and reputation have made it very difficult for other companies to compete; MemorexTelex, for example, has a turnover of $2.5 - 3 billion and StorageTek has a turnover of approximately $1.5 billion (the relevance of these companies will become evident as the case progresses). Following a number of lawsuits in the 1960's and 1970's, IBM has been forced into disclosure and it is now compulsory for the corporation to publish its prices. Competitors were then able to offer a product with more functionality than an equivalent IBM product at a cheaper price. Typically competitors were selling products at about 85% of IBM product prices, offering a better product and supporting their products with a better support system. Companies like MemorexTelex and StorageTek would look to IBM markets, where huge revenues were being generated and attempt to take a proportion of this and thus build profitable niches within the market (which is possible because they were not dealing with commodity markets).

MemorexTelex has developed a broad product range which includes AS/400 (tape disk), Airline, 3270, P.C.'s, Media and E3390 (which are large systems - automated tape libraries (ATL). Following a management buyout in 1985 and an amalgamation with Telex in 1987, by 1989, MemorexTelex had achieved a turnover of $2.4 billion.

StorageTek has a narrower product range which consists primarily of E3390 large system ATL's. It specialises in the research and development, manufacture, marketing, sales and service of products that store and retrieve electronic information for high performance computer systems and enterprise computer networks. StorageTek was founded in 1969 as a low cost alternative to IBM in the nine-track tape market and has grown to a $1.5 billion corporation with a significantly broadened product line. On October 31, 1984, as a result of increasing liquidity problems and continued deterioration in the company's profitability, StorageTek filed for reorganisation under Chapter 11 of the Bankruptcy Code in the U.S. Bankruptcy Court. It emerged from Chapter 11 on July 28, 1987, becoming one of the largest and fastest turnarounds in the history of American business. The StorageTek product range consists of disk, tape and printers and it competes in the same marketplace as MemorexTelex, as well as IBM.

In 1985, IBM made a statement declaring that the tape market was dead and that it was defocusing from tape. However, StorageTek made a strategic decision that tape was not dead and that the future for tape lay in automated tapes. At around this time, Ryal Poppa became chairman of StorageTek. He believed that since tapes had been around for 30 years, the market would be reluctant to change and that to be a success it required some form of automation process behind it. He realigned a lot of the development work being undertaken within StorageTek in other areas and focused completely on tape.

In 1987, StorageTek developed Nearline. The rapid growth in disk storage demand has created a flow-down need for significantly higher tape backup capacities. One of the newest elements in the strategy to maximise the capacity of a single tape transport is the addition of automated tape handling equipment. These automated systems have the ability to increase the unattended capacity of a drive tenfold in the case of low-end stackers, and up to hundreds of cartridges are available in some of the larger jukebox library designs. Against the backdrop of traditional backup and archival applications for tape, a new requirement has emerged that is demanding enhanced functionality in the magnetic tape drives. Nearline storage is composed of files that are accessed so infrequently that allotting hard disk space is not a cost-effective option.

However, these files still need to be referred to occasionally and cannot be relegated to traditional archived, offline tape storage either. Mini-library products are uniquely suited to meet this nearline application.

At this stage no other company had ever automated tape before and StorageTek, being first into the market, sold a large number of units initially. However, MemorexTelex soon introduced a competing product - the 5400. At the same time IBM entered into a strategic alliance with Grau - a German company - with the intention of selling tape libraries. A conflict arose between Grau and Hausen - another German company - over patent rights which delayed the introduction of an IBM product (the 3499) until late 1992 - five years after the StorageTek product had been launched. In essence, StorageTek has had to face minimum competition for the first five years of the product's life and as a result has 6000+ units worldwide, while MemorexTelex has a mere 300+ units and IBM is currently approaching a figure of 300 units; effectively StorageTek control 96% of this particular market.

However, IBM - the giant in the computer industry - is now trying to build a substantial presence in the ATL market with the 3495 and the 3494. This increased competition comes at a time when the growth in installation has slowed down considerably compared to five years ago. Further, the storage capacity has increased tremendously since the libraries were first introduced. In 1987, the maximum capacity attainable per cartridge was 200mb, yet cartridges are now available which can hold up to 1.6gb. Therefore, with this type of technological advancement, it is now possible to store the same capacity on one library as on four libraries five years ago. This is very attractive for users as the libraries take up a large amount of floor space which is a major part of the overall installation cost. StorageTek Nearline measures 11 feet across and is one of the smallest in physical size - the MemorexTelex library measures up to 96 feet long. This increased capacity has had a major effect on the total revenue of hardware companies. For example, the average cost of a StorageTek Nearline library is Stg£400,000. Large organisations would in the past purchase four of these libraries generating a revenue of Stg£1.6m. But with the increased capacity, one library is sufficient for the data management needs reducing firstly, the hardware revenue by £1.2m and secondly, the monthly maintenance cost is now reduced to one library instead of four.

Users are also left with excess hardware for which they have no use and traditionally hardware companies have not been concerned with the end use of the equipment. When the majority of the libraries were purchased in the late 1980's, they were purchased for automation purposes. When they were delivered to customers and installed initially, they were not fully functional and would not generate an adequate return on investment. This would only occur over a period of time as the hardware became more and more integrated into the various business functions. However, this was not a concern for the hardware companies who up to this point saw themselves as hardware suppliers, whose primary concern was to sell hardware and not worry about what the customer actually did with the system. This approach was acceptable when automated tape libraries were first introduced because the product was unique and competition was minimal and also the market size was growing at a very fast rate.

However, fundamental changes were occurring in the computer marketplace. It became obvious to all those supplying the market that customers were no longer willing to purchase hardware from one company and undertake a separate search for software. They now wanted to purchase a complete package that incorporated hardware with a software solution. Hardware companies which had been very successful in the past, suddenly found that its salespeople were not able to meet customer demands. Most hardware salespeople had an operations background and were thus very knowledgeable in the hardware area. However, because they never crossed to development, they essentially knew very little (if anything) about software and therefore they did not have the ability to offer the customer the overall solution they required.

5.4.0 Relationship Agreements

Dascom was providing a consultancy service in the IBM mainframe area of technical support to specific customers and computer users in the Dublin area - banks and insurance companies, for example - while, at the same time, providing a similar service to MemorexTelex, initially in

Ireland and eventually in the U.K. Before any relationship was established, Dascom provided MemorexTelex with a consultancy service whereby it assisted its salespeople in developing proposals, undertaking technical evaluations of prospective customers, and participating in pre- and post-sales presentations. Dascom developed a concept for a software product compatible with MemorexTelex hardware used to automatically load tape cartridges on drives. When it became apparent that customers were interested in this concept, Dascom developed the actual software product. MemorexTelex and Dascom formed an official agreement and the software product was combined with MemorexTelex hardware and sold as an overall solution.

MemorexTelex held full responsibility for sales and marketing since it already had an extensive sales and marketing network in the marketplace. Even more importantly, it had an established and widely known brand name. While much of its effort is concentrated on providing a high quality sales service, the company lack expertise in software development. Dascom was aware that it could never offer an equivalent sales service or establish such an extensive marketing network, nevertheless, it was confident that its strength was its software development abilities.

However, soon after this agreement became active, a number of problems arose. Firstly, the agreement - a legal contract, whereby MemorexTelex purchased a minority shareholding in Dascom - was based on achieving target profit figures over a certain length of time. According to Tom McGovern (Financial Director, Dascom), this type of agreement was not suitable in their situation. The main problem was the major differences in culture which existed between the two companies. For example, radical differences existed between the two companies' decision process. Dascom was accustomed to making immediate decisions, whereas within MemorexTelex, it was essential that all decisions were arrived at after a number of meetings, making the decision process a very formal one which often extended over a lengthy period of time. MemorexTelex expected Dascom to conform to its managerial systems such as documenting every directors' meeting. Secondly, MemorexTelex hardware did not make a huge market impact and thirdly, some fundamental internal changes occurred within MemorexTelex which resulted in the corporation placing decreased emphasis on large storage systems, which had become of less strategic importance to them. The corporation began to put more sales

and marketing resources into other areas - areas that were not related to the Dascom product. It was at this stage that Dascom realised it had made a vital mistake in its dealings with this particular relationship agreement. It assumed that if MemorexTelex held a minority shareholding in Dascom, then it would be in its interest to continue selling a large number of units of hardware compatible with Dascom software. However, it soon became apparent that this was not to be the case. Furthermore, although the partnership was a minority shareholders agreement, MemorexTelex felt that it had a high degree of control over Dascom which obviously was not the intentions of Dascom directors.

In 1988, Dascom in conjunction with MemorexTelex developed a solution for Telecom Eireann which allowed it to use a MemorexTelex library to store all itemised bills and to randomly access the information on tape. In 1990, Dascom decided that the solution it had developed for Telecom Eireann had much broader applications and could in fact become a package. This was legitimate because since Dascom developers had written the programme they owned the rights to it. At this stage, Dascom software developers unbundled the program from the telephone system and produced a superior product which they named OTAS - online tape archival system.

OTAS is a tape database management system and is, in this respect, similar to disk based database management systems, i.e., it is invoked from within the application programs and will store and retrieve data from tape databases in response to user requests. OTAS allows for significant direct access storage device (DASD) savings since migration of data from DASD to tape will enable large amounts of internal DASD space to be retrieved from online databases, via data deletion and database reorganisation. High levels of interface are supplied for all OTAS functions, to enable tape database processing to be fully integrated into existing batch or online applications. In this way it will be possible to extend existing system access to online data, via database management systems such as IMS/DB or DB2, to virtually unlimited quantities of archived storage on tape, while still retaining the ability to access this data online.

