

NEW BUSINESS DEVELOPMENT
IN A
DIVERSIFIED TECHNOLOGICAL CORPORATION

by

CHARLES ANDREW BERRY
B.Sc. (Honors), University of Glasgow
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Submitted to the Sloan School of Management
and the Department of Electrical Engineering and Computer Science
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Signature of Author: _____

Sloan School of Management and Department of
Electrical Engineering and Computer Science,
6 May 1983

Certified by: _____

Edward B. Roberts
Thesis Supervisor

Accepted by: _____

Edward B. Roberts
Director, Joint Program in the Management of Technology

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ABSTRACT

This thesis studies new businesses developed within one highly successful diversified technological corporation, over the period 1971 to 1977. This period was selected to ensure that relatively recent performance was examined while still leaving sufficient time for the outcome of each new business attempt to be measurable. The thesis seeks to identify critical variables which differentiate successful from unsuccessful new business development episodes and to understand the nature of the impact of these variables upon new business success.

Fourteen episodes were studied, including six attempts at internal development, six acquisitions and two minority investments of venture capital. The internal development episodes and acquisitions were equally divided between success and failure. Both minority investments were successful. Data were gathered by means of detailed questionnaires followed by interviews. These data were then analysed statistically to identify the significant variables which tended to distinguish successful from unsuccessful episodes.

The analysis revealed sixteen significant factors, with the following showing the strongest relationship: familiarity with marketing in the new business area and its relatedness to base capabilities; familiarity with the required patterns of doing business within the division hosting the new business; familiarity with the technology or service embodied in the product and its relatedness to base capabilities; market research in familiar markets prior to entering the new business. This list clearly emphasises the importance of familiarity with the various dimensions of the new business.

The thesis discusses the strategic implications of these results. A new conceptual framework is presented which may be used to characterize new business opportunities on the basis of a company's familiarity with market factors and familiarity with the technology or service embodied in the product. These characteristics form the two dimensions of a "familiarity matrix" which is built into a corporate tool for selecting entry strategy into attractive but unfamiliar new business areas.

The new tool indicates that a mixed approach to new business development encompassing internal development, acquisitions, joint ventures and minority investments of venture capital may make available a much broader range of opportunities than would otherwise be possible.

Thesis Advisor: Edward B. Roberts

Title: David Sarnoff Professor of Management of Technology

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CHAPTER I

INTRODUCTION

All growth-oriented companies must become involved in new business development. The message of the product life cycle is that companies cannot rely on their current products to produce the target rate of sales and profit growth. Since products go through this cycle from introduction through growth and maturity into decline, a company must take steps to replace revenues lost by business dependent upon declining products. A "planning gap" between desired and expected sales growth must be filled by developing new business.

There are three categories of new business development. A company may generate new products for its existing market, may take existing products into new markets or may address new markets with new products. This third category is normally classed as diversification.

This thesis examines fourteen new business development episodes within a highly successful diversified technological corporation. These episodes, which include both success and failure, are comprised of internal development, acquisition and minority investments of venture capital. The main goals of the thesis centre on identifying those features which consistently distinguish successful from unsuccessful episodes and on understanding the nature of the impact of these features upon new business development.

The author is unaware of any previous research on new business development which has concentrated on a single company. However, ample research data exist from studies which have examined ranges of companies. This thesis used these studies as a guide in formulating the research approach and in interpreting the data obtained.

Chapter II of this thesis is an extensive review of literature relevant to the topic of research. An attempt was made to build upon previous work included with Sloan Masters Theses.

Chapter III presents the focus of the research. It discusses the goals and the method of achieving these goals which was considered most appropriate. An outline is also given of the company which formed the centre of this research, including its historical background, recent performance, areas of business and organisation. The analytical techniques used throughout the research are also discussed.

Chapter IV gives an outline of the data which were collected. Individual episode case descriptions are given, together with the results obtained by searching across all episodes for consistently significant factors. Chapter V then interprets the data, relating the main findings to the results of earlier research on ranges of companies.

Chapter VI draws some major strategic implications from the results. These implications centre on the concept of corporate familiarity outlined above and this chapter therefore contains the major new proposals of the thesis.

Finally, Chapter VII presents the main conclusions and some suggestions for future research. The conclusions are drawn in a manner that addresses as directly as possible the main goals of the research outlined in Chapter III.

CHAPTER II

LITERATURE REVIEW

2.1 INTRODUCTION.

This chapter reviews literature relevant to the topic of new business development in a diversified technological corporation and the review covers three broad areas. Firstly, the topic of diversification is discussed. Since this thesis concentrates on a diversified company, it is important to evaluate the motives stimulating diversification, the historical performance of diversified companies and the problems they encounter. Appropriate strategies are then considered, followed by organisational issues relevant to the generation of new business ideas and the accommodation of new business ventures within the parent organisation. In order to address these issues, the review is divided into three sections:

- Corporate Diversification.
- Strategies for New Business Development.
- Organisation and Control in New Business Development.

Throughout this review emphasis will be placed on material relevant to diversification. Generating new products for existing markets or taking existing products into new markets represent perfectly valid approaches to developing new businesses. However, diversification is probably the most demanding approach in that it involves simultaneously both new products and new markets. This emphasis on diversification is maintained throughout the thesis.

In carrying out the review, relevant work included within previous Sloan Masters Theses was identified and studied. This review attempts to build on that previous work, stressing the areas most relevant to new business development from the corporate perspective. The work of Becker⁴³, Buddenhagen¹⁹, Mahoney⁴⁴, Zaic³⁰ and, most recently, Andrews⁴⁵ was found to be particularly useful.

All references identified throughout this chapter may be found in Appendix A.

2.2 CORPORATE DIVERSIFICATION.

2.2.1 A DEFINITION OF DIVERSIFICATION.

The term diversification may be interpreted in a variety of ways. It is therefore important at the beginning of any discussion on the topic to define the manner in which the term is being used. A former Chief Executive Officer of the General Electric Company was noted to have used the term in at least six different senses: "developmental (R&D) diversification", "functional diversification", "geographic (international) diversification" and "diversification of the means of financing." Consequently, diversification according to this CEO was a change in any of the above-mentioned elements of General Electric's corporate strategy¹. Ansoff² defines diversification as the penetration of new markets with new products and this is the traditional definition that will be used throughout this thesis. EXHIBIT 1 illustrates the concept.

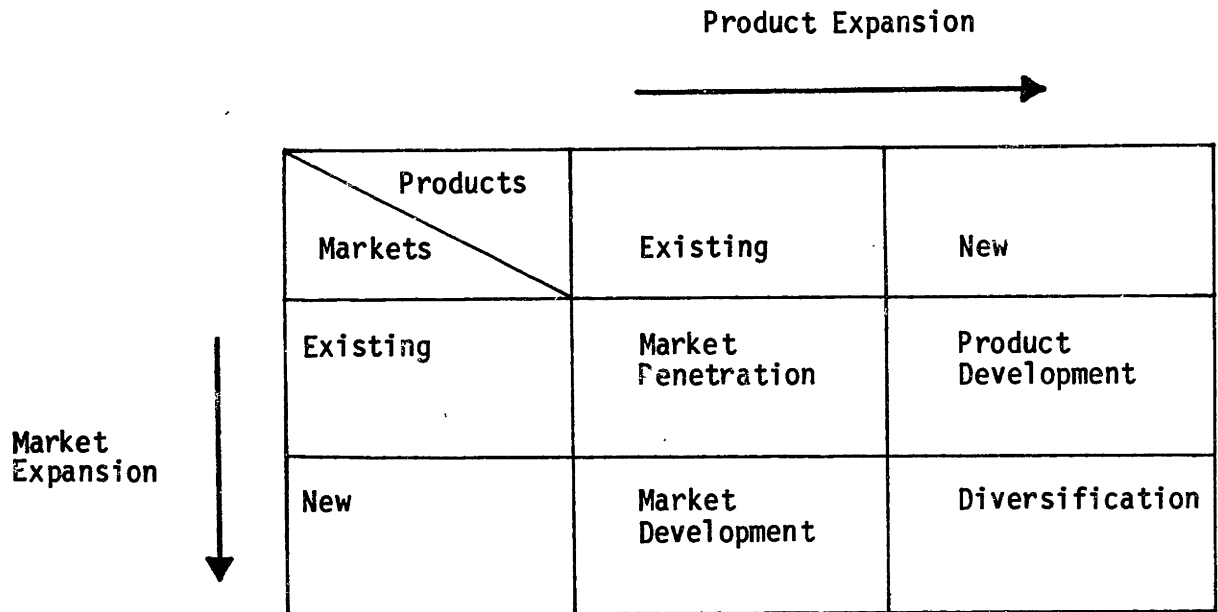
2.2.2 POTENTIAL BENEFITS OF DIVERSIFICATION.

Companies may undertake diversification in response to a wide variety of opportunities and pressures. Salter and Weinhold³ present a selection of possible reasons to diversify. These include:

- To mitigate the effects of a slow-down in sales and earnings accompanying the mature phase of a business's life cycle.
- To exploit a rich collection of new product ideas generated by a fruitful R&D effort in order to promote growth.
- To reduce the burden of competitive pressure.
- To smooth the swings of cyclical income streams.
- To avoid takeover.

EXHIBIT 1

A Definition of Diversification



- To use more fully the general management skills of the top executives.
- To attract and retain first rate managers.
- To avoid the impacts of anti-trust legislation that might arise if horizontal or vertical expansion were attempted as the growth mechanism⁴.

Although these opportunities and pressures represent motivation for management to undertake diversification, they are not automatically justification for such a strategy. The interests of the shareholders must be addressed and the relative priority of their interests over those of managers, employees and the public at large means that value creation must be considered in any diversification decision. Salter and Weinhold³ indicate that real economic value can only be created by a company following a diversification strategy when the combination of the skills and resources of the base and new business satisfies at least one of the following conditions:

- An income stream greater than that which could be realised from a portfolio investment in two separate companies equivalent to the base and new businesses.
- A reduction in the variability of the income stream greater than that which could be realised from a portfolio investment in two separate companies equivalent to the base and new businesses.

The basis of each of these conditions is a comparison of corporate diversification on the shareholder's behalf with independent portfolio diversification by an investor. The majority of benefits derived from reducing company specific risk (unsystematic risk) through diversification are equally available to the individual investor. Although diversified companies can achieve trade-offs between total risk and expected return that are superior to the trade-offs available to

single business companies, they cannot create value simply by diversifying away unsystematic risk. Since the unsystematic risk of a security may be eliminated by simple portfolio diversification, the investor does not need widely diversified companies to eliminate risk on his behalf.

The conclusion from the above argument is that a diversifying company can create value for its shareholders only when its risk/return trade-offs include benefits unavailable through simple portfolio diversification. Synergy is said to exist when the combined return on a company's resources is greater than the sum of its parts⁶. This can occur (i) when the products of two or more businesses use common distribution channels, warehousing or sales administration, (ii) where there is an opportunity for tie-in sales that can increase the productivity of the salesforce, (iii) where opportunities for common advertising and sales promotion exist, (iv) where common facilities can be utilised and spread over a larger volume, (v) when there is R&D carryover from one product to another, and such like. Although, in theory, the potential for synergy is greatest between businesses closely related in terms of key functional skills or product-markets, it is frequently difficult to take advantage of potential synergies. When this potential cannot be exploited, management of the so-called related businesses has many similarities to management of unrelated (conglomerate) businesses.

2.2.3 THE PERFORMANCE OF DIVERSIFIED COMPANIES.

Companies may diversify in a variety of different manners and Rumelt⁵ has developed a now widely accepted scheme for classifying diversified companies. This scheme combines the extent of diversification with a measure of the relatedness of the various businesses forming the company. In his analysis, Rumelt studied the way new business activities related to old and how diversification strategies differ in their strengths, skills or purposes that form the basis for the firm's cumulative diversification moves. As a result of this analysis he was able to identify three basic categories and nine total types of diversified companies. The categories were defined in terms of a

"specialisation ratio," showing the proportion of a company's revenues derived from its largest single group of related businesses. Businesses are considered related if they (i) serve similar markets and use similar distribution systems, (ii) employ similar production technologies or (iii) exploit similar science-based research.

The three major categories of diversified companies identified by Rumelt are: Dominant Business Companies, Related Business Companies and Unrelated Business Companies. Dominant Business Companies according to Rumelt's definition derive 70-95% of sales from a single business or vertically integrated chain of businesses. General Motors and IBM are typical of companies in this category. Related Business Companies have diversified by adding activities that are related to the skills and strengths possessed by the company. In this category, no single business accounts for more than 70% of total company sales and representative companies are Du Pont and General Electric. Unrelated business companies (commonly called conglomerates) have diversified without necessarily relating new businesses to old. The relationship is purely one of financial fit and no single business accounts for as much as 70% of sales. Litton and Rockwell International are companies that fall into this category.