In 1992, Dascom experienced another major problem in dealing with large corporations. It had proposed the product (OTAS) inside the policy of

MemorexTelex U.K. but it wanted it to be adopted at corporate level in the U.S. However, MemorexTelex U.S. rejected the product. Although MemorexTelex is a relatively young company with an entrepreneurial spirit, this did not prevent it from experiencing the effects of the Not-Invented-Here syndrome. Bill Shaughnessy (Managing Director, Dascom) believes that this was a primary factor in the rejection of their product by MemorexTelex. Pride and focus on its own products may very well have been a large part of its success story, but it also hampers the acceptance of outside ideas. But it was essential for Dascom to get support at a corporate level if the relationship was to be a success. The significance of this can be seen in the fact that MemorexTelex only had 8 ATL units in the U.K. and therefore, under the present relationship agreement, Dascom had only 8 potential customers which was not a large enough customer base. Whereas, in the U.S. it had over 200 units which would be a very significant customer base for a company like Dascom. Although MemorexTelex U.S. did not approve, MemorexTelex U.K. agreed with Dascom that there was no way it could prevent Dascom from promoting the product itself.

Dascom was working on a proposal with MemorexTelex for Manweb - a U.K. company - where the competition for the contract was StorageTek. StorageTek being the leaders in the field of automated tape libraries, thought that it would automatically win the contract for two reasons. Firstly, it has a huge customer base which would give the company credibility and secondly, its product was a better product than the MemorexTelex library. But suddenly, StorageTek realised that there was a further differentiator - i.e., the Dascom package - and it did not have it, making it more difficult to win the contract than anticipated. Being hardware people they did not understand the package, but being salespeople they recognised that the combination of hardware and software was giving MemorexTelex the competitive edge because the customer was expressing a distinct interest in the overall solution. StorageTek immediately approached Dascom to discuss the possibility of some form of collaboration but obviously at this point in time, Dascom were not in a position to cooperate with StorageTek in the Manweb proposal because of its relationship with MemorexTelex. However, StorageTek saw the benefit of using OTAS in proposals and was interested in having further discussions with Dascom about future contracts. The advantages for Dascom forming a relationship with

StorageTek rather than MemorexTelex were enormous. Firstly, StorageTek has a huge customer base - in the U.K. alone it has installed over 300 libraries which is more than the MemorexTelex worldwide figure. Furthermore, StorageTek has a much narrower product range than MemorexTelex and concentrate all its efforts - sales, marketing, research and development - on tape libraries which was where the Dascom software was applicable. MemorexTelex, on the other hand, had already made a strategic decision to de-emphasise tape libraries and to focus on other sections of the market which did not have applications for Dascom software. Also, due to financial restructuring it did not want to become involved in supporting another product - especially one which was not developed within its own corporation - further evidence of the negative effect of the Not-Invented-Here syndrome. Because of this lack of support at a corporate level, Dascom decided that it would begin to sell its product through StorageTek.

While the relationship never became acrimonious, it obviously would not make sense for MemorexTelex to continue an equity participation in Dascom if Dascom was now cooperating with its biggest competitors in the automated tape library section of the market, i.e., StorageTek. Dascom realised that the present relationship was going nowhere and eventually the agreement with MemorexTelex was terminated and the shares owned by MemorexTelex were repurchased by the directors of Dascom.

5.4.1 Negotiations

After the initial contact was made, and a basis of shared interests had been established, negotiations were completed very smoothly. The interests and needs of both firms suggested that the companies would make a perfect match. Both parties were excited about the deal, although Dascom was wary of having to deal with the bureaucracy of a large corporation (particularly after its past experience with MemorexTelex).

An agreement was set in place whereby Dascom would supply StorageTek with software on a very similar basis as MemorexTelex, however, under this agreement StorageTek did not undertake an equity participation. Dascom had learnt from the MemorexTelex alliance that having an equity participation in a company does not guarantee 100% commitment from a large corporation. Furthermore, cultural conflicts

arose when MemorexTelex attempted to extend the level of control they held over Dascom.

> MemorexTelex tried to impose their culture on our organisation without realising or understanding the vast differences which exist between large and small companies.
> (Tom McGovern, Financial Director, Dascom).

Therefore, a renewable annual agreement was set in place and StorageTek do not have any direct control over the management of Dascom. StorageTek proposed that the name of the package should be changed to NearArchive - which it was - in keeping with the StorageTek product range where everything is Near----. It also produced brochures and other promotional material describing NearArchive and its function. These brochures were produced in identical format to other StorageTek products and they held the StorageTek name with no mention of Dascom.

5.4.2 Rationale for Cooperation

StorageTek became involved in the relationship for a number of reasons. First of all it saw the differentiating factor MemorexTelex held when it was using the Dascom product in its proposal. Secondly, it felt that it could use this product to extend the company's product range and most importantly, it felt that the combination of its hardware and Dascom software would aid in selling more of its core products. However, the company does not wish to view the alliance as a strategic alliance but rather as a tactical alliance.

> There is definitely an element of "strategic fit" between our two companies, but we view the alliance as being tactical. Dascom had a product which we felt would increase StorageTek's sales, therefore, it made sense for us to form some type of relationship with them. With the recession, companies have been forced to increase the usage of present equipment and competition has become stronger.
> (Paul Bush, Marketing Director, StorageTek)

Dascom expected primarily marketing advantages from the agreement with StorageTek. As a small company targeting large corporations as customers, Dascom had frequently had to overcome prejudice about its small size. Purchasing departments were reluctant to deal with a young, small company, even though Dascom's products may be technically superior to large competitors' products:

> The big advantage to us in setting up [the alliance] with StorageTek in the first place was that we instantly get access to their existing customers who in most cases are large companies. We can walk into companies like Barclays Bank, and people will sit down and listen to us. StorageTek has a high profile in this particular area of storage management. If we come into their company as StorageTek, they will listen and take seriously what we have to say. If we were to go in as Dascom they would wonder who we are and I suspect we would have great difficulty in getting in through the door, let alone talk to the right people.
> (Geriant Waters, Software Developer, Dascom)

Dascom's software product is a complement to StorageTek's hardware systems and could easily be sold in package with StorageTek's computers. StorageTek's U.K. (and indeed worldwide) direct sales force was of special interest to Dascom, which depended on a small direct sales force.

While Dascom could help StorageTek address a specific customer need and improve its competitive position, StorageTek could help Dascom boost its growth potential within a short time before Dascom would have to face increased competition from other software developers.

Furthermore, StorageTek's reputation for quality and support was exemplary. In forming the alliance, Dascom became part of the StorageTek Active Call Management (ACM). ACM provides a proactive, dynamic responsive support operation which offers high levels of service expertise. It entails a 24 hour 365 day services offering year round support availability.

The scope of negotiations developed beyond a licensing agreement for two reasons: (1) Dascom needed an infusion of capital and StorageTek agreed to contribute to the research development financing; and (2) the software package was extremely complex, and the existing StorageTek salesforce needed technical backup from Dascom technicians.

5.4.3 Early Cooperation Experiences

At the start of the relationship, Dascom again made the assumption that StorageTek salespeople could sell both hardware and software - a mistake that it quickly recognised:

> They could promote and sell hardware and they could promote but not sell software.
> (Paul McSweeney, Sales Manager, Dascom)

> They [StorageTek] are a hardware organisation, they do not really know software and they certainly do not have the expertise in selling software solutions. They would like to be able to sell this black box solution which has all the various components. They can supply the hardware and the hardware expertise but they need somebody else to supply the software, the expertise to sell it, to evaluate customer requirements, to implement and support the software. This is the role that we play because they do not have their own people to carry out these functions.
> (Geriant Waters, Software Developer, Dascom)

StorageTek salespeople and systems engineers (who are sales support) had historically sold and supported hardware. They were very unfamiliar with areas of software and had virtually no application development knowledge. So even though the ATL has its own software, it was wrapped up into the hardware deal and was in effect, invisible to the salesperson who was thus selling a piece of hardware. Dascom became very frustrated with this situation because it now had access to a huge sales network who did not have the knowledge to promote and sell the software. The other problem which arose with the StorageTek salespeople was that a NearLine library cost £400,000, while NearArchive cost a mere £40,000. Thus the commission involved in selling software is very small compared with that achievable in selling hardware.

Initially, StorageTek's sales team won a small number of contracts as a direct result of having NearArchive in their proposal and being able to offer the sought after 'overall solution'. However, it soon became apparent that they were using NearArchive as a talking point:

> What they used the software for was as a talking point with the customer and were not actively trying to sell it. They were going into a customer saying: " I've got this great product, terrific product, it could do a lot of things with your hardware. I don't know what it does, I don't know how it does it, but I do know it does something" So you can see how the software was used as another reason to go into the customer.
> (John Walshe, now Director of Business Solutions Group, past Technical Director, Dascom)

The salespeople had no real benefit in selling software; they were not able to understand it and when they attempted to involve the systems engineers, because it is an application and not operations, they were not able to support it either. Dascom recognised that if this situation continued, it would sell two or three packages and that would be the end

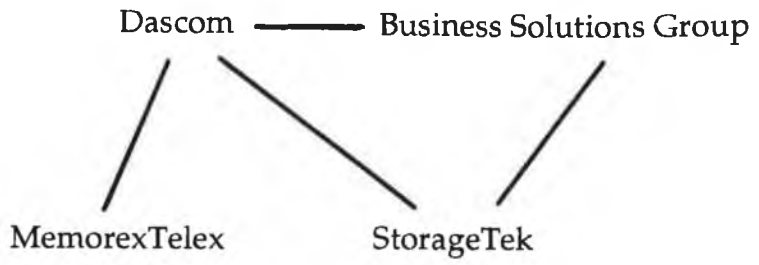
of what had appeared to be a lucrative relationship. Rather than let this happen, it made a strategic decision to change the situation.

From February, 1993, John Walshe (who was at this time Technical Director in Dascom) worked very closely with the StorageTek sales-team. Because he was an instigator in the program design, he knew how to present it across to customers. He had been integrally involved with the Telecom Eireann application and could explain to potential customers why Telecom Eireann had used it, what benefits they got out of it and why they were still using it and how customers could get better use out of their libraries. Present users realised that they had been underutilising their assets simply on the basis that they did not know how to use the application. Dascom aimed for more than just getting the product sold through StorageTek - often StorageTek had incorporated the program into a financial package offering it to customers in lieu of a discount. Although it would be counted as a sale for Dascom, it was not content with having its package sitting in organisations and not being fully integrated (if at all) into the business. The directors felt that this would achieve very little for the company's long-term success, reputation and credibility.

> Zurich Municipal has successfully integrated NearArchive into a DB2 system. They found that they can now move data in 20/30 seconds rather than the 2/3 minutes their old system took and they are thrilled with the package. This is the type of reference base that we are trying to build. We can use their testimonial in future proposals.
> (John Walshe, Director, Business Solutions Group)

At this time, John Walshe was working in the Dascom U.K office. In February 1994, he re-established this office as an independent company under the name Business Solutions Group which owns one-third of the copyright of NearArchive. This company has initiated a separate cooperative agreement with StorageTek which is very similar to the Dascom agreement. Thus, Dascom's strategic alliance experiences have developed even further, whereby a new company has been established as a direct result of the cooperative agreement. However, Business Solutions Group has continued a very close working relationship with Dascom. The development of the different relationships is summarised in Figure 5.1.

Figure 5.1 Development of Key Relationships



Source: Developed by Author

From the very beginning of the Dascom/StorageTek alliance there were problems which had to be worked on from both sides. Dascom was very frustrated with the initial StorageTek sales effort. However, both partners acknowledged the problem and set about fixing it. While StorageTek may not have delivered all its promises initially, the relationship gave Dascom, and subsequently, Business Solutions Group the opportunity to build up a very significant customer base comprising blue chip accounts:

> Since our relationship with StorageTek commenced, we have built up a very significant customer base - accounts like Barclays Bank, Girobank, DVOIT, Royal Insurance, Commercial Union, B.T. Billing and NatWest. There is no way we could have got access to these accounts without StorageTek. The first thing that these large blue chip companies look for in a computer company is longevity - they need to be reassured that based on your history, you have a future. You can have a very bad product and sell it into these companies if you have a future, in contrast to having a good product but appearing not to have a future. There is absolutely no way they will buy a product that does not have a track record or a history. They may be implementing a system that will be around for 20/30 years and they need reassurance that your company will be there to support the package. They do not want the cost or commitment of employing their own staff to support the program.
> (John Walshe, Director, Business Solutions Group)

Dascom has established a direct link with StorageTek marketing department which is the only channel of communication with the company. Since the software is sold as a StorageTek product by StorageTek salespeople, Dascom did not have a direct link with customers. To overcome this communication problem, Dascom set up a U.K. office which provided pre- and post-sales support to customers as part of the StorageTek network. These people were an essential link in the

whole chain and provide Dascom with a second channel of information concerning customers needs.

StorageTek do not want Dascom to have direct dealings with customers because it wants to have full control over the relationship between the companies and fear that an element of this control will be lost if Dascom communicate directly with customers. However, this poses particular problems for Dascom since it cannot develop in a vacuum and needs to observe what is happening in the marketplace and monitor changing customer requirements. Dascom realise that it cannot solely depend on the feedback information from StorageTek and therefore take every opportunity to obtain information itself through Business Solutions Group and occasions when Dascom technicians are requested to visit customers to provide indepth technical support. Yet this communication problem remains a major weakness in the Dascom - StorageTek relationship.

5.4.4 Constraints

Constraints in the relationship agreement mean that Dascom are not presently actively promoting NearArchive outside of Ireland and the U.K. Any communication between Dascom and StorageTek France or StorageTek Germany is supposed to take place through the marketing department in StorageTek U.K. However, there is very little incentive for those in StorageTek U.K. to make presentations on behalf of Dascom to any of their sister companies. Firstly, the percentage commission on software is relatively small compared to that on large hardware sales; and secondly, the majority of the commission on sales in France or Germany would go to branches in the respective countries. Yet, Dascom feel that there is huge potential for NearArchive in these markets but, because of terms in the agreement, they are restricted from pursuing this potential. Part of the problem is caused by the culture of large organisations. NearArchive has not been accepted at a corporate level in StorageTek i.e., through headquarters in the U.S. Within this Corporation, all the communication channels flow from headquarters to individual country branches and vice versa but very little communication occurs between countries. It is difficult for Dascom to appreciate these cultural differences and they sometimes become frustrated with the inactivity of StorageTek U.K.

> StorageTek is an American company with their headquarters in Colorado. There are strong relationships between corporate headquarters and each individual country, but from country to country there is a much more informal network - the main paths lead back to headquarters. If you try to do something across the hierarchy, it is difficult, particularly if there is no great benefit to them - which in this case there is not.
> (Geriant Waters, Software Developer, Dascom)

5.4.5 Unexpected Benefits

During discussions with a big insurance organisation, Dascom discovered a further application for its software. The customer was looking for a solution whereby it would be possible to scan data into the system. In providing a solution, it was able to develop another product - NearImage - with financial backing from StorageTek. NearImage provides support for the migration and retrieval of objects from tape using IBM's object access method (OAM), allowing cartridge tape to co-exist with existing OAM storage devices. The software package provides a complete range of facilities and utilities to implement a comprehensive tape object migration and retrieval strategy with minimal installation and implementation requirements.

5.4.6 Exit Strategy

A definite exit strategy is in place in the legal agreement protecting each partner if either side break the agreement. While the software is sold as a StorageTek product, many customers are aware that it is being supplied by a third party, and they demand that such an exit strategy be in place to protect their interests if the agreement breaks down.

However, both parties are extremely wary of becoming overdependent on each other. StorageTek U.K. is not prepared to become so integrated with Dascom that it cannot continue in a certain direction of business, or sustain a particular support level without them. For this reason it prefers to view the alliance as tactical rather than strategic - whether this is actually the case or not is debatable. Dascom also has huge reservations about becoming overdependent on StorageTek being its only market. This is the reason it has been particularly careful in attempting to build up a reference base of its own customers - though it acknowledges that this has been successful because it goes into organisations initially as StorageTek people, in fact, their business cards have the StorageTek name, telephone number etc., on them.

> ... if at some stage they [StorageTek] want to quit the agreement, we have established an existence of our own that holds a future for us. One weakness of a pure strategic alliance would be where we were so dependent on them that if the alliance ended we would die. And we must realise that this is a very real threat. Because the alliance is in place on the U.K. level rather than corporate headquarters, they could get orders from the top to ditch us.
> (John Walshe, Director, Business Solutions Group)

5.5.0 The Present Situation

Mr. John Walshe is of the opinion that a partnership is never a real partnership when one partner is substantially larger than the other, and furthermore, strategic alliances are a short- term rather than a long-term strategy, i.e., he views them as a means to an end rather than an end in themselves. Exactly, what the future is for Business Solutions Group is presently unclear.

> In a strategic alliance, usually one partner either wants access to the other's market or they want the other's product/s and once they have this and the market has gone through its life cycle, the relationship at that point is dead, because there is nothing new to come into it.
> (Dave Litten, Project Support Manager, Business Solutions Group)

Business Solutions Group is essentially an extension of StorageTek U.K. but yet is an independent company. And at the moment this situation is very favourable for StorageTek U.K. because they do not have to report them upwards to headquarters as they are not a department or a budget. Even though headquarters are aware of the arrangement and are closely watching the situation, there is no risk involved for them as long as Dascom and Business Solutions Group remain separate entities. However, Mr. Walshe and Mr. Shaughnessy both feel that this arrangement is not an adequate long-term solution.

On the other side, StorageTek are happy to keep the relationship at its present level for the foreseeable future.

> Our Company has always been very guarded about setting up alliances with other companies. At the moment we have no intention of purchasing Dascom. Maybe we might take out a minority equity shareholding in the company but it would have to suit us and we would have to feel that we are getting something really substantial out of doing so.
> (Paul Bush, Marketing Director, StorageTek U.K.)

All partner companies involved judge the alliances to be a success - a judgement which has been made on the level of increased sales. Both agreements are reassessed on a one yearly basis and are likely to remain on similar terms for the immediate future. Dascom and Business Solutions Group are aware that a strategic alliance does not last indefinitely. Both companies are considering further European expansion but are experiencing difficulties under the current arrangements with StorageTek. In the long-term, both directors would like to see a further amalgamation (and perhaps, an eventual takeover) of their respective companies with StorageTek, yet, at the present time StorageTek is not considering this option.

5.5.0 Chapter Summary

In this chapter, the case study was presented which traces the initiation, implementation and development of various strategic alliances in a small Irish software company. It incorporates all partners' involvement in the relationships and establishes where each partner would like to see the relationships progress to in the future.

The following chapter presents an analysis of the case using cause mapping to analyse the streams of decisions and behaviour occurring through the phases of initiation, implementation and development of strategic alliances.

Chapter 6

CASE ANALYSIS

6.1.0 Introduction

In Chapter 4, it was established that this study seeks to answer two questions, as well as addressing a number of propositions. The core research questions are:
Why are cooperative agreements between large and small companies initiated? and
How are such relationships initiated, implemented and developed over time?

The propositions, which are based on ideas and concepts derived from both empirical and theoretical evidence are as follows:
1. The small firm will enter into a strategic alliance because it does not have direct access to certain assets which are most likely to be marketing and distribution channels
2. The large firm will enter into a strategic alliance to gain access to technological know-how or a technological advancement it does not possess
3. Organisational culture conflicts will occur
4. Trust and goodwill are achievable over time through developing a good working relationship between partners.

6.2.0 Analysis Technique

Cause mapping, an established technique of analysis, was deemed particularly suitable to apply to the descriptive data (documented in the case history in the previous chapter) in order to study the streams of decisions and behaviour occurring through the phases of initiation, implementation and development of strategic alliances (Ennis, 1994). Coding schemes were utilised to indicate causal and definitional relationships among the linkages in the causal map. A map was constructed by connecting specific events, decisions and interactions of people with a symbol for the type of relationship observed. To enhance reliability and validity at this stage of the research, each edition of the cause map (only the final one is presented here) was circulated to the key people in the partner companies whose comments ensured that the refined map was representative of the actual happenings.

(Unless specifically stated, the 'relationship or alliance' refers to the Dascom/StorageTek relationship.)

The cause map was used in an attempt to develop a framework which would represent the 'actual happenings' in the initiation, implementation and development of a strategic alliance between small and large firms, i.e., it identifies events, phases, decision processes and influential variables which the firms experience over a period of time. The aim in this exercise was to develop an understanding of the events which have occurred during the life of the strategic alliance. Before attempting any form of mapping procedures, it was essential to have a very intimate knowledge of the data. This was gained through the many hundreds of hours spent with the various partner firms, transcribing tape recording and observational notes and compiling the final case history.