On analysing the performance of the various categories of company, Rumelt concluded that Dominant Business Companies under-performed, on average, all other classes of diversified companies (based on five accounting-based performance measures) from 1949-1969. Unrelated Business Companies, the group that grew most during the period under study, showed significantly higher corporate growth rates but also showed the lowest rates of capital productivity. Related Business Companies, however, outperformed the averages on the five accounting measures used in the study. They provided, on average, the second highest set of growth rates but achieved the highest returns on capital. Although these basic results did not include adjustments for the differing mixes of business (which differ in intrinsic profitability) within which each firm operated, they still indicate the problems companies may face. Remaining close to traditional businesses can result in mediocre performance whereas wide ranging diversification places the productivity of capital at risk. In addition, the potential for successful related

diversification is highly dependent upon the characteristics of the company's base industry.

Peters⁴² supports Rumelt's conclusions on superior performance of related business companies. In his study of 37 "well managed" organisations he found that they had all been able to define their strengths and then build on them. They had not moved into potentially attractive new business areas which required skills that they did not have.

Fast³⁴ suggests three reasons why related diversification should be more successful than unrelated diversification. Firstly, he mentions the widely held belief that related ventures offer greater opportunity for the transfer of existing knowledge and skills. Secondly, related ventures can be launched at lower cost than unrelated ventures, resulting in higher return on investment for ventures of equal payback. Thirdly, management support for and commitment to unrelated ventures tends to be fragile. Hence, unrelated ventures not only have higher cost and require more learning than related ventures, but they also tend to have less lasting support.

Diversification is a strategy that needs to be carefully planned and executed, but the returns can be significant. Rumelt's results indicate that both related and unrelated diversification can generate useful benefits for both management and shareholders. However, it is important that diversification, whether related or unrelated, should not be regarded as a remedy for poor corporate performance.

2.2.4 PORTFOLIO ANALYSIS.

A number of techniques have been developed to analyse a diversified firm's operations by displaying them as a "portfolio" of businesses. Porter⁴⁶ presents two of the most popular techniques: the growth/share matrix attributed to the Boston Consulting Group (BCG) and the company position/industry attractiveness screen associated with General Electric, McKinsey and Company, and Shell. Wind and Mahajan⁴⁷ discuss the application of these and other models in designing product and business portfolios.

The Growth/Share Matrix.

This matrix uses industry growth and relative market share as its two dimensions. Each business unit of the company is characterised and plotted on this matrix which is usually divided into four quadrants as illustrated in EXHIBIT 2. The basic concept behind the matrix is that business units in each of the four quadrants will be fundamentally different in terms of cash flow characteristics and should therefore be managed differently. It also has implications on how the firm should build its total portfolio.

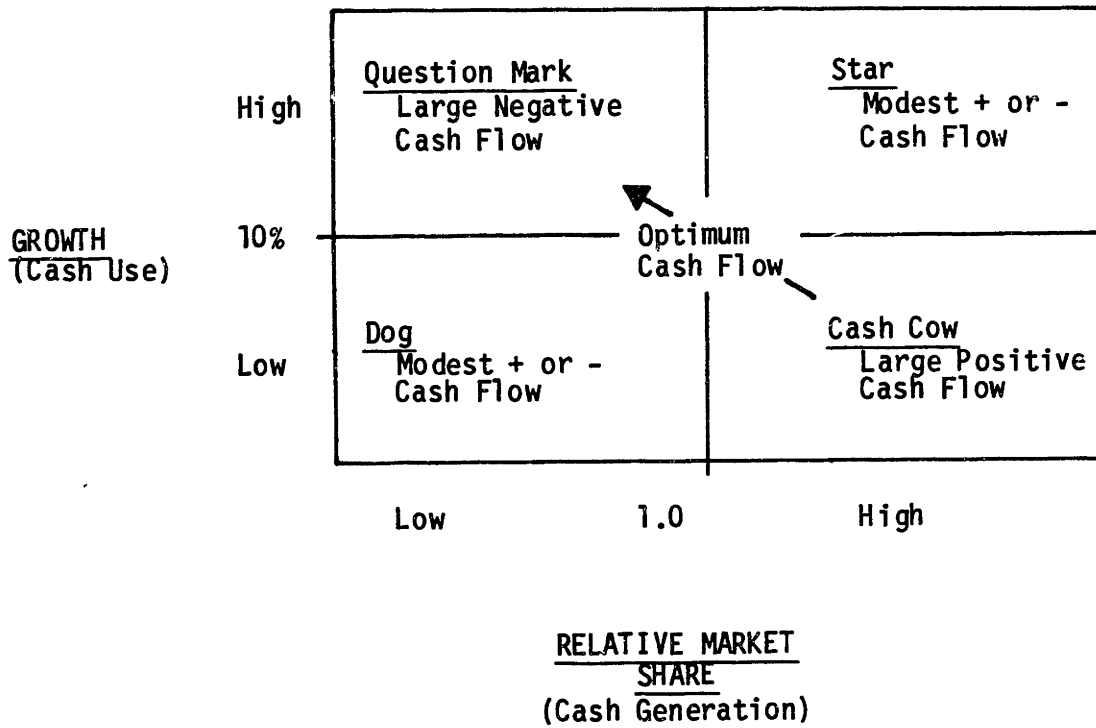
The four quadrants are normally characterised as:

- **CASH COWS:** Businesses with high relative market share in low growth markets will produce healthy cash flows, which may be used to finance other developing businesses.
- **DOGS:** Businesses with low relative share in low growth markets will often be modest cash users. They will be cash traps because of their weak competitive position.
- **STARS:** Businesses with high relative share in high growth markets usually will require large amounts of cash to sustain growth but have a strong market position that will yield high reported profits. They may be nearly in cash balance.
- **QUESTION MARKS:** Businesses with low relative share in rapidly growing markets require large cash inflows to finance growth and are weak cash generators because of their poor competitive position.

Ideally cash cows finance the development of question marks into stars. Those question marks considered unsuitable for development are managed to generate cash (harvested) and become dogs. These are either harvested or divested from the portfolio. BCG argue that the portfolio should be managed so that this transfer takes place and so that cash balance is maintained.

EXHIBIT 2

Growth/Share Matrix



Source: (46)

This model has some important limiting constraints. Firstly, the market must have been accurately defined to account for interdependencies with other markets--a complex problem. Secondly, industry characteristics must be such that relative market share is a good proxy for competitive position and relative costs. Thirdly, market growth must be a good proxy for required cash investment. The above are some of the limiting constraints that are frequently not satisfied.

The Company Position/Industry Attractiveness Screen.

This matrix uses attractiveness of the industry and strength or competitive position of the business units as its two dimensions as illustrated in EXHIBIT 3. Business units are positioned on the matrix by means of an analysis based on the criteria identified in the exhibit. Recommended strategies for the various regions of the matrix are BUILD by investing capital, HOLD by balancing the generation and selective use of cash, or HARVEST or divest. A firm can use the matrix to ensure it has a balanced portfolio in terms of the mixes of developing/developed businesses and cash generation/cash use.

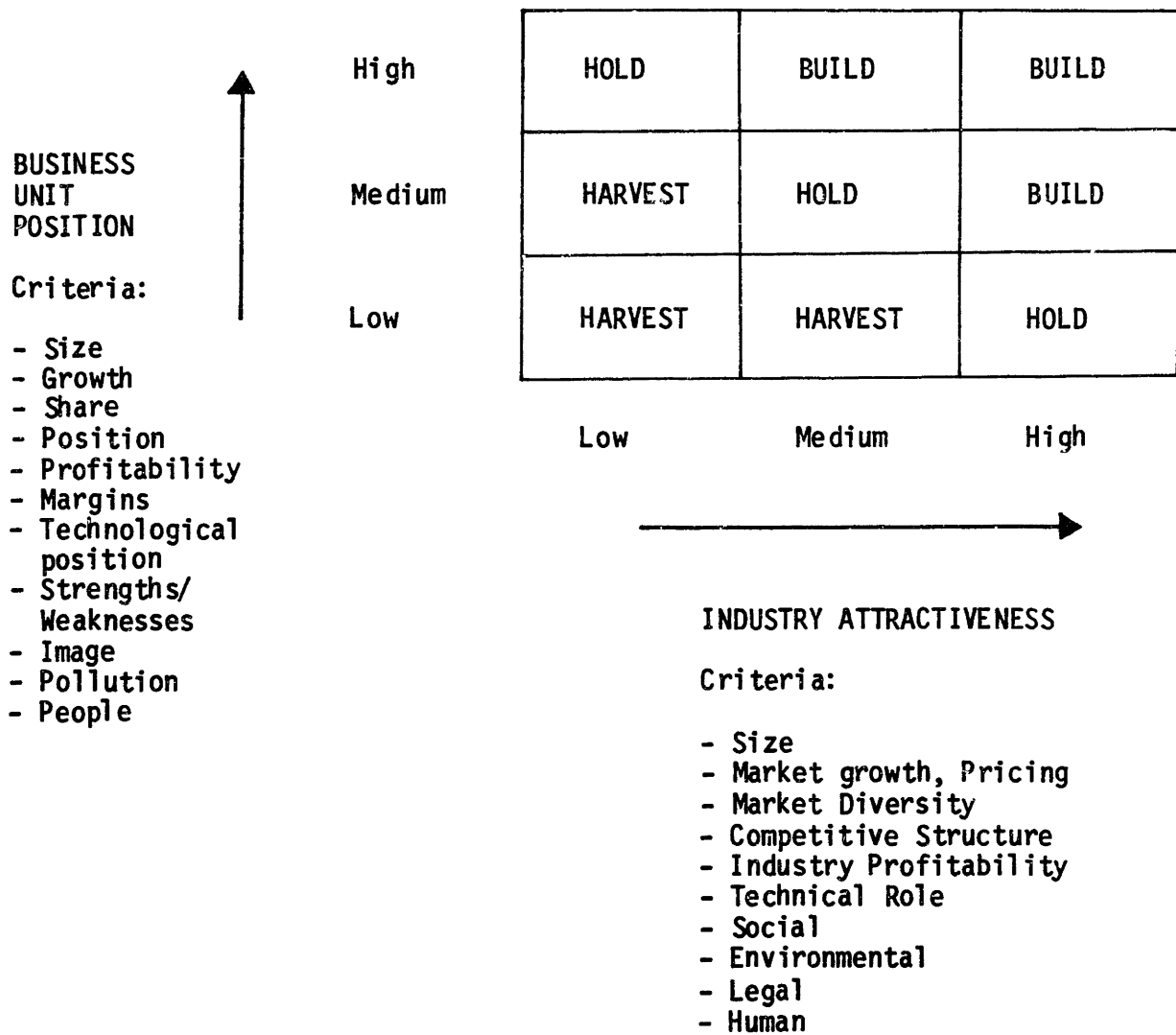
This position/attractiveness screen requires subjective judgments to be made as to where business units should be plotted. The screen is less precisely quantifiable than the growth/share matrix and as a result, attempts are sometimes made to increase objectivity by introducing quantitative weighting schemes.

Whichever matrix is used, the major benefit offered is a basic consistency check in formulating competitive strategy. The most difficult tasks involve positioning business units on the matrix, determining the appropriateness of the suggested strategy and subsequently implementing that strategy. These analytical tools can also play a useful part in the analysis of competitors.

Haspeslagh⁴⁹ examined the utility of strategic portfolio planning by carrying out a survey of 345 major U.S. companies. He found that such an approach did help managers strengthen their planning process and solve the problems of managing diversified industrial companies. The major factor influencing success was not the basic analytical technique but the embodying of the theory in the management process. Portfolio theory

EXHIBIT 3

Company Position/Industry Attractiveness Screen



Source: (46)

cannot be divorced from practice.

In high technology companies, these established business portfolio techniques may inadequately address another important dimension of corporate strategy--technological innovation and technology management. Petrov⁵³ believes that there is an emerging consensus that technology management is one of the responsibilities of top corporate management. He suggests that corporate technology strategy is an essential element of overall corporate strategy and that the concept of a corporate portfolio of technologies may be useful in developing effective strategies. Such a portfolio balances technological resource allocation against technology attractiveness or importance and relative technological leadership, with the aid of an attractiveness/position matrix.

Technology and business portfolios provide two fundamentally different views of a corporation. Petrov indicates that when they are integrated, they provide a sound foundation for developing corporate strategy.

2.2.5 DIVERSIFICATION AND ANTI-TRUST LEGISLATION.

Shanklin⁹ discusses the potential impacts of U.S. anti-trust legislation on companies attempting to diversify and grow. Anti-trust policy is designed to fight industrial concentration and the monopolistic powers that can develop in such situations. This implies that anti-trust policies foster conglomerate growth rather than integrative growth. It is not only companies adopting an acquisition based strategy that are affected; companies that have grown via internal integrative strategies have also had problems. Some have been forced to license patents to competitors free of charge.

The implications of anti-trust policy for strategic business planning depend upon whether a firm is in a dominant or non-dominant industry position. Low market share companies indulging in highly integrative internal and external growth strategies (including market penetration, market and product development, vertical and horizontal integration) are unlikely to be considered anti-competitive. However, high market share companies must balance growth through synergy-producing, integrative strategies against risk of anti-trust actions. Shanklin suggests two strategies which facilitate synergy-producing growth without creating market share concentration: concentric diversification and international market development.