This analytical approach allows a number of categories to emerge from the empirical evidence (documented in the case history) rather than imposing preconceived theoretical categories on the data. Fahy and Narayanan (1989) have developed the notion of *cause - effect understanding* which refers to the "structure of causal inferences made by the strategist to make sense of the strategic environment" (p.362). They define revealed causal maps as the "interconnected assertions of causality decision makers choose to reveal to the world around them" (p.362). In a sense, the cause map presented in this study allows such assertions to be identified and evaluated. The cause map provides a visual outline of various dealings with strategic alliances over time and suggests a number of emerging categories. The categories are then examined and analysed in detail to establish their relevance to the strategic alliance and the key questions being posed in this study. When constructing the map, the author had to make a key decision about from which angle to commence. Since the initial interest in this study came from a curiosity in the distribution practices of small software companies in Ireland, it was decided to begin the map from the foundation of Dascom - the small firm under investigation, and to trace the relationship experiences over time incorporating all influential factors.

6.3.0 Towards Understanding a Strategic Alliance

Figure 6.1 Cause Map of Strategic Alliance Development

(For code explanations, refer to Table 3.1)

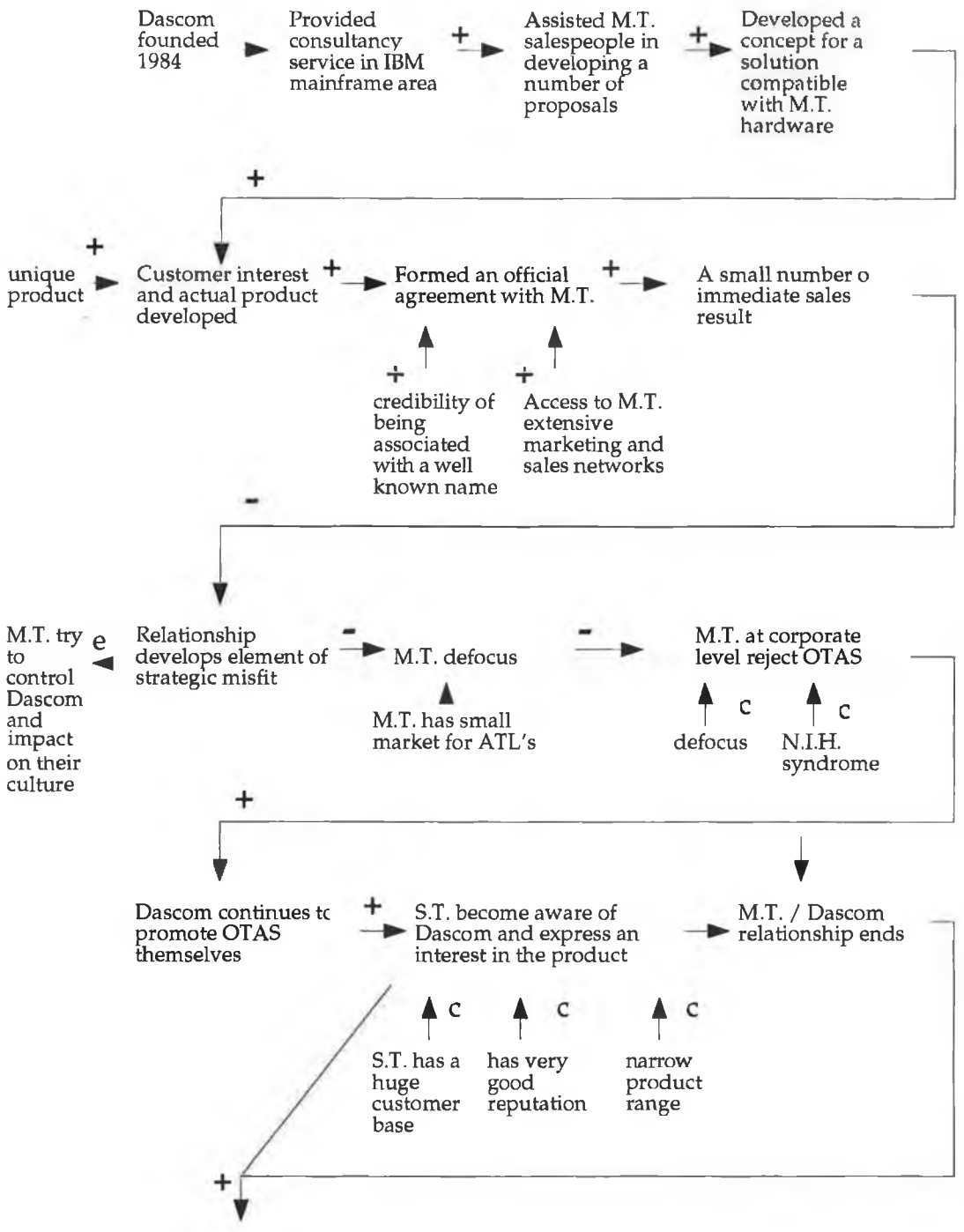
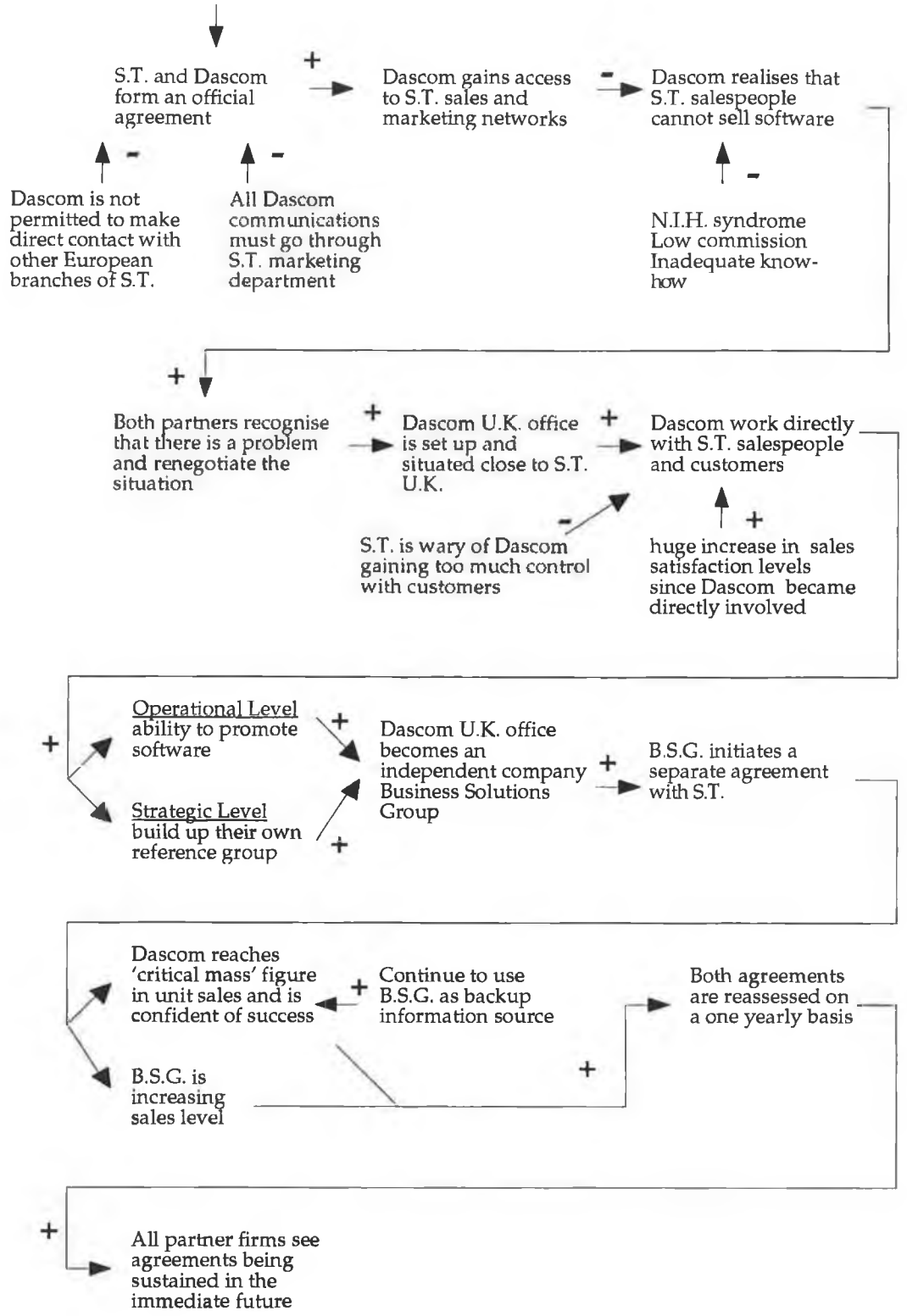


Figure 6.1 continued



Source: Compiled by Author

6.3.1 Rationale for Initiation

Dascom's primary reason for becoming involved in strategic alliances was to gain access to assets it as a small company did not possess, i.e., extensive marketing and distribution channels. It had developed a product - NearArchive - but did not have either the financial capacity or a credible reputation to promote and sell the package extensively. The directors believed that in forging a relationship with a compatible hardware company, they would reach markets which would otherwise be inaccessible to them. Since the company was involved with MemorexTelex in a consultancy capacity, it became the obvious choice as partner. Furthermore, it had an extensive marketing and distribution network and also had historical credibility. At this early stage in Dascom's experiences with strategic alliances, its directors did not foresee the effect of the product realignment undertaken by MemorexTelex. However, in this stage of the analysis, it suffices to discuss rationale which was, as already mentioned, to gain access to extensive marketing and distribution networks, and to be associated with a reputable partner.

Dascom's principal rationale for the strategic alliance with StorageTek was to forge an alliance with a well-known large hardware company which has an established history, credibility and reputation, and also, an extensive marketing and sales team which served a large customer base comprising primarily blue chip companies. StorageTek's standing as the industry leader in automated tape libraries made it a far more attractive proposition for Dascom than its previous partner - MemorexTelex. Being associated with a reputable partner like StorageTek was very important to Dascom, since it operates in a marketplace where image and credibility directly affects sales potential. A secondary rationale which has developed over time was to use StorageTek to partly finance a number of research development projects.

StorageTek's rationale for cooperation with Dascom was to get access to Dascom's software package, which was one of the first major developments in automated tape libraries since their introduction. StorageTek realised that MemorexTelex had a competitive advantage in using NearArchive in their proposals. StorageTek recognised that they could use NearArchive to extend their product range which would ultimately mean selling more of their core products. More importantly,

customers were demanding an overall solution which incorporated hardware and software, and while StorageTek are experts in hardware research and development and manufacturing, they knew very little about software and could not offer customers the required solution. Their cooperation with Dascom - a software company - was seen as an answer to this problem. The alliance was clearly focused on the technology incorporated in one product. StorageTek wanted to get access to NearArchive because it was a complement to StorageTek's product line, and it was expected that it would increase the attractiveness of StorageTek's proposals against MemorexTelex and especially IBM - the historical leader in the industry. StorageTek was determined to protect and enhance existing competitive position, thereby forming a partnership with Dascom in order to incorporate NearArchive into its own strategy.

The relationship helped Dascom to experience a faster revenue growth by gaining access to StorageTek's direct sales force. Thereby, a defensible competitive position could be established fast in an emerging market. On StorageTek's side, their product line would become more versatile and attractive to its customers by gaining access to the technical sophistication of Dascom and its software. Thus, StorageTek's competitive position could be enhanced greatly through the relationship. The focus of the relationship was primarily on the development and marketing of a specific solution, and less on learning the partner's capabilities.

6.3.2 Negotiations

During the negotiation period (of the Dascom/StorageTek relationship), both firms correctly identified their partners' resources and potential contributions to the partnership. Dascom had what StorageTek wanted, and StorageTek had what Dascom wanted. They identified a common goal in the future to work towards. Although the rationale for cooperation was quickly established in this way, the partners did not spend substantial time on deliberating how to make the cooperation work. Thus the relationship was fundamentally built on the momentary convergence of their technologies. Rather than find ways to safeguard the operation of the relationship, the partners took a chance and assumed that the relationship would work itself out, based on the common interests. Furthermore, both partners viewed the relationship differently - Dascom looked at it as a strategic alliance, making it a fundamental part in the

success of their company. StorageTek, on the other hand, viewed the relationship as a tactical alliance - probably because they would not acknowledge any level of dependency on a third party i.e., Dascom.

The agreement was constructed so that both parties were able to protect their interests in the relationship. To both sides, the agreement offered the potential to profit greatly from the relationship and thus created a strong motivation to make the alliance work. But at the same time, the partners have not allowed themselves to become critically dependent on each other - StorageTek maintain that they are involved in a 'tactical' alliance which reduces the strategic importance they place on the arrangement. Dascom has retained complete control of its company and continuously attempts to build up its own name and reputation.

In summary, a basis of strong shared interest was established in the negotiation period and an agreement was drafted which protected the interests of both parties. StorageTek did not want a controlling interest in Dascom, which in the short term, was very important to Dascom who had a previous bad experience with MemorexTelex in this area.

6.3.3 Development of the Relationship

Although vastly different in organisational cultures and procedures, the partners have succeeded in bridging the majority of these differences. There has not been much involvement between the partners - unlike MemorexTelex, StorageTek has not attempted to inflict their culture or a high degree of control on Dascom. On the other hand, Dascom has recognised the difference between large and small organisations and they have learnt to work out any major problems which arise. This has been helped by the fact that many of the Dascom people have had previous experience working in a large organisation and they were therefore familiar with the culture of such an organisation.

However, an inherent operational problem arose early in the relationship. Although StorageTek is a relatively young organisation, it was not immune to the occurrence of the Not-Invented-Here syndrome in its organisation. In the sales department, StorageTek's sales people were not actively promoting the software - they were using it as a talking point, but they did not adequately understand the product to be able to sell it.

Furthermore, the product has not yet been accepted into the StorageTek portfolio at corporate level in the States. Neither companies wanted these problems to destroy the relationship as they both felt it had huge potential to be a success.

Initially, StorageTek did not want Dascom to have much direct contact with their customers, because they felt it would jeopardise their position and they could lose an element of control over the relationship between them and their customers. However, they compromised this position when they realised that their own sales people were not qualified to promote and sell the solution. Business Solutions Group now works as an extension of the StorageTek sales team and they have the ability to promote and explain the package to customers. Furthermore, StorageTek U.K. has undertaken to present the package to other company branches. Dascom quickly recognised the weaknesses in the StorageTek sales team and solved the problem by using its own people in conjunction with the StorageTek sales team.

6.3.4 Sources and Effects of Goodwill and Trust

The lack of initial support at StorageTek was a major source of frustration for Dascom and could have led to a decline in the relationship climate. However, since both partners wanted the relationship to work, they were willing to invest some effort which translated into goodwill. The fact that these initial problems could be overcome has even increased the trust and goodwill in the relationship, and as a result of successful culture bridging, the quality of the relationship is very good. This is evidenced in the fact that Business Solutions Group has open access to the StorageTek building in Woking (U.K.) and can use company documents such as promotional materials, headed paper and business cards.

StorageTek may, at some future date, invest in a minority equity shareholding in Dascom and/or Business Solutions Group - Paul Bush (Marketing Director, StorageTek) believes that this would show the larger firm's commitment and confidence in the smaller firm, and thus increase the trust between the companies. However, because of Dascom's past experience with MemorexTelex, a minority equity shareholding may not be viewed as a token of trust or commitment.

6.3.5 Unexpected Benefits

When the relationship was formed, Dascom had one product, (OTAS, renamed NearArchive). However, when they were in negotiations with a customer (in conjunction with StorageTek), a development arose whereby the customer was looking for solution whereby they could scan data into the system. With financial backing from StorageTek, Dascom was able to develop a new product - NearImage - which is now selling successfully in a number of markets.

6.3.6 Lack of Headquarter Support

When Dascom was involved with MemorexTelex, it felt that the Not-Invented-Here syndrome was the major reason the product was rejected at corporate headquarter level. At the time, this presented major problems because MemorexTelex had such a small customer base for automated tape libraries in the U.K. Similar problems have arisen with StorageTek, however, in the short term, this is not a major issue because StorageTek has a very large U.K. customer base. Yet, Dascom would like to see more commitment from the company in the long term.

However, StorageTek management is reluctant to give any further commitment, because, at the moment it does not see any major benefit in doing so, but it has not ruled out a future possibility. Also, to incorporate under the auspices of headquarters would be a very long and complicated legal procedure and StorageTek is not yet willing to take this step.

6.3.7 Interest Shifts

Dascom experienced major problems with MemorexTelex when the latter refocused its sales team. Essentially, the strategic fit which had been established between the partners disappeared and Dascom realised that the maximum potential sales possible from the partnership was eight units. This soon led to the relationship becoming dysfunctional. Since StorageTek has a narrower product range, such a problem should not arise to this extreme.

6.3.8 Dependence

A potentially negative consequence of the strategic alliance, is that Dascom could become over dependent on StorageTek and therefore extremely vulnerable vis-a-vis its partner. Both partners are aware of this problem and are determined to overcome it. Dascom and Business Solutions Group are actively looking for new business opportunities outside the realm of the alliance. They use the partnership agreement to their maximum advantage and are building up a very attractive customer base which is giving the companies the future credibility they need to be able to survive on their own. StorageTek has always restricted its involvement in Dascom and has not made any false promises. Although it is aware that Dascom ultimately would like to become part of the StorageTek worldwide group, it does not see any real benefit in such a move at the present time and has made this clear to the directors of Dascom.

6.4 .0 Dascom's Relationship Development

Since its early development, Dascom has been involved in a number of strategic partnerships - a route now taken by numerous firms in the software industry (and indeed, many other industries). It is possible to categorise Dascom's development into five chronological phases:

Phase 1: OTAS is developed in conjunction with MemorexTelex
Phase 2: Alliance with StorageTek; NearArchive
Phase 3: Dascom sets up U.K. office - Dascom U.K.
Phase 4: Dascom U.K. reconstitutes itself as an independent entity - Business Solutions Group
Phase 5: Considering European expansion.

(For a summary, see Figure 6.2 overpage.)

Figure 6.2 Chronological Phases of Dascom's Relationship Development

CATALYST	NARRATIVE		
Dascom Software Expertise	TIME	Phase 1	Phase 2
↓			
Market Need Data Archival and Retrieval Systems	EVENT	Develop with MemorexTelex (for Telecom) new OTAS	Alliance with StorageTek; Near Archive product
↑			
MemorexTelex StorageTek ATL Hardware Expertise	POTENTIAL ADVANTAGE (to Dascom)	Better than existing OTAS	StorageTek big player in U.K.; good strategic fit
	POTENTIAL DISADVANTAGE (to Dascom)	MemorexTelex is a small player in the market	StorageTek's hardware selling orientation

Phase 3	Phase 4	Phase 5
Dascom sets up U.K. office	U.K. office reconstitutes itself as an independent entity (B.S.G.) under 'alliance champion', John Walshe	Considering European expansion
Attempt to access end user more directly	Further motivation to succeed	Desire to internationalise
StorageTek's sales/ marketing function is channel/ gatekeeper to end user	Alienation from U.K. market	U.S. corporate control at StorageTek not supportive; poor inter-country relations

6.4.1 Phase 1: OTAS is Developed in Conjunction with MemorexTelex

Dascom was able to develop OTAS from a concept which arose when it was working in conjunction with MemorexTelex on a proposal for Telecom Eireann. There was huge potential for this package as it was a major development in the area of ATL's, its primary advantage being the significant DASD savings it created. Dascom became involved in the alliance with MemorexTelex because it did not have the assets to reach the large potential market. MemorexTelex was a well established company with extensive marketing and distribution channels. At the outset, it appeared to be a perfect partner for Dascom. However, MemorexTelex was a very small player in the ATL market and when a strategic decision was reached to defocus the company, ATL's became an insignificant part of its overall product range. Dascom did not adequately examine its partner's criteria before the alliance was forged. Furthermore it did not correctly determine the potential problems incurred due to differences in organisational cultures and the immense bureaucracy surrounding large organisations. As the relationship developed, these problems became quite obvious. Perhaps if Dascom had spent more time examining MemorexTelex's credentials during the partner selection stage, it would have been more reluctant to enter into a relationship with MemorexTelex (and especially in allowing the company to have a minority equity shareholding in its company).