Concentric diversification requires a company to develop or acquire new products which have marketing and/or technological synergies with its existing products but which are not normally targeted at the company's present markets. The company benefits from positive externalities or economies of scale or both but avoids increasing any existing large market share in its major markets.

International market development enables a high market share company to maintain concentration in its base business by diversifying markets instead of lines of business. This enables the company to undertake rapid growth in several foreign markets without approaching too large a market share in the home market. International market development represents the integrative growth strategy available to high market share companies that is least likely to encounter anti-trust obstacles.

2.2.6 SUMMARY.

In concluding this section it is useful to summarise the main benefits attributable to diversification. In general, the operating benefits of related diversification offer the greatest potential for improving corporate performance. The nature of potential benefits changes on moving from related to unrelated diversification as does potential impact. Benefits from general management efficiencies replace operating synergies generated by integrating functional activities. When the extreme of totally unrelated diversification is reached, only financial benefits are significant. EXHIBIT 4 tabulates potential benefits. Although this is primarily directed towards diversification through acquisition, the principles are broadly applicable across other diversification strategies.

EXHIBIT 4

Potential Benefits of Diversification

	Related Business Diversification	Unrelated Business Diversification
Product-Market Orientation	Diversification into product markets with similar marketing and distribution characteristics, or similar production technologies, or similar science-based research activities.	Diversification into product markets with key success variables unrelated to the key success variables of the parent principal business.
Transferable resources with greatest potential for creating value	Operating and/or functional skills; excess capacity in distribution systems, production facilities, or research operations.	General management skills; surplus financial resources.
Nature of potential benefits	Increased productivity of corporate resources through operating efficiencies, improved competitive position accruing from increased size of business, and reduction in long-run average costs can lead to a reduction in the variability of a company's income stream and/or a larger income stream than that available from simple portfolio diversification.	More efficient cash management and allocation of investment capital, reduced cost of debt capital, and growth in profits through cross-subsidization can lead to a larger income stream than available from simple portfolio diversification. Reduction of systematic (market-related) risk is unlikely.

Source: (3)

2.3 STRATEGIES FOR NEW BUSINESS DEVELOPMENT.

Companies have traditionally approached new business development via two routes: through internal development or through acquisition. Internal development exploits internal resources as a basis for establishing a business new to the company. This normally requires a dedicated planning system designed to review, on a continuing basis, the technological competence of the organisation and its opportunities for new business development. Kusiati⁷ has noted that as long as a decade may be required to establish the technological and organisational capacities necessary for such a strategy. Biggadike⁸ studied forty large U.S. companies that diversified through internal development and found that it took typically eight years for the ventures to generate a positive return on investment. Performance did not match that of a mature business until a period of ten to twelve years had elapsed.

In contrast to internal development, acquisition can take weeks rather than years to execute. This approach may be attractive not only because of its speed, but it may also offer much lower cost of entry into a new business or industry. Salter and Weinhold³ point out that this is particularly true if the key parameters for success in the new business field are intangibles such as patents, product image, R&D skills and such like. These intangibles may be difficult to duplicate via internal development within reasonable costs and timescales, and therefore contribute to a risk of entry to the new market for those pursuing diversification by that vehicle.

Some advantages and disadvantages of internal development and acquisition are given in EXHIBIT 5. These are based on the research of Gilmore and Coddington⁴⁸ who examined the diversification efforts of 13 firms originally specialising in defense markets. However, the factors outlined in EXHIBIT 5 are broadly applicable, and not simply limited to firms similar to those studied.

Roberts²² mentions that many corporations are now adopting new venture strategies in order to meet ambitious plans for diversification and growth. These may be found appealing when a company wishes to exploit potential sales areas previously ignored, and they normally involve introducing radically different products into existing markets or

EXHIBIT 5

Advantages and Disadvantages of Internal Development and Acquisition

	<u>ADVANTAGES</u>	<u>DISADVANTAGES</u>
ACQUISITION	<ol style="list-style-type: none">1. Reduces time period for significant market entry.2. Immediate profits.3. Good way to secure commercial marketing capability.4. Acquired firm may benefit from parent's developed technology.	<ol style="list-style-type: none">1. Initial period of adjustment tough; management problems frequently develop.2. Have to pay a premium for well-managed, profitable firm.3. Competition for good firms is severe.4. Miscellaneous problems such as possible anti-trust law violations, incompatible labor relations policy, different personnel policy, and tie-up of top executives in negotiation.
INTERNAL DEVELOPMENT	<ol style="list-style-type: none">1. Profit potential, in relation to investment apt to be greater.2. Better chance of using present employees and facilities; better chance for continuity.3. Community benefits through stable or added payrolls.4. More apt to be related to present lines of endeavor, therefore less chance of error.5. Possibility of creating entirely new market.	<ol style="list-style-type: none">1. Time lag to break-even tends to be long (5 years or more).2. Many internal developments not significant producers of income--become energy leaks.3. Have to develop an organization along with the product.4. Firms have to develop reputation (or name) in a new market.5. Significant opportunities are rare and difficult to identify.6. Unfamiliarity with new markets leads to major errors.

Source: (48)

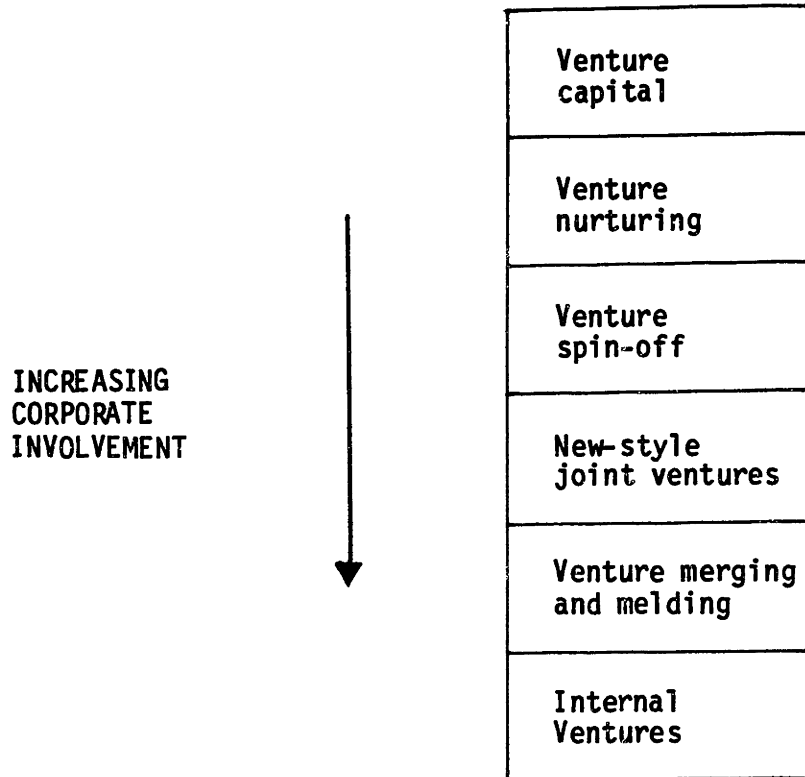
market expansion. In addition, the ventures frequently involve technology that is new to the company and structural modifications are often required in order to undertake the venture. It is therefore not surprising that their record of success is not great. However, although the odds against venture success are high, Roberts argues that no other strategy for promoting growth in size or profitability offers a higher probability of success.

In the past, successful strategies for growth have been based on launching products to satisfy unmet market needs, the output of R&D efforts, the exploitation of untapped foreign markets and acquisitions. However, Roberts believes that today, saturation of domestic and foreign markets, uneven performance of R&D, and the combination of high interest rates with anti-trust legislation make these traditional growth strategies less likely to succeed. As a result, despite their low probability of success, venture strategies have become more appealing.

EXHIBIT 6 displays the range of alternative strategies which Roberts considers appropriate for launching new ventures. They range from those involving low corporate involvement to others which demand a high level of corporate input both in terms of dollars and management time. The full spectrum of strategies including both venturing and acquisitions will now be discussed in more detail.

EXHIBIT 6

Spectrum of Venture Strategies



Source: (22)

2.3.1 ACQUISITIONS.

The late 1960s featured high merger activity, with acquirers at that time being mostly conglomerates executing the transaction using packages of securities. Acquisition activity has again increased in popularity, not just with conglomerate corporations and cash tends to be used rather than packages of securities. Contested bids are common in the current merger movement and substantial premiums above the initial market value of the target company are being paid. For example, in 1978 the average premium of cash tender offers above pre-merger market value was 70%.

Rappaport¹² points out that the popular explanation for the recent increase in acquisition activity is that many solid companies are being undervalued in capital markets, making it cheaper to acquire than to build via internal development. When this is coupled with the uncertainty of the economy and the impacts of government regulation, acquisitions become increasingly attractive relative to internal growth strategies.

Not all acquisitions create value for the acquirer's shareholders and the acquisition bid price must be determined carefully relative to the present value of future cash flows from the acquired company. A thorough financial analysis program is required in order to determine acquisition candidates that will provide an acceptable return on investment. Such an analysis is especially necessary in the current climate of high premiums over market valuation. In addition, the competitive nature of the acquisition market requires companies to respond quickly as well as wisely when candidates become available.

Rappaport's paper presents a framework for analysing potential acquisitions in order to estimate value. The process of analysing acquisitions covers three areas: planning, search and screen, and financial evaluation. Rappaport concentrates on financial evaluation and identifies the main questions to be addressed in the analysis as:

- i) What is the maximum price that should be paid for the target company?
- ii) What are the principal areas of risk?

iii) What are the earnings, cash flow, and balance sheet implications of the acquisition?

iv) What is the best way of financing the acquisition?

It is suggested that with the aid of computer models, initial evaluation can be carried out quickly and at low cost.

Salter and Wienhold^{3, 10, 11} have identified some common misconceptions about diversification through acquisition. It is useful to examine these misconceptions.

Misconception 1:

Acquisitive diversifiers create larger returns (through increased earnings and capital appreciation) for their shareholders than non-diversifiers.

This misconception developed in the 1960s and was partly due to the large emphasis placed upon earnings per share growth by corporate management and security analysts. Diversifiers that were able to accommodate a large number of acquisitions often showed substantial EPS growth. However, when it was realised that a large proportion of this growth was simply an accounting mirage and that capital productivity was a more accurate indicator of performance, the market value of many acquisitive diversifiers declined markedly.

Misconception 2:

Unrelated diversification offers shareholders a superior means of reducing their investment risk.

This argument is often used to justify conglomerate mergers. However, although unrelated diversification may be attractive from a corporate standpoint, it does not offer unique or superior means of reducing investment risk. An investor is able to eliminate unsystematic risk (specific to a company) by portfolio diversification. It is therefore unnecessary for companies to reduce unsystematic risk on behalf of

shareholders and such an action will consequently not increase the value of the firm.

Misconception 3:

Adding countercyclical businesses to a company's portfolio leads to a stabilised earnings stream and a heightened valuation by the marketplace.

This misconception is an extension of the previous one, but focuses on market valuation rather than risk reduction. The argument is based on a "risk-pooling" concept which suggests that when a firm diversifies into an industry with a business cycle or set of economic risks different from its own, the stability and safety of the total income stream is enhanced. It is argued that when one component is "down," the other is "up" and the average remains stable.

In practice, such stability has been difficult to achieve. Countercyclical businesses are difficult to identify as a result of some common dependence on the economic climate. Even if suitable businesses can be identified it is difficult for diversifying companies to construct a balanced portfolio of businesses. This is attributable to the difficulty in finding countercyclical businesses of appropriate size, especially when these businesses may have different growth rates. In order to overcome this growth rate problem widely diversified companies require to undertake selective acquisition in order to maintain the balance of their business portfolios.

Misconception 4:

Related diversification is always safer than unrelated diversification.

It is commonly believed that management exercise judgment most effectively when diversification is limited to businesses with similar production, marketing and distribution or research and development characteristics to their base business. Although this belief often proves accurate, history indicates that concentration on related

acquisitions does not guarantee superior results to unrelated diversification.

Misconception 5:

A strong management team at the acquired company ensures realization of the potential benefits of diversification.

Many diversifying companies believe that the potential benefits of diversification are best realised if acquisitions are limited to well managed companies. However, it is often the acquiring company's management skills rather than those of the acquired company that are most important in achieving maximum benefits from diversification. This is especially true if the acquired company is recognised as well-managed and priced accordingly in the capital market. If the acquisition is to be justified from an economic standpoint the acquirer must manage to ensure that potential synergies are fully exploited.

Misconception 6:

The diversified company is uniquely qualified to improve the management performance of acquired businesses.

During the acquisition activity of the 1960s it was frequently argued that the profitability of acquired companies could be improved by "modernising" administrative practices and introducing a higher degree of discipline than that demanded by the external marketplace. While this may be true, the benefits are strictly attributable to improvements in administrative and managerial practices and not to diversification.

Misconception 7:

Great deals are typically made by professional "deal makers."

Salter and Weinhold identify this misconception as perhaps the most dangerous of all. Investment bankers provide attractive ideas but it is the role of the company to select the opportunities which offer the greatest economic and strategic value. This involves developing criteria for diversification and acquisition which fit their concept of the

corporation plus an ability to recognise and exploit the potential for creating value through diversifying acquisitions. Acquiring companies have to live with an acquisition long after it has passed being a "great deal."

Salter and Weinhold also identify seven ways in which firms can create value for their shareholders via an acquisitive strategy. These all require that at least one of the following conditions is satisfied; either an increase in returns or a reduction in risk relative to that which could be achieved by the same firms involved in the merger if they operated independently. The ways in which value can be created by acquisition are outlined below.

- A diversifying acquisition can raise the productivity of capital when the special skills and industry knowledge of one merger partner can be applied to the competitive problems and opportunities facing the other partner. (The creation of value is the realisation of potential synergy.)
- Investments in markets closely related to current fields of operation can lead to a reduction in long-run average costs. For example, economies of scale may yield benefits.
- Business expansion in an area of competence can lead to the development of a "critical mass" of resources necessary to outperform the competition.
- Diversification into related product markets can enable a company to reduce systematic risk.

The preceding methods for creating value via acquisition are particularly relevant to related diversification. The following methods are most relevant to unrelated diversification, although similar benefits may result from related diversification.

- The diversified company can route cash from units operating with a surplus to units operating with a deficit and can thereby reduce the need of individual businesses to purchase working capital funds from outside sources.

- Managers of a diversified company can direct its currently high net cash flow business to provide investment funds to businesses in which net cash flow is presently zero or negative but in which management expects positive cash flow to develop. This can improve the long-run profitability of the corporation as a whole.

- Through the impact of risk pooling, the diversified company can lower its cost of debt and leverage itself to a greater extent than its nondiversified equivalent. The company's total cost of capital thereby goes down and provides shareholders with returns in excess of those available from a comparable portfolio of securities.

In deciding to embark on a strategy of diversification via acquisition it is important that a company selects the route best suited to its existing asset base and special resources. In situations in which the company is able to export or import relevant functional skills or resources, related acquisition may prove most attractive. Alternatively, when a company has the ability to analyse the strategic and financial requirements of a wide range of businesses, to accommodate a lack of uniformity in organisational structure, or to transfer surplus financial and managerial resources between subsidiaries, then unrelated acquisitions may be attractive. However, whatever the strategy adopted, it is important that careful screening and analysis is carried out before the acquisition is finalised. Establishing formal acquisition guidelines can help ensure that adequate analysis is carried out.

It has already been pointed out that an acquisitive strategy often requires swift action on the part of a prospective acquirer. Formal acquisition guidelines can help companies prepare themselves for swift action in a variety of ways. Firstly, working through a formal process

without tight time constraints tends to reinforce a broad understanding among executives of the objectives of the company. Secondly, the generation of guidelines tends to produce widely shared views on company strengths and weaknesses, special needs and factors important to future profitability and corporate development. Thirdly, the formal system tends to develop a common language or set of concepts relevant to the acquisition decision. This is of benefit in that it helps ensure that a standard logic is applied during the quick decisions often necessary when acquisition opportunities arise.

In concluding the discussion of acquisitions, it is useful to note Salter and Weinhold's comments on availability of acquisition candidates. They point out that in capital markets, exchanges of corporate securities result in companies changing ownership every day. Consequently, most companies, especially those which are publicly owned, are available at a price. The important issue is therefore not availability of attractive candidates, but whether the potential value created for the acquirer's shareholders is sufficient to justify the purchase price.

2.3.2 LICENSING.

Acquiring technology through licensing represents an alternative to acquiring a complete company. Killing¹³ discusses licensing as a vehicle for product diversification, pointing out that many firms in Canada and the U.K. are exploiting this route. They believe this to be less risky than the traditional alternatives of acquisition or internal development. It avoids the risks of product development by exploiting the experience of firms who have already developed and marketed the product. Typical license agreements provide the licensee with full technical information and patent rights in return for a royalty directly related to sales. This reduces the financial exposure of the licensee since he does not experience royalty costs until the product is actually being sold.

Two types of license agreement are discussed: the first is the "current technology" agreement in which the licensor transfers only technical information and patents which exist at the date of the

license. The alternative is the "current and future" agreement in which the licensor undertakes to transfer not only the current information and patents, but also all future developments relating to the product. This greatly reduces the burden of development work on the licensee, who would otherwise have to perform in-house development work in order to remain competitive with other firms introducing technological advances. Whatever the type of agreement undertaken, a license program is not a substitute for in-house research and development competence. Indeed Killing mentions one licensee who had to increase his technical competence in order to enter license agreements. In a current technology agreement, technical capability is required in order to carry out development necessary to remain competitive. In a current and future agreement, technical capability is needed in order to communicate effectively with the licensor.

Killing concludes that for diversification into areas related to those existing in the firm, licensing may yield benefits. However, for diversification into unrelated areas, licensing can become a trap, enticing a firm to produce a product which it does not have, and cannot develop, the skills to produce. Similarly, long-term dependence on a licensor may lead to a lack of planning ability and the success of the product may be dependent upon the licensor.

Several potential benefits of licensing in related diversification may be identified. Since the area of the new business is closely related to the firm's base business, judgment on the new technology and the new market are generally sound. Taking a license may save time and reduce risk, without imposing any significant penalties on the licensee. The taking of a license to introduce a related product may also lead to the development of in-house skills by the licensee in a new technical area. However, this process takes considerable time and still requires effort and planning by the licensee.

2.3.3 INTERNAL VENTURES AND VENTURE SPIN-OFF.

The venture category involving the highest level of corporate involvement is the internal venture. In this strategy, a firm attempts to enter different markets or develop substantially different products

from those of its base business by setting up a separate entity within the existing corporate body. This separate entity may be a new group or even an entirely separate division. Overall, the strategy has had a mixed record, but some companies such as 3M have exploited it with considerable success. Since the strategy is based on the resources that already exist within the company, the present R&D facilities may be expected to represent a source of new business ideas. One output of R&D efforts may be ideas or technology unappealing to the main organisation. In this instance the originating organisation undertaking internal venturing may then spin-off the new business as a separate corporation in an effort to gain market and operational experience in the new field. Roberts²³ mentions that this venture spin-off strategy may be a good way to retain an internal entrepreneur or exploit a by-product technology but the limited involvement that it allows still offers only limited rewards to the parent organisation.

Roberts has studied the performance of large corporations in internal venturing and found that key people in internal ventures had very similar characteristics to those of his earlier studies of new company entrepreneurs. In addition, the patterns of the more successful technical ventures inside large corporations are similar to the patterns of growth and success in independent small ventures. He indicates that a large corporation might usefully explore the notion of deliberately "diseconomising" scale in an effort to appear small. In this way they could exploit the small entrepreneurial group characteristics of drive, speed of response, adaptability and such like. Large firms indulging in diversification should attempt to emulate these kinds of characteristics and structures.

Large company biases against young people tend to prevent resources being easily available to young entrepreneurs. In addition, the existence of a senior venture sponsor within the large organisation is often an important factor in venture success. He helps negotiate the political boundaries within the firm. Above all, success of an internal venture depends on rapid movement of new technology--a fact also true for smaller firms.

Roberts has identified key obstacles within large firms that can hinder or stifle internal entrepreneurship. Firstly, the high level

management in the company are undoubtedly best equipped for decision making so long as the decisions relate to the base business of the company. However, decisions on diversification that are based on experience with old product lines and old markets may be totally inappropriate for a new high technology field. These decisions may be better delegated to newer, younger people who are more familiar with the new technology.

A second obstacle results from the pressure for rapid profit generation rather than long term returns. Biggadike¹⁸ has shown that on average it takes eight years before new ventures become profitable and ten to twelve years before they reach performance equivalent to that of a mature business. While most managers do not expect immediate profits, few accept several years of losses. Consequently, any corporate venture which promises losses for a period longer than the job horizon of most managers seems unlikely to survive.

The traditional organisational cultures of large firms form a third obstacle to effective venturing. These traditions tend to discourage informal structures incorporating finance, R&D, manufacturing and marketing. In practice these functions are usually formally segregated and this is highly incompatible with new business formation.

Finally, inappropriate reward systems can extinguish internal entrepreneurship. Risk-taking is often discouraged and this may tend to stimulate restatement of old instead of an injection of new concepts and directions.

Buddenhagen¹⁹ evaluated the success of internal entrepreneurship as a strategy for new product development within one division of a large electronics corporation. He found that the most important determinant of success in the sixteen internal ventures of his study was the character of the venture's product and its relationship to the company's primary commercial effort. Ventures targeted at products with a commercial orientation and associated with an existing major product area were most successful. This was attributed to the superior quantity and quality of resources allocated to the venture. Other important factors influencing venture success were previous administrative experience on the part of the venture manager, the newness of the technology, the level of superior support and understanding and the level of corporate sponsorship for the

venture. Finally, those ventures in which the managers had a high degree of latitude for independent action and the marketing staff had a high technical capability also tended to be more successful.

Zaic²⁰ further explored factors contributing to success and failure of ventures within one company. He believed that marketing was the single most important factor determining new venture success. In particular, the main aspects were the recognition that marketing was important (evidenced by a thorough marketing plan). A second significant factor was managerial environment, which needs to be evaluated carefully when considering venture management. In addition, innovation through internal venturing must have a continuity of support from all levels in the organisation, starting with top management, and the venture should be given enough latitude for independent action. Zaic's final conclusions relate to finance. He believes that venturing should not be attempted by survival-oriented companies. The company should be financially secure before undertaking any venturing.

Some pitfalls of corporate venturing have been noted by Fast²¹. He indicates that, in general, internal venturing has been unsuccessful (with the exception of 3M and some others) and suggests that major corporations can learn more details of the venture development process by studying venture capitalists. He cited, as examples, 3M and Corning who have invested as limited partners in venture capital partnerships. This involvement in business development financing can keep the company in touch with new technologies and emerging industries as well as providing the guidance and understanding of the venture development process necessary for more effective internal corporate venturing.

Biggadike¹⁸ believes that it is critical to financial success that new ventures target at large scale entry. His research indicates that the way to improve odds and build a corporate product portfolio is to commit substantial resources to each venture and to defer immediate financial performance in favour of market position. Launching new businesses takes large scale entry and continual commitment; it is not an activity for impatient or risk-averse companies.

Weiss⁴⁰ builds on Biggadike's work by comparing the performance of internal corporate ventures with comparable businesses started by individuals. He found that the new independent businesses reached

profitability in half the time of corporate ventures--approximately four years versus eight years. Weiss attributes this difference partly to the market share targets of corporate ventures criticised by Biggadike. He believes that new independent businesses set more ambitious targets in order to acquire initial start-up capital and to later generate additional capital from within the firm. Other factors contributing to the higher performance are: better initial strategy, better corrective actions and more effective weeding out. Poor performing corporate ventures may receive continued support in circumstances in which comparable independent ventures would die.

Corporate start-ups targeted at new markets are equivalent to new business start-ups and should be treated from the outset as stand-alone businesses. Weiss also believes that the financial performance objectives of new ventures should be set at a significantly higher level than typically achieved in the base business and greater emphasis should be placed on ends than on means. He finally concludes that by adopting the correct approach, large corporations should be able to achieve performance equivalent to that of the best independent start-ups.

2.3.4 JOINT VENTURES.

Despite the great potential for conflict, many companies successfully diversify and grow via joint ventures. Killing¹⁶ points out that as projects get larger, technology more expensive and the costs of failure too large to be borne alone, joint venturing becomes increasingly important. In addition, for companies exploiting international market development, joint venturing may be unavoidable, since some governments insist on domestic partners rather than corporate subsidiaries.

Killing identifies one basic problem in managing joint ventures: the presence of more than one parent. Disagreement can develop on a wide range of topics such as venture growth rate, products and markets. In order to minimise these frictions it is important to select the management structure most appropriate to the venture and two types of venture are identified: dominant parent ventures and shared management ventures. In the former category, one parent manages the venture like a

wholly owned subsidiary, and in the latter both partners manage the enterprise. Failure rates indicate that shared management ventures are significantly more difficult to operate but there are conditions in which this is the preferred structure. Some guidelines on the selection of the appropriate structure are:

- If one parent's operational skills are unnecessary to the success of a joint venture, the other parent should oversee the venture.
- If both parent's skills are necessary to the success of a joint venture, but those of one parent can readily be transferred on a one-time basis, the other parent should dominate the venture.
- If the skills of both parents are critical to the success of the venture, a shared management joint venture is appropriate.

Killing also stresses that the degree of each partner's reliance on the other's skills can change dramatically over time. Consequently, as circumstances change, parents should be willing to modify a venture.

New product joint ventures are discussed by Hlavacek et al.¹⁷ and are considered to be of particular importance. These new product joint ventures refer to situations in which large and small companies join forces to create a new entry in the marketplace. Primarily the small company provides the technology, the large company provides marketing capability and the venture is synergistic for both parties.

Roberts²² also stresses the potential of this form of joint venture. Many studies on the innovation process have shown that small companies and individual inventors are more effective at innovating. If this innovative ability and entrepreneurial drive are combined with capital availability, marketing strength and distribution channels of a large company, the result can be a very powerful team.