6.4.2 Phase 2: Alliance with StorageTek; NearArchive

As it became clear that the alliance with MemorexTelex was not going to be successful, Dascom did not completely reject the notion of partnership agreements due to this particular failure. Rather, it reassessed the situation and considered a number of other options. It knew that it had a unique package which had huge potential if it could be successfully brought to the marketplace.

When StorageTek approached Dascom, strategic fit was established much earlier in the relationship than was the case with MemorexTelex (where one could correctly question the existence of strategic fit at any time). StorageTek was the obvious choice of partner for a number of reasons. First, it had a narrow product range which consisted primarily of ATL's which was Dascom's core interest. Second, it was (and still is) the leader in this area, dominating approximately 95% of the market. Third, it was

extremely interested in forging an alliance with Dascom because it recognised the value of incorporating NearArchive into its proposals. Furthermore, StorageTek has a long history and a very strong reputation in the computer industry.

6.4.3 Phase 3: Dascom Sets up U.K. Office - Dascom U.K.

As the StorageTek/Dascom alliance developed a number of problems arose. The main problem was that StorageTek is a hardware company and its salespeople were trying to sell a software product that they did not understand. Initially, neither StorageTek nor Dascom recognised the problems in having hardware salespeople promoting and selling software. StorageTek was reluctant to allow Dascom to have a lot of direct contact with end users. It in effect wanted to act as gatekeeper in the relationship, which may not have been a problem if StorageTek had the necessary abilities to sell software.

However, Dascom realised that if StorageTek salespeople continued to promote its software, the relationship would never produce more than a small number of unit sales. StorageTek acknowledged these weaknesses and compromised its position, allowing Dascom to have increased direct contact with customers. As Dascom personnel were spending more and more time in the U.K., it decided to set up a U.K. office, whose sole purpose was to support the strategic alliance. This has become a key factor in the success of the relationship. Dascom, now not only had almost complete direct access into customer organisations, but it also had a very important second channel into StorageTek (previously, all communication went via the StorageTek marketing department).

6.4.4 Phase 4: Dascom U.K. Reconstitutes Itself as an Independent Entity - Business Solutions Group

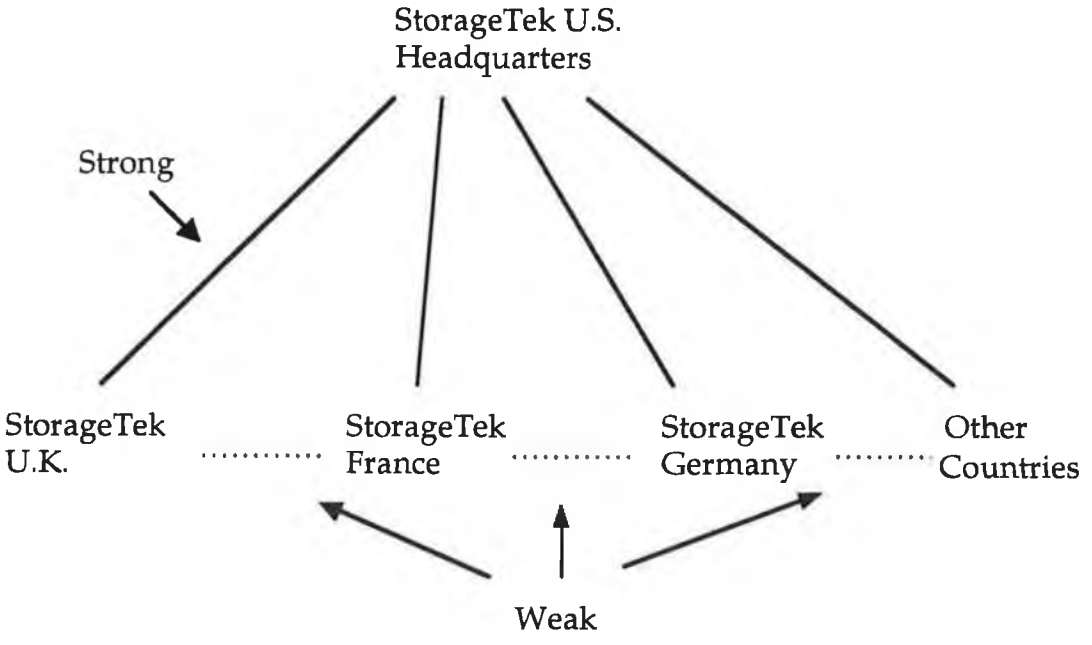
Since March 1994, Business Solutions Group has been operating as an independent entity. This is an interesting, and unexpected development in the progression of the initial Dascom / StorageTek alliance. Business Solutions Group operates under a very close working relationship with StorageTek. In effect, an independent company has been created on the strength of what started out as a licensing agreement.

6.4.5 Phase 5: Considering European Expansion

Dascom's long term plan is to internationalise throughout Europe and eventually into North America. It believes that NearArchive has the potential to bring the company to the desired international level. However, its relationship with StorageTek has been a major constraint to these plans. Initially, Dascom thought that in the long term, StorageTek would be the perfect vehicle through which to channel its internationalisation. However, it made a fundamental mistake in not recognising and understanding the bureaucracy involved in the channels of communication in a multi-national organisation. It made the assumption for example, that if it developed a strong relationship with StorageTek U.K. (which it has achieved), StorageTek U.K. would then open channels to other branches of the company. But the inter-country communication links within the organisation are extremely weak as all communication channels lead back to headquarters in the United States. It is very difficult for a company like Dascom to accept this lack of communication since such a feature would not arise in the culture of a small organisation.

There is huge potential for NearArchive on an international basis since it is an unique package and StorageTek has a very large international customer base. However, Dascom must accept that it will not get access to these markets unless it can channel it through headquarters. Even though the directors find it difficult to understand, they must accept that the inter-country communication link is so weak that it is essentially useless to them (this is illustrated in Figure 6.3). To succeed in internationalising through StorageTek, it is essential for Dascom that NearArchive is recognised at corporate level. This may infer that StorageTek U.K. will be forced to change its view of the alliance and to view it as strategic rather than merely tactical. At the present time, StorageTek is reluctant to make such a move and there are a number of reasons for this. Firstly, StorageTek is a hardware company and not a software company. Historically, it has not produced or sold software as a separate entity from hardware. Secondly, incorporating a product at headquarters level means going through a lot of bureaucracy and legalities. Thirdly, StorageTek is not willing to make any further commitment to Dascom than the present agreement until it is confident that it will yield an adequate return on investment.

Figure 6.3 StorageTek Inter-Country Communications Link



Source: Compiled by Author

6.5.0 Chapter Summary

In this chapter, cause mapping was applied to the descriptive data - documented in the previous chapter - to analyse the streams of decisions and behaviour occurring over throughout the alliance initiation, implementation and development. Coding schemes were utilised to indicate causal and definitional relationships among the linkages in the causal map.

Decisions and behaviour discussed include rationale for initiation; negotiations; development of the relationship; sources and effects of goodwill and trust; unexpected benefits; lack of headquarter support; interest shifts; dependence; and phases the company has gone through in its development. They were not pre-existing categories, but rather, categories which emerged from the data throughout the analysis.

In the final chapter the author develops a theoretical model, based on the causal map presented in this chapter. An explanation is offered and the key research objectives and propositions addressed. Based on the model developed and the conclusions derived, a number of managerial implications are deduced. Finally, further research recommendations are proposed.

References

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Chapter 7

CONCLUSIONS

7.1.0 Introduction

The number of strategic alliances between large, established organisations and small, unknown firms is increasing - especially in industries influenced by rapid technological progress such as the software industry. In theory, the combination of a small company's know-how with a larger firm's marketing and distribution systems and capital strength, should lead to both parties developing a strong competitive advantage. Yet, in the past, many of such partnerships have led to disarray, disillusionment, wasted time money and other resources, and even, lawsuits. Although much has been written in the literature about strategic alliances, (a comprehensive review is presented in Chapter 2), few authors have explored the notion of alliances between large, established companies and small firms. This study, which began from a curiosity with the distribution strategies of small software companies in Ireland, has progressed to an attempt to offer a model which may be representative of the happenings between two companies - one large and one small - when they embark in the development of a partnership agreement.

Since the results presented here are based only on a single case, they are not representative, in the traditional sense, of the of the whole population of strategic alliances. From the outset, the methodological approach of the research rejected the notions of the positivistic sciences which are premised on axioms that assume a single, tangible reality consisting of discrete elements; the division of discrete elements into causes and effects; independence between researcher and phenomenon; the possibility and desirability of developing statements of truth that are generalisable across time and context; and the possibility and desirability of value-free, objective knowledge discovery (Hunt 1983, Hirschmann 1986). Rather this study was approached from a humanist viewpoint whereby instead of standing apart from the system being studied, the researcher integrates within it. Central to this approach is the belief that human beings construct multiple realities which are realities that can be comprehended only as gestalts, i.e., holistically. The researcher and the phenomenon under study are mutually interactive and the researcher cannot distance the self from the phenomenon nor can the phenomenon be understood without the personal involvement of the researcher.