Although this venture approach is certainly appealing, it also has potential problems. Two of these difficulties are stressed by Roberts; the first is misreading the appropriateness of the large firm's marketing and distribution channels. Roberts gives as an example the joint venture

between Johnson and Johnson and the Damon Corporation to market clinical laboratory equipment. This venture failed because although Johnson and Johnson had extensive marketing and distribution channels within hospitals, these were dedicated to disposable medical products and not medical equipment. The second potential difficulty is attributable to the "impedance mismatch" that may exist between large and small companies which tend to operate and respond at very different rates. This difference in organisational "pulse rates" can generate strain in a joint venture relationship.

However, despite these potential difficulties, Roberts believes that the promise of these new product joint ventures remains high. Of all venture categories they offer the highest promise of quick market impact and profitability since they are exploiting existing competitive strengths.

2.3.5 VENTURE CAPITAL AND NURTURING.

The venture strategy identified by Roberts which has the lowest level of corporate involvement is that associated with external venture capital investment. Major corporations have exploited this approach in order to participate in the growth and development of small companies as investors, participants or even acquirers. Roberts points out that this approach was popular in the mid to late 1960s with many large corporations such as Du Pont, Exxon, Ford, General Electric and Singer. Their motivation was the opportunity to secure entry into new technologies by taking minority investments in young and growing high technology enterprises. However, few companies have been able to make this approach by itself an important stimulus of corporate growth or profitability.

In situations where the investing company provides managerial assistance to the recipient of the venture capital, the strategy is classed as venture nurturing rather than pure venture capital. Although this seems perhaps a more sensible approach to diversification than a simple provision of funds, results indicate that it is still unlikely to have a major impact on investor's sales or profits.

Aguren¹⁵ studied the larger non-financial corporation as a venture capital source. He found that the two most important motives for corporate investment in small companies were the quest for new, expanding technologies and for talented technical people. Other motives were an urge for opportunistic profits, the need for ventures of high potential in order to sustain corporate growth, surplus cash needing investment and conversion from defense to commercial business.

The potential advantages to the entrepreneur of being financed partly by a large corporation are the resources for management assistance often available and the commitment of the latter firm toward continued financing of the venture through rough periods or for further expansion. Disadvantages are the odds against any future public issue, the possible loss of controlling interest and the possible burden of too much management assistance from the investing organisation.

Studies carried out by Greenthal and Larson⁵¹ indicate that venture capital investments can indeed provide satisfactory and perhaps highly attractive returns, if they are properly managed. Such investments can also provide access to new technologies, as pointed out by Aguren¹⁵. However, they also agree with Roberts' belief²² that venture capital is unlikely by itself to succeed in generating major acquisitions or contribute significantly to overall corporate growth.

Rind⁵² also discusses the role venture capital in corporate development, distinguishing between direct venture investments and investment into pooled funds of venture capital partnerships. He points out that although direct venture investments can be carried out from within a corporation by appropriate planning and organisation, difficulties are often encountered. These are frequently attributable to a lack of appropriately skilled people, contradictory rationales between the investee company and parent, legal problems, and an inadequate time horizon. In contrast, an investment in a partnership may have several advantages. It provides an opportunity to attract good people, problem investments become less visible, management time is conserved, a long-term commitment is assured and many legal liabilities are eliminated. However, if the investor's motives are other than simply maximising return, it may be important to select a partnership concentrating investments in areas of interest.

Rind concludes that venture capital is indeed a useful tool for corporate development. It is difficult but possible to do internally, and an outside partnership investment can be either an alternative first step or a beneficial supplement to a direct corporate venture capital program.

2.3.6 VENTURE MERGING AND MELDING.

The final category of venture strategy identified by Roberts is that of Merging and Melding. As the title implies, this does not represent a single strategy but rather an integrated approach encompassing all other technologically oriented venture strategies.

Roberts cites the example of Exxon as a company which has adopted such an approach. Exxon Enterprises has exploited in house R&D, external venture capital, technology acquisition, joint ventures with small firms and internal venturing, all integrated under planning and policy guidelines. This is targeted at creating a critical mass of marketing and technological strengths in selected areas of business activity. It had enabled Exxon to transform itself from a massive single product oil company toward a diversified operation, expanding into computers, communications, advanced composite materials and alternative energy devices¹⁴, but without yet achieving success.

2.4 ORGANISATION AND CONTROL IN NEW BUSINESS DEVELOPMENT.

Expanding a business from a single activity or concentration on a single market to a diversified enterprise engaged in multiple activities and markets creates many kinds of tasks for the company's management. At a fundamental level is the overall task of responding to the expansion. The necessity may arise for shifting from direct control of the enterprise to indirect, decentralised management. To the elements of expansion and decentralisation may be added the factor of unfamiliarity as new and different types of business activity are undertaken. In a program of vigorous diversification, these tasks arise within a short period of time and the organisation may be stressed by the climate of sudden change.

The issues of organisation and control are not only limited to factors attributable to expansion and decentralisation. It is also necessary to consider the processes of idea generation and new product development that form the base from which internally developed new businesses grow. If sustained growth from internal resources is a corporate goal, then structures and systems must be introduced which are receptive to new ideas and foster new business development. This section therefore addresses not only the topics of organisation and control of new business ventures once acquired or grown, but also the issues of identifying and nurturing new business possibilities.

Miller²⁴ makes some general comments on the organisation of diversified companies. He believes that the entire problem of establishing effective relationships among business units in a diversified company depends on an ability to discern their essential similarities and differences. He makes the following observation:

- The nature of the work at the operating level determines the organisational balance and control procedures that are established to direct the work.
- The organisation balance and control procedures tend to breed certain implicit standards of business judgment that prove effective in dealing with problems in the industry.

- A diversification program frequently calls upon such judgment to be applied to problems outside the framework in which they were developed.

Although Miller's broad beliefs may be correct, it is important to look deeper at the factors peculiar to individual strategies. These will now be discussed in more detail.

2.4.1 INTEGRATION AND CONTROL OF ACQUISITIONS.

Acquisition frequently results in involvements with new technology, unexpected business situations, and ambiguous supervisory relations which are not found in the slower process of change from known to unknown associated with internal development. Hence, a diversifying company cannot normally step in immediately after acquisition to manage a business it knows nothing about. It must set up a communication system that will permit it to understand the new business gradually.

Miller²⁴ believes that there is a tendency to misjudge the requirements of new acquisitions. He suggests this is due to the scattering of management effort that normally occurs in an acquisition program, an underestimation of the financial support required, and an incompatibility between appropriate managerial judgment for the parent relative to that required for the new subsidiary. The major difficulty is that the acquisition process involves the diversifying company in important guidance problems before it is properly oriented towards the new business.

The factors which contribute to this premature involvement include the following:

- The process of encountering an acquisition partner depends largely upon chance. Although planning can influence contacts and evaluate candidates, final selection must remain a corporate responsibility.

- Finalising an acquisition agreement and committing capital to the venture changes its status, leaving it open to new product policies, expansion and management reorganisation. The diversifying company cannot escape responsibility for supervision of these changes.
- The base business of the diversifying company tends to create certain implicit management assumptions which may not be applicable to the new business. The process of clarifying these assumptions and understanding the standards required by the new business takes time and effort.

A company diversifying through acquisition must establish management and control procedures which will promote the orientation process. Some possibilities are:

- Budget controls and reports that will provide relevant information and clarify mutual responsibilities.
- Reorganisation to bring together related functions and separate unrelated functions, in order to reinforce the market contacts and work objectives of the new venture.

It must be pointed out that although potential difficulties exist in every acquisition, they are most severe during the first such venture by any company. However, Miller indicates that once a diversifying company has made one acquisition, it has established the basis to make several more. As a result, all companies in Miller's study had made more than one acquisition, and there was a tendency towards an increasing tempo of acquisition after the first move.

2.4.2 INTERNAL DEVELOPMENT.

Diversification through internal development attempts to establish viable new products with maximum effective use of existing facilities and organisation resources. There are two basic means of achieving this;

through common use of existing resources or through the application of existing technology to penetrate a new field.

The potential for common use depends on the adaptability of the established facilities and organisation. Adaptability of the existing organisation and work procedures can be a serious problem if mismatches exist between those appropriate for the base business, and those necessary for the new business. Two important examples are:

- Speed of response in established control procedures incompatible with needs of the new venture (too slow).
- Established quality control standards may interfere with the standards needed for the new venture.²⁴

These problems can be particularly severe when diversification involves a marked change in markets as in the case, for example, of a shift from defense to commercial fields. Andrews⁴⁵ emphasises this point. He suggests that in order to overcome such difficulties, government contractor companies who wish to diversify into commercial markets by internal development should set up a completely separate commercial group.

Penetration of new markets with existing technology depends on the adaptability of the technology as well as a certain amount of luck and imagination in applying it to new fields. Miller²⁴ identifies two important factors:

- In order to maximise the chance of breakthrough, the technology must be relatively advanced or relatively new.
- Entry into new fields requires considerably more support than the mere exploitation of technical advantage at one point in the design or production.

Success finally may not occur until the technology has been adapted, new facilities have been established, or familiarity with new markets has developed. This last factor is very important. Andrews⁴⁵ found that

consideration of market factors was a strong predictor of success in his studies of commercial diversification.

Organisational Structure and Innovation.

All internal development ventures exploit some new business possibility normally identified within the organisation. An important issue when discussing internal development is therefore the impact of organisational design on new product innovation. Kolodny²⁵ discusses this issue, citing in particular the work of Davis and Lawrence²⁶ and Jermakowicz²⁷ which points to a high correlation between matrix organisation designs and very high rates of new product innovation. He indicates that almost all organisational arrangements may be reduced to three basic forms: functional, product/area and matrix.

Marquis²⁸ found the functional form generated highest technical performance--a surprising result in view of the fact that it had previously been assumed that it was the project structure which should lead to technical excellence. In addition, the functional form also offers efficiency and scale economies. Project organisation offers high marketplace responsiveness and excellent coordinating characteristics. Matrix organisation designs allow project or product or business area units to gain the economies of scale or rationalization of the functional side of the organisation while still maintaining the autonomy, organic characteristics and coordinating capacity to manage innovative activities successfully within the boundaries of the larger organisation. Jermakowicz²⁷ found that of these three forms, matrix was most effective at ensuring the implementation or introduction of new products into the organisation while project organisation yielded the most creative solutions.

Jervis³⁸ examined the earlier SAPPHO studies³⁹ and suggests an important reason for the apparent high correlation between matrix organisation and new product innovation. He believes that the technology fundamental to a venture is transferred to the venture team by the most effective method--the movement of people from the source of the technology (the functional organisation) to the team. The dual reporting aspects of the matrix organisation ensures that the coupling between the

venture team and the functions remains tight, but the venture manager still has freedom to interact with future users and markets. The SAPPHO studies found these interactions to be crucial to venture success.

Kolodny²⁵ believes that one key benefit of matrix organisation is that it creates many mini-general managers who have total responsibility for their task. Each is responsible for an entire business area and represents a kind of entrepreneur operating within the boundaries of the larger organisation. Although project organisation also provides such roles, matrix structures tend to exaggerate competitive aspects by forcing the matrix managers into the political role of negotiating for resources with the functional managers. A second benefit of matrix stems from a team's ability to maintain autonomy and small size while still retaining access to the efficient functional resources of the organisation.

This ability to maintain autonomy is essential in any attempts to nurture entrepreneurship as a vehicle for internal development. This vehicle can offer great benefits and Roberts has published extensively on the topic^{29, 30, 31}. Souder³² identified six conditions which correlate with entrepreneurship and the success of new product development efforts. These six were:

- Early identification of potential entrepreneurs.
- The entrepreneur's formal license, giving a clear mandate to carry out the function.
- The informal influence of the entrepreneur, which forms his real source of power.
- The sponsorship provided for the entrepreneur by someone higher in the organisation to champion their ideas and actions.
- The organisational location of the entrepreneur's project, which should be such that the project's scope and goals may be enclosed within the license and mandate of that organisational level.

- The discretionary powers given to the entrepreneur.

Although the study of 100 new product developments conducted by Souder does not permit a priority rank to be imposed upon these six factors, it does indicate that satisfaction of these conditions is strongly correlated with project success.

In this section on organisational structure and innovation, a variety of work has been cited which stresses the potential advantages of matrix structures. Although these may all be valid, the matrix structure also has some potential drawbacks. Allen⁴¹ indicates that an individual attempting to drive a project organised in this fashion may face serious problems in coordinating and managing all of the subsystem interfaces. This is due to the fact that those responsible for each subsystem have split loyalty; they are responsible to both the project manager and their departmental or functional manager.

Brown and Agnew⁵⁰ expand on this concept of split loyalty, proposing some factors which determine the balance of power in a matrix organisation. They argue that:

- A balance will occur where goals are clearly specified and the technology is well understood.
- Project managers will dominate where goals are clearly specified but the technology is poorly understood.
- Functional managers will dominate where goals are vague but the technology is well understood.
- Neither group will dominate and conflict will be greater where goals are vague and the technology is poorly understood.

Recent research by Katz and Allen⁵⁴ explored the influence of this power balance over project performance in R&D matrix organisations. They found that higher performance was obtained when influence over salaries and promotions was perceived as balanced between project and functional managers. Performance was found to be highest when organisational

influence was centred in the project manager and influence over technical details of the work centred in the functional manager.

New Venture Groups

The internal development mechanisms discussed so far have not necessarily involved any major organisational modifications. However, Fast³³ points out that during the prolific diversification activity of the 1960s, an organisation innovation--the new venture group--gained widespread popularity. These groups were established in order to separate new business development from established business activities. Numerous arguments support this separation and they point to the need for:

- A "greenhouse" to nurture new business development by providing a special climate and culture supportive of entrepreneurship.
- An environment free from red tape and one which provides short lines of authority allowing quick response time, flexibility and decision-making in situations of high uncertainty.
- A centre of responsibility for new business development to ensure that it receives sufficient attention and resources.
- Insulation of new ventures from the dominant values and culture of a parent company which may stifle the development of new ideas.

Fast indicates that despite the fact that the above advantages are seldom questioned, the record of success for venture groups is very poor. The two reasons for this are called "strategic reversal" and the "emergence trap."

In discussing "strategic reversal," it is necessary to note the main driving forces normally behind the formation of a new venture development. These are:

- A corporate strategy emphasising diversification.

- A financial position characterised by an investment gap (a cash flow which exceeds the existing suitable investment opportunities).
- An unfavourable outlook in the company's base business.
- A top management sponsor of the venturing concept--usually an entrepreneur or risk-taker.

When these come together, a venture group is often established and when they disappear, the group is often disbanded. Now Biggdike has shown¹⁸ that it can take eight years for a venture to become profitable, and yet within that time period major switches in corporate strategy may take place. The main problem stems from the fact that the venture group's mission is a long term one, whereas the strategic situation which justifies the existence of the department is rarely static.

The "emergence trap" refers to the internal political problems that may be encountered by a successful venture group. If a venture group generates successful new business, it may stimulate jealousy, resentment and attempts by established power centres to undermine the group. This response may be attributed to three major factors. Firstly, the group represents competition for scarce resources. Secondly, it often enjoys favouritism of top management. Thirdly, as the group grows it may develop its own support resources, thereby encroaching upon the territory of other functional departments within the parent organisation.

Fast suggests that there are three important considerations relevant to the success of a new venture department no matter whether it adopts an approach based on short term, low risk, imitative ventures or long term, high risk, innovative ventures. These success factors are:

- The group should be self financing as far as possible.
- The group should have balanced top management support. A sponsor sensitive to the political climate is required.

- The venture group charter should be reviewed as the company's strategic position changes.

The key to making a new venture department successful lies in managing its evolution³⁴.

2.4.3 EXAMPLES OF SYSTEMS FOR INTERNAL DEVELOPMENT.

So far in this discussion of organisation and control in new business development, hypotheses have been presented and results of studies have been outlined. This section now concentrates on systems actually established by two companies in an effort to promote growth from internal development. The two companies, Minnesota Mining and Manufacturing Company (3M) and Texas Instruments have adopted markedly different approaches. (A third company, Du Pont, has also employed a similar system to that used by 3M³⁵.)

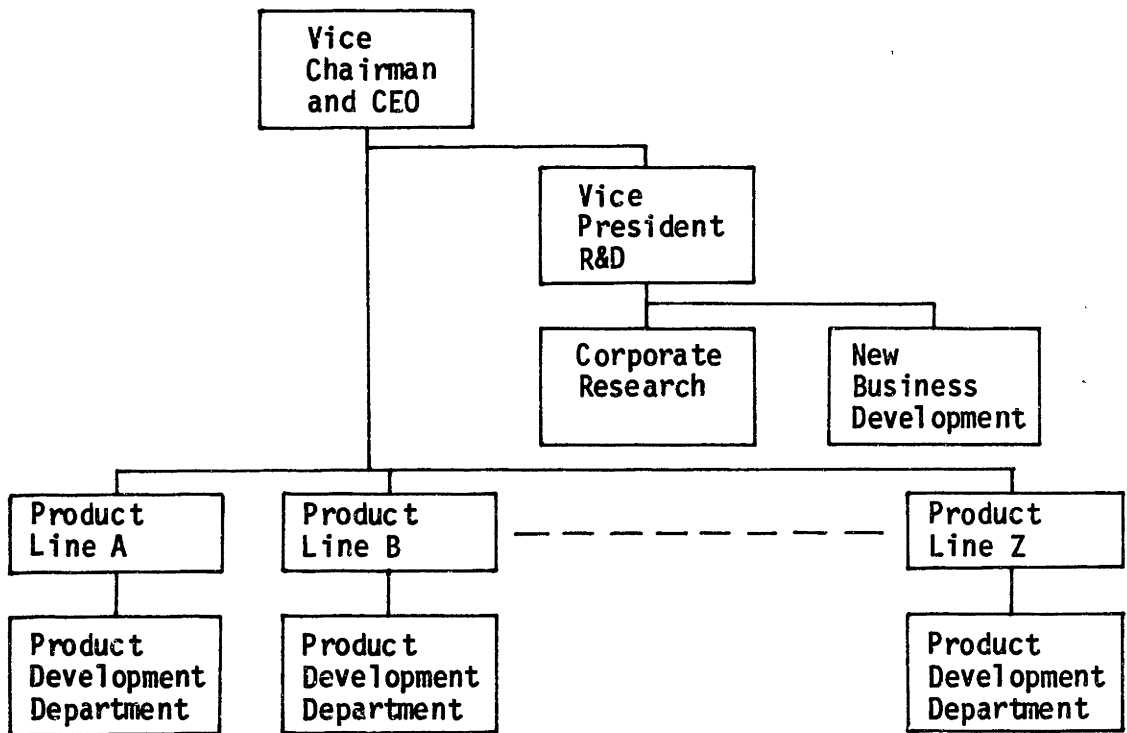
The 3M System.

3M has based its growth on internal development, and Roberts²² has described the system which has allowed them to achieve a long term ROI growth rate of 16% compounded annually. Their organisational structure is illustrated in EXHIBIT 7. The New Business Development Division fulfils a quite different role from bodies with equivalent titles in other organisations. It is responsible for evolving, nurturing and maintaining diverse business activities at various stages of development. It is an internal venture nurturing organisation, and when the ventures reach adequate size, they are set up as part of an existing division or as a new division.

In addition to the new business division, the product development departments of each established division are tasked not only with supporting the work of their own division, but also with unconstrained new venture development. They may even undertake ventures that will compete with the products of other divisions, the philosophy being that this environment of internal competition keeps all participants in fighting trim.

EXHIBIT 7

3M Structure for New Ventures



Source: (22)

The climate is highly favourable to entrepreneurial activity and there are multiple sources of venture capital available to fund new ventures. Each product line department can support any suitable venture from within its own division, no matter what the target market may be. In addition, corporate groups may fund any venture regardless of origin so that any venture proposal may seek funding from more than one source.

Ventures are staffed with entrepreneurial product teams called business development units. These teams are built by internal recruitment of volunteers rather than assigning staff and are composed of people from technical areas, accounting, manufacturing and finance. 3M believes that commitment is increased by relying on internal recruitment rather than assignment.

Performance measures for a venture at 3M are typical--ROI, profit margin, and sales growth rate. However, they do not require that sales volume estimates exceed prespecified minima before the new product has entered the market.

Rewards for the venture teams are linked to sales growth and come in the form of changes in employment status and compensation category. Special incentives are also provided for managers who are able to "breed" new ventures or departments.

In concluding this brief description of the 3M system it is interesting to note the special "eleventh commandment" that is relevant to 3M--"Thou shalt not kill a new product idea." Throughout the organisation, management provides active encouragement of new venture generation.

The Texas Instruments System.

During the 1950s and 1960s, Texas Instruments sales grew at an average compound rate of 25% per year, and over the same period, the corresponding profit growth rate was 24%. Internal development formed virtually the sole basis for this growth, which continued throughout the 1970s. Vancil³⁶ discusses the systems that were developed within T.I. to assist in achieving a sustained rate of internally generated growth.

The organisational structure at T.I. combines a traditional product-line hierarchy with an array of management systems known as

"OST"--"Objectives, Strategies and Tactics." The product line hierarchy is based on four major groups which are composed of in excess of thirty operating divisions. Each of these divisions is in turn composed of Product Customer Centres (PCC's) and there are of the order of eighty of these units. These are roughly equivalent to the product departments of conventional product-line structured firms, but many have their own engineering, manufacturing and marketing capability. T.I. believes that these PCC's have done much to encourage a spirit of customer responsiveness and innovation in management and to develop entrepreneurial managers.

Overlaid on this conventional structure is the OST system, which amounts to a statement of goals and the plans for achieving these goals at the appropriate level in the organisation. EXHIBIT 8 presents the OST hierarchy of goals. At the lowest level in this hierarchy are specific R&D projects called Tactical Action Programs (TAP's), each run by a TAP manager. Related TAP's are grouped into Strategies managed by Strategy managers. In turn, related Strategies are grouped to form Objectives, each headed by an Objective Manager. In 1978, for example, OST consisted of 250 TAP's, 60 Strategies and 12 Objectives.

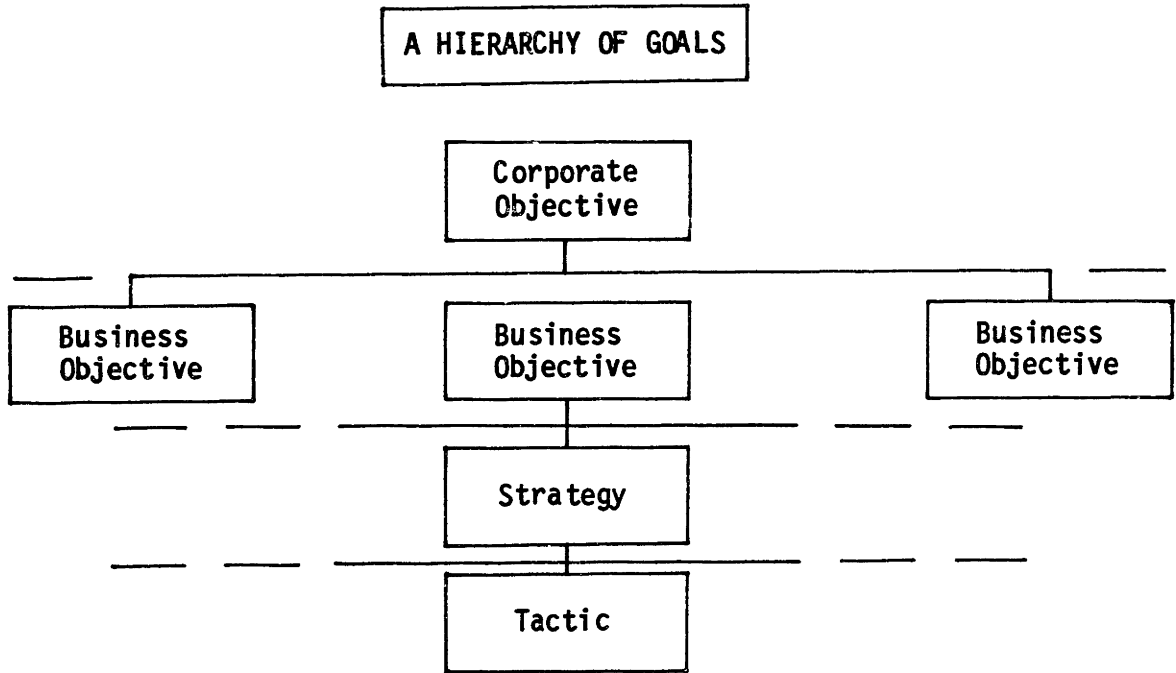
OST is connected to the product line hierarchy in two ways. Firstly, most managers fulfill a dual function. Many TAP managers are also PCC managers and most Strategy managers are also division heads. It is believed that this assists in moving products from R&D into production. Secondly, OST permits a TAP to be formed from resources in any PCC's, thereby giving considerable flexibility and speed for entering new businesses.

In addition to this dual reporting structure, there is also a split in annual spending budget--an operating fund and an OST fund. The purpose of this split is to ensure that managers do not disregard long-range strategic programs in favour of short-range profits. Performance is assessed, not just on the basis of ability to produce results on current operations, but also on the basis of performance in long term programs.

Although this system appears to have been successful in promoting internal growth, it has tended to miss ideas generated by staff at lower levels in the corporation. In order to overcome this difficulty, T.I.

EXHIBIT 8

Texas Instruments "OST" Hierarchy



Source: (36)

created a mini-R&D program called IDEA. This enables employees with suggestions for new products or process developments to obtain grants from senior technical staff, without the need for the formal presentation and documentation procedures required for OST. Some major T.I. successes such as the "speak and spell" product grew from ventures funded by IDEA³⁷.

In concluding this section on examples of success, the comments of Roberts²² are particularly important. No single strategy works for all. What works for 3M or T.I. will not necessarily work for every company and it may be dangerous to mimic the success of others. It is up to the management of a company to establish a system tailored to its own particular characteristics and needs.