7.2.0 Towards a Model

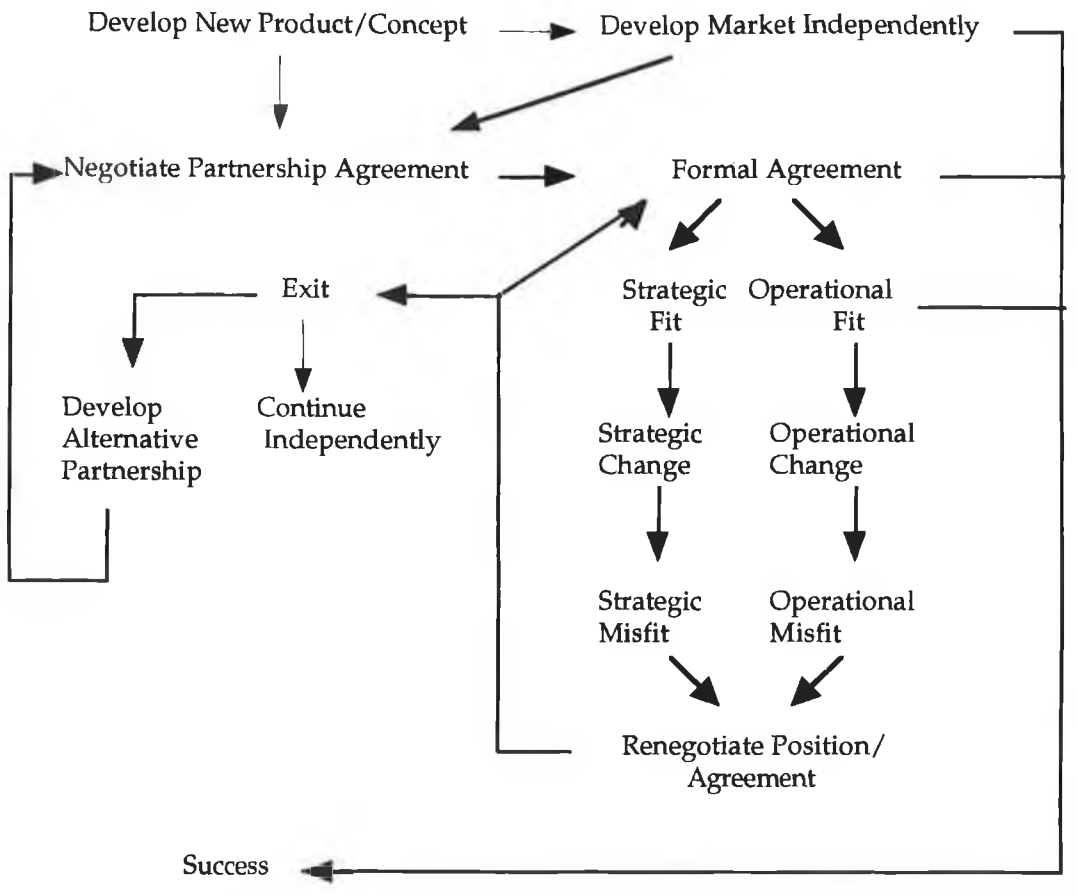
The results of this study offer some insights into the causal relationships determining the initiation, implementation and development of partnerships between large and small firms. The model developed as a result of these observations may be a helpful tool in interpreting similar strategic situations. At the very least, the ideas presented here can be utilised as a basis for discussion and thus contribute to a better understanding of cooperative management.

As far as possible this research has followed Glaser and Strauss' (1967) recommendation for the development of "grounded theory", whereby the researcher or analyst lets the theory emerge from the data. As opposed to attempting to fit data into preconceived theoretical formulae and ignore all the factors which may not come into any particular category, this study has designed and redesigned a model firmly based on empirical observations of "real world" situations. Cause mapping was used as a tool to reduce the many hundreds of pages of data collected throughout the study and a number of patterns became obvious as a result of this exercise. These patterns were then generalised to develop a model representing the causal relationships between small and large companies involved in strategic alliances (presented in Figure 7.1 on the following page).

7.2.1 Model Explanation

The starting point in the cycle is when a new product or concept is developed (in this case by the small company, i.e, Dascom). The company has two choices: develop a market independently; or negotiate a partnership agreement. Due to many factors, the small company will often choose the latter avenue whereby it seeks a partner to aid its development. After identifying a potential partner, negotiations take place and a formal agreement is set in place. From this point, success can be achieved, although this is not likely. The formal agreement ideally should lead to both strategic and operational fit, again a point where success can be achieved. However, it is the nature of the "real world" that change will occur and this can happen on both a strategic and operational level.

Figure 7.1 Strategic Alliances - A Model



Source: : Based on Author's compilation from Cause Map (Figure 6.1) and other case analysis

Furthermore, the negotiation process may establish strategic fit but may not sufficiently address implementation issues (operating fit). The initial enthusiasm and goodwill in the partnership is rapidly translated into frustration, when a lack of internal support at the larger firm renders a smooth operation impossible. Similar obstacles can also arise from differences in culture and structure between the organisations. This leads to strategic misfit and/or operational misfit. At this stage, both partners need to renegotiate the agreement which re-establishes strategic and operational fit, or either or both partners may decide to exit and the partnership is terminated. If the latter occurs, the small company may seek an alternative partner or chose to continue independently.

Many specific areas of strategic alliances have been studied by various authors, such as why firms should cooperate (Contractor and Lorange, 1988), life cycle of agreements (Kogut, 1988), task and organisational complexity (Killing, 1988), partner selection (Geringer, 1991) and trends in collaborative agreements (Hergert and Morris, 1988). However, to make a direct comparison of the model developed in this study and past literature is difficult, because very few authors have attempted to develop such a model. The one exception to this, is the work undertaken by Niederkofler (1989). In his model, he places more emphasis on the dependence factor and postulates that if operational misfit occurs, and it is not resolved and the small company is dependent on the larger firm's support, strategic fit will then occur. This author believes that strategic and operational misfit can exist in parallel with each other, rather than as a result of each other.

Even though the model presented is tentative in nature, and there is certainly a need for further disconfirmatory research, managers may use it to shape their behaviour, actions and decision-making when involved in a strategic alliance. While implications of this study for managers are discussed later in the study, it is interesting to consider their activities at this stage. Initially, managers must focus on the establishment of both strategic and operational fit - without both, it is unlikely that the alliance will be a success in the long-term. Furthermore, they must recognise that change will occur, and accordingly, be able to adapt to new situations as they arise. They should also acknowledge that the strategic alliance may not be a success, and therefore, have some type of exit strategy in place. If this situation occurs, they should not disregard the possibility of developing an alternative relationship.

7.3.0 Key Research Questions

This study seeks to answer two basic questions which are the central objectives of the research:

> *Why* are cooperative agreements between large and small companies initiated?

How are such relationships initiated, implemented and developed over time?

7.3.1 Rationale for Initiation

The primary reason cooperative agreements between large and small firms are initiated is similar to a fundamental reason alliances are put in place between similar sized companies, i.e., to gain access to assets one company does not possess. This reason is widely documented by authors such as Killing (1983), Contractor and Lorange (1988) and Harrigan (1985). However, in the case of relationships between small and large organisations there are very specific assets which each company may be lacking.

Small Firm

The primary rationale for the small company becoming involved in a strategic alliance is to gain access to assets it as a small company does not possess. These assets are:

- Credibility with customers, suppliers and financiers
- Extensive marketing and distribution channels
- Finance for additional research development projects.

Dascom's principal rationale for the strategic alliance with StorageTek was to forge an alliance with a well-known large hardware company which has an established history, credibility and reputation, and also, an extensive marketing and sales team which served a large customer base comprising primarily blue chip companies.

This supports the first proposition which was that the smaller firm will enter into a strategic alliance because it does not have direct access to certain assets which are most likely to be marketing and distribution channels.

Large Firm

The large firm's primary rationale behind the relationship agreement was also to gain access to assets it as a large company does not possess. However, the assets lacking in the large organisation are very different to those missing in smaller companies. These assets are:

- Corporate entrepreneurship
- Competitive advantage

Entrepreneurship is probably the most difficult asset to foster in large organisations. The large firm intends to protect and enhance its existing competitive position by complementing its product line. Alternatively, it may wish to establish a new competitive position in a new market by diversification or by preparing for fundamental technological change.

In a sense both MemorexTelex's and StorageTek's primary rationale for entering into an agreement with a small company is a combination of these two reasons. Dascom's software package which was one of the first major developments in automated tape libraries since their introduction demonstrates the entrepreneurial spirit present in so many small companies and lacking in almost all large organisations. Even more importantly, customers now demand an overall solution which incorporates hardware and software, and while most hardware companies (such as StorageTek and MemorexTelex) are experts in hardware research and development and manufacturing, they know very little about software and cannot offer customers the required solution. If this situation was to continue in the long-term, hardware companies would find it difficult to sustain competitive advantage.

This supports the second proposition which states that the larger firm will enter into a strategic alliance to gain access to technological know-how or a technological advancement it does not possess.

7.3.2 Initiation, Implementation and Development

The second core objective of this study was to determine how cooperative relationships are initiated, implemented and developed over time.

In order to succeed, a strategic alliance must have a balance of strategic and operating fit. During the negotiation period firms establish strategic fit in correctly identifying their partners' resources and potential contribution to the partnership and are able to set a common goal in the future to work towards. However, at this early stage, the partners may not spend substantial time on deliberating how to make the cooperation work which can lead to operational misfit. The model constructed presents strategic and operational fit in parallel with each other. However, it should be noted that if either strategic or operational fit is achieved, this does not mean that the other is automatically present. It is more likely that one may exist without the other in the initial stages, and if this situation remains unresolved, the partnership will not be a success.

In the MemorexTelex/Dascom relationship both strategic and operational misfit are evidenced. Strategic misfit arose when internal changes occurred within MemorexTelex which resulted in the corporation placing decreased emphasis on large storage systems, which had become of less strategic importance to them. Operational misfit arose when MemorexTelex attempted to impose its organisational culture on Dascom. It is obvious that this would cause problems between the two companies since the culture of large and small organisations are so fundamentally different. This supports the third proposition which states that organisational culture conflicts will occur.

In the Dascom/StorageTek relationship strategic fit was very quickly established as a result of the strong basis for shared interests. However, this has been weakened by the reluctance of StorageTek to view the relationship as strategic and its preference in thinking of the arrangement as a tactical agreement. The reason for this is StorageTek does not want to be in a situation whereby it is dependent on Dascom. Likewise, Dascom has retained complete control of its company and continuously attempts to build up its own name and reputation.

As the relationship developed a degree of operational misfit is evidenced. Even though StorageTek is a relatively young company, it is affected by the Not-Invented-Here syndrome. This led to its sales team not actively promoting the Dascom product. However, this problem was acknowledged by both partners and operational fit was re-established.