CHAPTER III

RESEARCH FOCUS

3.1 INTRODUCTION.

The research which forms the basis of this thesis is an attempt to identify and understand factors that are important or critical in any company's attempts to undertake new business development. Emphasis is particularly placed on new business development for diversification.

At the corporate level, some of the basic questions which the thesis attempts to address are:

- How should a medium/large company stimulate and maintain the innovative process in order to develop new business and promote growth?
- What organisational structure should such a company adopt to best accommodate new business, whether this results from acquisition or internal development?

Questions applicable at the level of individual new business development episodes are:

- Which critical variables differentiate successful from unsuccessful new business development?
- What is the nature of the impact of these critical variables on new business development success?

Episodes may consist of the acquisition of companies in related or unrelated areas of business, internal new business development, joint

ventures with other companies or venture capital minority investments in growing companies. The study attempts to answer these latter questions in broad terms across all episode categories while also probing more deeply into individual categories to identify factors of significance peculiar to that category.

The final question of the study is:

- Does a multifaceted approach to new business development encompassing a range of both internal and external ventures offers real benefits over alternative strategies concentrating on, for example, internal development?

The method of research selected as most appropriate to the targets of the thesis was based on an in-depth study of a single company which had successfully diversified via a broad-based approach. This approach permits the relative performance of a range of strategies to be explored within a common corporate culture and under constant corporate goals. Alternative approaches based on comparative analyses across a sample of companies would have been less attractive in that variations in corporate cultures and goals could have clouded the issues which form the centre of attention of this thesis.

The criteria identified as important at the start of the search for a suitable candidate company are outlined below.

- The company should be technically oriented and have successfully diversified from a dominant base business.
- Major efforts at new business development should have been undertaken over the period 1970-1977. (This time limit is imposed so that relatively recent performance is studied while still ensuring that enough time has elapsed so that the performance outcome of particular episodes can be determined.)
- A broad range of business development approaches should have been attempted, including, if possible, internal development, joint ventures, venture capital investments, and acquisitions.

- Successful and unsuccessful examples should be available for each different approach to new business development.

- The company should fall in the medium/large category, representing current annual sales in the range \$200 million to \$1000 million.

The above list represents the major factors which influenced the search for a candidate. Other secondary factors were location (with corporate headquarters preferably in the Boston area) and some geographic spread of operations (across both the U.S. and the world).

A company which was receptive to the study and which satisfied all the above conditions was identified. Not only had the company achieved successful diversification but it had also maintained an outstanding performance and growth record for more than a decade.

3.2 THE COMPANY UNDER STUDY.

3.2.1 HISTORICAL BACKGROUND.

The company which forms the centre of this research work was founded in the late 1940s as a university spin-off. Its business originally concentrated on providing scientific and technical services to government agencies and during the 1950s government bodies formed the prime source of revenue. However, during this period steps were taken towards diversification into commercial markets while also increasing the emphasis on the production of hardware rather than concentrating purely on the supply of services.

Throughout the early 1960s the government continued its heavy demand for services. The company went public during this period and was well received by the market with price to earnings ratios reaching 100. In the middle of the decade, major diversification started in order to broaden the range of the firm's business, which, at that time, was still relatively narrow. A vigorous acquisition program was undertaken and by the end of the decade over twenty technically oriented companies had been acquired. This more than doubled the areas of business in which the company was involved. In addition, financial performance remained impressive with returns on stockholder's equity of 15+ % and earnings per share growth rates of 15+ %.

In 1969, however, the company made a loss for the first and only time in its history. This was primarily due to large cost overruns on a fixed price government contract. One major impact of this slump was to encourage the acceptance of an effective planning and control system which was eventually introduced in the early 1970s.

Throughout the 1970s, the company continued its strategy of diversification through not only acquisition but also internal development. With the aid of the planning system the company made a strong recovery from the 1969 slump until today its performance is outstanding in maintaining above average results.

Current corporate strategy centres on base development plus planned and controlled diversification. There is no single predominant product line or service. Instead, business elements are configured so that

unforeseen difficulties encountered by any one element will not strain the resources of the corporation as a whole. The basic business strategy is to enter relatively specialised market areas in an attempt to be a market leader or a performance competitor--a position which is currently achieved in more than 80% of its business elements. Finally, business elements are afforded high latitude for independent action within their own market area in an attempt to cultivate a "small company" environment.

3.2.2 PERFORMANCE, AREAS OF BUSINESS AND ORGANISATION.

A consolidated summary of earnings is given in EXHIBIT 9 for the years since 1970. Sales and net income growth is illustrated in EXHIBIT 10. It can be seen that sales and net income growth are 21% and 27% respectively, compounded over the last five years. This performance exceeds the management target minimum growth goal of 20% and it may therefore be concluded that the planning system and diversification strategy have contributed to success. Government contracts, which originally formed the sole source of revenue, provided about half of revenues and 30% of earnings in 1982.

The company now operates in seventeen countries and its areas of business have traditionally been divided into five separate segments which will be identified in this thesis as segments 1 to 5.

Segment 1 produces state of the art instrumentation which addresses small but generally rapidly growing markets. Equipment for nuclear imaging and spectroscopy, laser instrumentation and systems for resource and energy exploration are typical of the products.

Segment 2 produces heat transfer/dissipation devices, mechanical seals and seal valves, and electro-optical devices for the generation, detection, imaging and measurement of light.

Segment 3 is involved in a wide range of service fields such as consultation on natural resources, water quality, automobile research and biomedical research.

EXHIBIT 9

CONSOLIDATED SUMMARY OF EARNINGS SINCE 1970

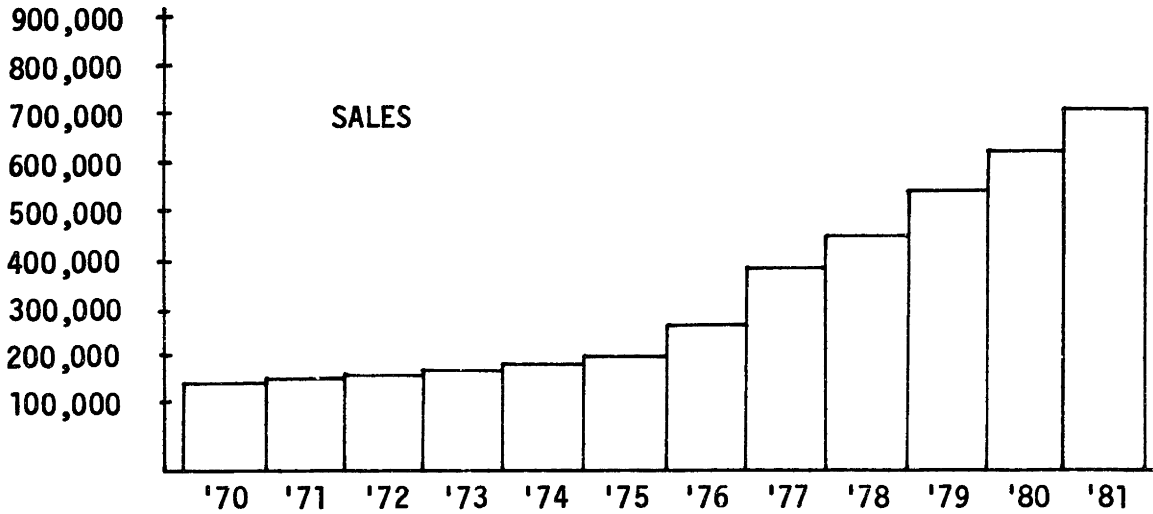
(\$000 OMITTED)

	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>	<u>1976</u>	<u>1975</u>	<u>1974</u>	<u>1973</u>	<u>1972</u>	<u>1971</u>	<u>1970</u>
NET SALES AND CONTRACT REVENUES	\$704,161	618,312	529,347	445,581	380,381	266,716	200,726	183,887	158,465	149,309	140,938	139,009
GROSS PROFIT	\$144,168	131,336	113,692	91,236	787,746	66,801	53,230	46,166	37,016	33,747	30,543	31,590
INCOME FROM OPERATIONS	\$56,623	49,999	39,311	30,347	25,759	21,310	16,046	14,525	10,178	9,105	7,700	7,145
NET INCOME	\$34,119	26,905	21,456	16,980	13,444	10,480	8,339	6,761	5,110	4,375	3,273	2,005

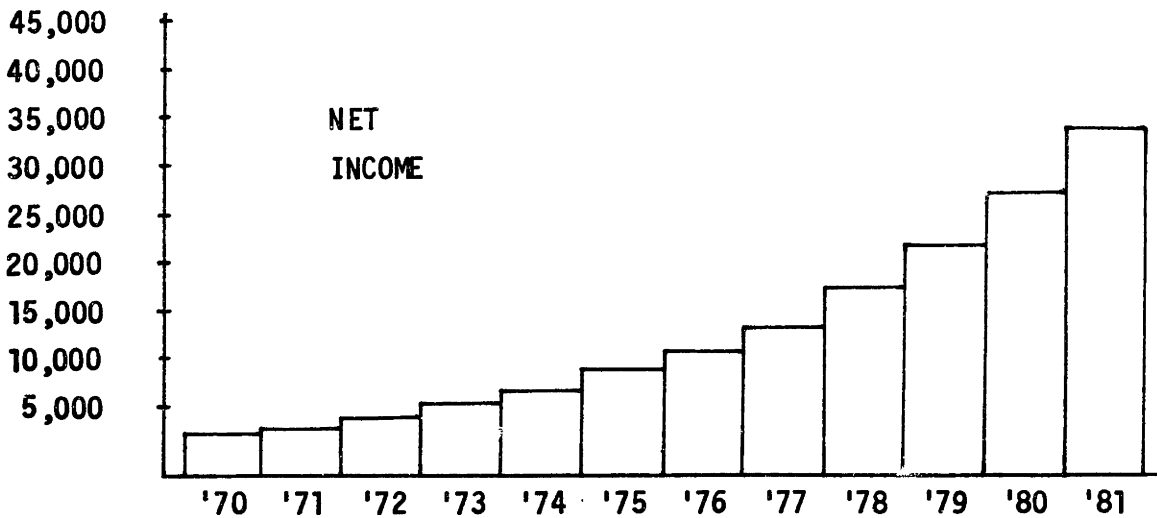
EXHIBIT 10

Sales and Net Income Growth

\$ (THOUSANDS)



\$ (THOUSANDS)



Segment 4 provides services to government agencies. In this case services are provided to foreign countries in addition to U.S. military and civil bodies.

Segment 5 continues in the original base field of business of the company. It is dedicated to service/support, with particular emphasis on energy related work of U.S. government agencies.

Other business interests also exist but are small relative to the activities included under segments 1 to 5. EXHIBIT 11 shows the breakdown of sales by category of business for the years since 1970.

Although these segments are important in describing the work of the company, they do not reflect any organisational features. The organisational structure incorporates in excess of 150 Business Elements which are combined to form 36 Divisions. These are in turn formed into 6 Groups which are directed from the corporate level. The company currently employs approximately 18,000 people.

3.2.3 THE PLANNING SYSTEM.

A large part of the company's success is attributed to the effective planning and control system introduced in the early 1970s. This planning process is divided into two major parts: the Five Year Plan and the Profit Plan. The Five Year Plan concentrates on strategy whereas the Profit Plan is financially oriented and covers a twelve month period.

The business element level represents the lowest level at which strategic planning is required. A business element is defined as a system which involves a single product line or a particular service capability being supplied to satisfy the needs of a single market.

At the level above the business element, the division, strategic planning is required for the division as a whole. In addition, divisional managers are required to participate in the development of strategies for the individual business elements under their control.

Divisions are combined into groups which are each the responsibility of a group executive. Management at this level is involved not only in

EXHIBIT 11

SALES FROM OPERATIONS BY INDUSTRY SEGMENTS

<u>SALES</u> (<u>\$000 OMITTED</u>)	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>	<u>1976</u>	<u>1975</u>	<u>1974</u>	<u>1973</u>	<u>1972</u>	<u>1971</u>	<u>1970</u>
SEGMENT 1	\$99,932	95,945	84,866	67,229	59,453	50,106	46,563	36,806	31,306	26,515	23,957	22,206
SEGMENT 2	\$204,103	202,009	172,131	135,208	105,595	82,002	47,412	44,721	35,860	28,416	23,971	25,069
SEGMENT 3	\$63,714	44,333	33,837	31,388	26,035	22,822	24,804	22,662	16,292	12,278	9,038	8,091
SEGMENT 4	\$111,314	68,982	55,443	39,978	29,952	24,498	24,572	27,514	27,538	32,284	30,849	26,991
SEGMENT 5	\$212,788	194,971	171,249	158,954	137,862	66,215	41,279	36,331	31,233	31,057	34,909	34,047
OTHER	\$12,310	12,072	11,821	12,824	21,484	21,073	16,096	15,853	16,236	18,759	18,214	22,605
TOTALS	\$704,161	618,312	529,387	445,581	380,381	266,716	200,726	183,887	158,465	149,309	140,938	139,009

strategic planning for a particular group, but also in assisting top management in evaluating strategic plans.