Negotiations may establish strategic fit, but may neglect to adequately address operational fit. Strategic misfit may arise as a result of a change in either partner's position and/or environment. This can be resolved through renegotiation and repositioning of the relationship or the relationship may be terminated if no basis of shared interests can be identified. Both of these scenarios are evidenced in the case presented in this study. Operational misfit may be overcome by managers willing to work together as a team. Unresolved operational misfit is also detrimental to the success of a partnership.

Goodwill and trust increase over time on the basis of personal relationships fostered between the major players in the partnership, through intensive communication, and successfully overcoming problems as they arise. Goodwill and trust decrease over time when cultural and structural differences remain unbridged. This supports the final proposition which states that trust and goodwill are achievable over time through developing a good working relationship between partners.

7.4.0 Implications for Managers

Based on the development of the model, and the conclusions derived from the analysis, a number of managerial implications for the implementation of a strategic partnership agreement can be deduced. It must be reiterated that these deductions and conclusions, based in a sense on a sample of one, are not amenable to normal statistical inference. However, these insights provide empirical evidence of how cooperative relationships are initiated, implemented and developed over time.

7.4.1 Negotiation Process

Since the cooperative agreement depends on the contributions of both partners, only relationships that benefit both parties will work. Each partner must bring something to the agreement that will benefit the other partner. If this is not the case, and the relationship only benefits one party, the other partner will not be willing to make adequate contributions to the partnership.

If the negotiation process is a success and creates a firm understanding of each partner's position and interest, the relationship can be built on a solid foundation of shared interests. This is achievable through an open discussion of interests and the avoidance of hidden agenda. This type of clear communication also increase the level of goodwill experienced between organisations.

It is essential that each partner recognises the danger of becoming over dependent on the other which may render and alliance dysfunctional. No matter how good the terms and communications are at the beginning of a relationship, partners firms must not lose sight of the fact that the partnership may not work out. For this reason it is vital to have clear exit strategies in place.

7.4.2 Culture and Structure

Where there exists a relationship between small and large organisations, there also exist structural and cultural differences. The effects of such differences can be reduced by limiting the interaction between partners to the minimum necessary to achieve the goal of the cooperative agreement (without inhibiting the communication level essential for success). To minimise the effect of structural and cultural problems, the large organisation should assign one key person to manage the relationship. In doing so, this person can coordinate activities concerning the alliance, and reduce the bureaucracy normally associated with large organisations. In return, the small company must acknowledge the needs of the large organisation and present memos, accounts etc., as far as possible, in the format required by the large firm.

The importance of how the larger organisation links with the smaller, whether through assigning one key individual to manage relations or through some other well-conceived contact mechanism, should not be underestimated. In working with the StorageTek UK subsidiary, Dascom established a local working relationship with StorageTek which, in the short-term, provided an adequate outlet for the smaller company. Its medium- to long-term strategic options were limited by the strong central control culture of the larger company and the consequent absence of direct inter-subsidiary links. In the absence of a relationship with a senior

sponsor in the US parent company, Dascom was inevitably peripheralised to an extent.

7.4.3 Flexibility

The success of an alliance is largely determined by the ability of partners to react to change - both strategic and operational change. One of the few things that is certain in a relationship agreement is the change will occur and can lead to strategic and/or operational misfit. Each partner must be willing to reexamine its role in the partnership and be capable of inducing the necessary changes. In parallel to this, firms much acknowledge each others' limitations in this area, especially in the large organisation where bureaucracy can severely hinder change and flexibility.

The model stipulates that a formal agreement be in place. However, the degree of formality is debatable. A tight legal agreement will have two effects on the partners. First, it is certain to reduce the flexibility of the partnership and second, it is likely to increase transaction costs. The case presented in this study reflects the inappropriateness of a rigid legal agreement between two partners, where one is a large organisation, and the other is a small firm. While it is important to have a legal document to protect both partners, it should not become the central focus of the alliance. Instead, partners should concentrate on cultivating good faith between companies, and in doing so, will increase the chance of success and reduce legal and thus, transactionary costs.

The notion of flexibility is supported by research undertaken by Knight (1991). He agrees that agreements need to be flexible and even "loose", allowing each partner the capacity to make adjustments and a relatively easy exit through an escape clause if the relationship does not proceed to each partners expectations. Lorange and Probst (1987) further argue that the reason for many joint venture failures is that they have not been designed with sufficient adaptive properties to cope with the emerging environmental turbulence, i.e., they lack flexibility.

7.5.0 Propositions

This study has substantiated the four proposition developed earlier. To reiterate, these are:

1. The small firm will enter into a strategic alliance because it does not have direct access to certain assets which are most likely to be marketing and distribution channels.
2. The large firm will enter into a strategic alliance to gain access to technological know-how or a technological advancement it does not possess.
3. Organisational culture conflicts will occur.
4. Trust and goodwill are achievable over time through developing a good working relationship between partners.

However, a number of other propositions have arisen in comprehending the case material which render further study:

5. Partnership selection does not warrant the amount of attention it has received in the past in the literature. Many authors (e.g., Harrigan, 1985, 1988, Geringer, 1991, Bleeke and Ernest, 1991), place much emphasis on the partner search stage in the formation of a strategic alliance. Obviously identifying the correct partner is a critical factor in a successful alliance. But one must question the extent of the search, and postulate that the partner choice may be obvious - perhaps even before either firm has decided to develop a strategic relationship, especially in the case of the small firm. In the words of one of the players in the case study, "it quickly becomes obvious who you can best do business with".

6. Each partner firm must articulate a very clear indication of the benefits its company can give to the other in forming a partnership agreement. The primary motivation for a firm forming an alliance is to gain access an asset it did not previously possess, and unless, a firm believes it is gaining something from the alliance, it will not wish to continue the relationship.

7. Large organisations are very unlikely to acknowledge their dependence on a smaller organisation and would rather view a relationship as tactical as opposed to strategic. This is an issue which has

received very little attention in the literature and warrants further research.

A related point here is the need to consider carefully the contact points and mechanisms between the larger and smaller firm. This is particularly relevant when the smaller firm is dealing with a division or subsidiary of the larger firm which may have diverse and transnational operations.

8. Credibility and access to a huge customer base is a core reason a small firms would wish to foster a relationship with a large organisation. Small firms have always experienced difficulties in developing new markets, especially when dealing with large corporations. Niederkofler (1989) has also found credibility to be a key issue for the small firm in a strategic alliance with a large organisation. However, while many other authors explore the concept of the small firm gaining access to the large firm's distribution channel, they do not develop the notion of increased credibility.

7.6.0 Further Research

This study is a useful beginning in understanding strategic alliances between large and small organisations. The constructs and dynamics involved in cooperative relationships are so diverse that they could not possibly be understood in a single study. Indeed this particular study has probably produced more questions than provided answers. But it does provide a starting point for developing a solid theoretical understanding of strategic alliances between large and small firms. Each of the eight propositions are an individual basis for continued theoretical discussion. The notion of "event contextuality" coined by the author (in Chapter 4) merits further investigation and examination.

How this research progresses from this point depends on beliefs of the individual researcher. Some may treat this study purely as an exploratory one, and would wish to take the propositions and develop hypotheses which would be then subjected to rigorous statistical testing, creating "hard" data. However, this avenue may have its limitations. Instead, a multiple case study approach undertaking cross-case analysis is

suggested. This is based on the premise that managers construct multiple realities which are realities that can be comprehended only as gestalts. There are numerous events in the implementation of strategic alliances that warrant further research of the nature. For example, exactly how do managers span cultural boundaries? What differences exist in other industries? Each of the propositions could be examined and thus, further refine the theoretical model developed in this study.

One of the most exciting aspects of this study - at least in the eyes of the author - is the rejection of traditional marketing research methodology - the desire to attain "hard" data, measure, quantify and test variables in a true positivistic sense. Instead, it is hoped that this study displays the merits of the researcher assuming a humanistic stance and immersing the self into the phenomenon under investigation and allowing the data to speak for itself and for theory to emerge from the data rather than applying pre-existing theory to the data. There is potential for every aspect of managerial activity to be examined holistically.

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APPENDICES

Appendix A

Copy of introductory letter sent to companies at the early stage of the study.

Dear ,

I am a graduate undertaking an MBS by full-time research on the software industry in Ireland. My particular focus is in the examination of strategic alliances and partnerships in the industry.

At a recent meeting with Barry Murphy and John Dixon of the National Software Directorate, your company was suggested as a potential participant in my study. Thus I am wondering if it would be possible to meet briefly with you to discuss the possibility of such participation.

I fully appreciate the many demands on your time, but I would hope that modest benefits might accrue to your firm and the software industry in general from my study. I plan to investigate why cooperative relationships are initiated, how these relationships are implemented and how they develop over time.

I will contact you by phone in a week's time to discuss the matter further.

Yours sincerely,

_____

Emma Donnellan.

Appendix B

Inventory of Potential Companies for Case Study.

Mentec International Ltd.,
Dun Laoghaire Ind. Est.,
Pottery Road,
Dun Laoghaire,
Co. Dublin.

Expert Edge Computer Systems Ltd.,
Equity House,
85 Pembroke House,
Ballsbridge,
Dublin 4.

Iona Software Ltd., Unit 6,
IDA Enterprise Centre,
East Wall Road,
Dublin 3

Precision Software Ltd.,
103 Lower Baggot St.,
Dublin 2.

ESBI Computing Ltd.,
Stephen Court,
18/21 St. Stephens Green,
Dublin 2.

Implementors International Ltd.,
Unit 10
Leopardstown Office Park,
Sandyford
Dublin 18.

Dascom Services Ltd.,
Weir View House,
6 The Mall,
Lucan
Co. Dublin.

Sybex Computing Ltd.,
Leopardstown Office Park,
Dublin 18.

Softco Ireland Ltd.,
40 Northumberland Ave.,
Dun Laoghaire,

Co. Dublin.

Insight Software Export Ltd.,
83 Lower Leeson Street,
Dublin 2.
International Financial Systems Ltd.,
39 Dame St.,

Credo Group Ltd.,
Russell House,
Russell Group,
St. Stephens Green,
Dublin 2.

Key Financial Services Ltd.,
Dame St.

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