The major activities for the Five Year Plan and the Profit Plan take place at different times each year. The spring of each year is dedicated to the Five Year Plan. This process starts at the Chief Operating Officer's Office which activates the process by issuing guidelines to Group Management. These are then modified and fed to business elements via the divisions. The business element, division and group managers then produce their own detailed five year plans which are reviewed by the Business Development Committee composed of top level management. The final phase involves the review of the consolidated Corporate Plan by the Board of Directors.

The entire process is based on the use of standard documentation across the entire company. It involves a great deal of time and effort on the part of management but it is believed to be an extremely useful management aid. It forces attention to be diverted from operating problems toward longer term strategic issues and ensures that all organisational components operate with the same frame of reference.

The Profit Plan is prepared in the fourth quarter of each year and forms the basis for operations management and control of the business over the following twelve months. Business element managers, division managers and group vice presidents all prepare profit plans and these are again reviewed by senior line level executives. This is to assure that business strategy is coordinated with financial control.

The company believes that the planning system is effective in controlling and measuring base operations. It also provides a useful means of evaluating new business development.

3.3 THE METHODOLOGY OF THE STUDY.

The method of research was based on an in-depth examination of a range of new business development episodes initiated by the company during a period of stable corporate goals and corporate strategy. It was ascertained that these factors had remained unchanged over the period 1971 to 1977. In addition, a wide range of approaches to new business development had been undertaken during this period. Both these factors satisfied the goals of the research and it was therefore decided to concentrate the study on this time-frame.

The research technique adopted was based on the use of structured interviews and detailed questionnaires. These were designed around the analytical framework illustrated in EXHIBIT 12. A single questionnaire was developed to extract important information on the corporate goals and strategies that prevailed during the period 1971 to 1977 together with the corresponding sales and growth performance. Additional questionnaires were developed to examine in detail the characteristics and performance of individual new business development episodes. Since a variety of business development strategies had been undertaken, a separate questionnaire was generated for each of three categories of strategy. These were structured so that broad comparisons could be made across all episodes.

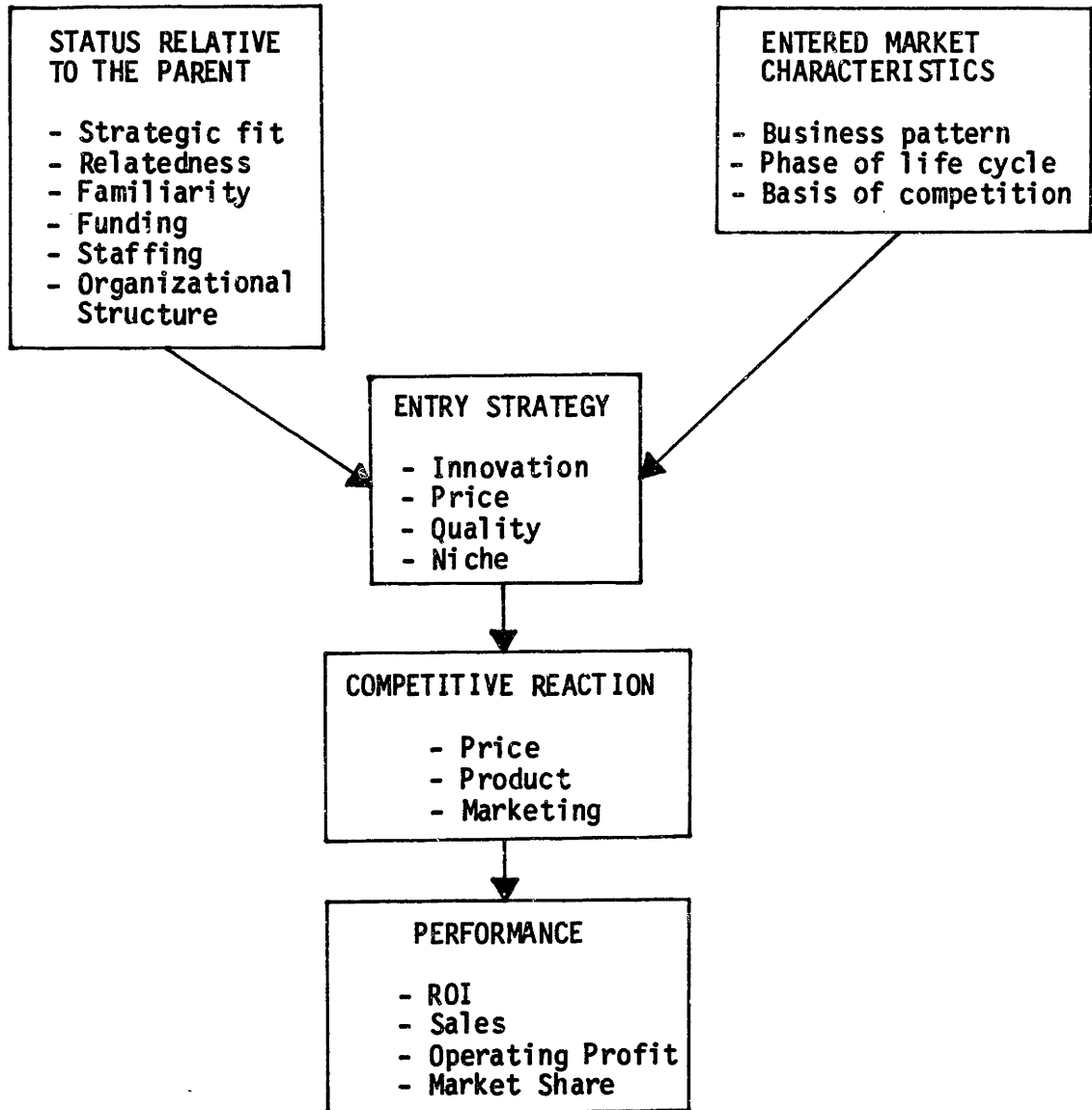
Back-up interviews were also used to probe more deeply into critical issues uncovered by the questionnaires, and to clarify any areas of ambiguity.

3.3.1 THE PROCESS OF SELECTION OF BUSINESS DEVELOPMENT EPISODES.

Once the company under study had indicated a willingness to cooperate on the research, the proposed goals of research and the methods of achieving these goals were then explained in more detail. When these were found to be satisfactory, it was agreed that a mutually acceptable data base consisted of 6 internal developments, 6 acquisitions and 2 minority investments. Within each category it was considered desirable to select episodes such that both successful and unsuccessful examples appeared in equal proportions. This mix was preferred so that episodes

EXHIBIT 12

ANALYTICAL FRAMEWORK FOR NEW BUSINESS DEVELOPMENT EPISODES



could be examined for key factors influencing success. In the case of minority investments of venture capital, no unsuccessful investment could be identified. A pair of episodes was therefore selected whose success could be characterised in markedly different fashions.

Joint ventures were not included in the analysis. Although the company had exploited this approach, they pointed out that it was not considered to be a prime option for new business development. Joint ventures tended to be undertaken when no alternative was possible. International market expansion into countries insisting on a domestic partner rather than a subsidiary was cited as a typical example. This is exactly the situation discussed by Killing¹⁶.

The final selection of episodes satisfying the criteria outlined above was carried out by the company under study. When these were found to be acceptable, the questionnaires were issued to members of staff within the corporate headquarters of the company who were considered especially familiar with individual episodes. Once the completed questionnaires had been studied, these staff members were then interviewed to provide further insight into the episode.

3.3.2 THE RANGE OF EPISODES STUDIED.

The range of episodes studied was composed of 6 internal developments, 6 acquisitions and 2 minority investments of venture capital. Within each category, episodes were selected so that a wide range of the company's areas of business was covered, including both the manufacturing of products and provision of services. The research questionnaires extract detailed features of each episode and broad descriptions will be given in the next chapter, which outlines the data. However, it is useful when discussing the framework of the research to describe the range of episodes studied.

The internal development episodes selected were divided evenly between product lines and services. Five of the company's business segments were represented in the sample. The product lines studied included sonar instruments, electro-optical components and electrical connectors. The service businesses were comprised of support of government work in energy related programs, educational services

sponsored by government and biological testing services for the commercial sector.

The acquisitions included five companies and one product line. Two of the acquired companies were service oriented, one undertaking support of government defence work and the other devoted to laboratory support of medical work. The outputs of the remaining acquired companies and product line addressed a wide variety of markets. One was a process company producing non-assembled product. Others produced electrical devices such as fans and motors, seismographic equipment and electronic measuring instruments.

Both minority investments were start up companies involved in high technology, high growth markets. One produced quality control inspection equipment for the semiconductor industry, and the other produced flexible computer information systems for hospitals.

3.3.3 STRUCTURED INTERVIEW AT THE CORPORATE LEVEL.

A single questionnaire was administered at the corporate level in order to obtain an overview of goals, strategies and performance during the period 1971 to 1977. The questionnaire used for this purpose is included as APPENDIX B.

The initial sections of this questionnaire were targeted at three broad areas: goals, strategy and organisational structure. In each of these areas, the situation that prevailed over the period 1971-1977 was determined together with the length of time that the situation had existed prior to 1971. Any changes that had taken place since 1977 were also requested, together with an explanation of the stimulus which provoked change.

The questionnaire then moved to the corporate attitudes towards the various strategies available for business development, namely acquisitions, internal development, joint ventures and minority investments. An assessment of the relative exploitation of these possibilities over the period 1971-1977 was obtained plus the numbers of divestitures and discontinued businesses. The relative contribution of the various strategies to total sales and growth was also determined.

The final section of the questionnaire concentrated on the identification and generation of new business possibilities. In particular, it extracted the corporate views on any formal systems and incentives that had been introduced in an attempt to stimulate innovation.

3.3.4 QUESTIONNAIRES FOR NEW BUSINESS DEVELOPMENT EPISODES.

Individual questionnaires were administered for each new business development episode studied. The separate questionnaires dedicated to each category of episode (internal new business development, acquisitions and minority investments) are given in APPENDICES C, D and E respectively.

Each questionnaire was divided into three parts. Parts I and II covered general issues and performance issues respectively and contained broadly similar questions across all three episode categories. Part III of each questionnaire contained more detailed questions specific to particular strategies, and was therefore different for each category of episode.

PART I

This part of each questionnaire included questions on the basic characteristics of each episode, its fit with corporate goals and strategies and its relationship to existing business and resources. The process of analysis and approval which led to the initiation of the episode was also explored. In the internal development and acquisition questionnaires emphasis was placed on marketing research, entry strategy and characteristics of the target market. This set of questions was omitted from the minority investment questionnaire since the parent organisation did not interface directly with the market. The final topic covered in this section of the questionnaires was that of idea generation. A question was included on the source of the idea that formed the basis for the new business development.

PART II

This section of the questionnaires was dedicated to performance. Data were gathered on financial returns as a function of time. The episode was classified as successful or unsuccessful and the reasons for this classification were requested. A question was also included on the degree to which performance matched expectations. In addition, unexpected problems or benefits encountered in the episode were explored.

The questions included within PART III vary across episode categories. They will therefore be discussed separately.

PART III: Internal Development.

The magnitude and source of the funding for the initial stages of the episode was examined. A split was requested between funds for R&D and funds for marketing. Questions were included on the method by which the new business was accommodated within the parent organisation, the organisational structure of the new enterprise and on the policy adopted to staff the episode. The concluding questions attempted to gauge the degree of freedom afforded to the management of the new enterprise and the presence or absence of key characters normally associated with successful internal ventures--the project "champion" and the project "sponsor."

PART III: Acquisitions.

The questions dedicated to acquisitions opened with an investigation of the characteristics of the acquired company, including sales, products, markets, structure and such like. This was followed with a probe into the important criteria influencing the selection of acquisition candidates and the process by which a candidate was finally selected and acquired. Questions were included on the integration of the acquisition within the parent organisation, addressing both organisational structure issues and management systems. A final set of questions explored any interchange of staff that took place between parent and subsidiary.

PART III: Minority Investments.

The origin of the opportunity to invest venture capital was established together with the motivation of the parent to invest that capital. Questions were posed as to the magnitude of the investment, the route by which capital was channelled to the investment (whether by direct funding or via a pooled fund) and the criteria which influence route selection. The section concluded by exploring the level and nature of any involvement of the investor in the activities of the recipient after investment, the benefits obtained from the investment and its influence on future actions of the investor.

All questionnaires ended with a broad question requesting any additional comments or information considered relevant and not already covered within the questionnaire.

3.4 ANALYTICAL TECHNIQUES.

The corporate interview was administered in order to understand the goals, strategies and performance over the period 1971-77 which form the context in which the new business development episodes must be viewed. The information in this questionnaire is therefore not designed to be processed.

The episode questionnaires in Appendices C, D and E were structured to be broadly parallel in parts I and II before they branch to specifics in part III. This approach permitted large portions of the data to be examined broadly across episode categories.

A total of 14 episodes was studied and of these, two were minority investments. These require significantly lower levels of corporate involvement than internal development or acquisition and were therefore evaluated separately. This left a sample of twelve episodes divided equally between success and failure. Although this sample was small, it did permit some limited statistical analysis to be carried out.

Various hypotheses were developed with regard to factors which might distinguish successful from unsuccessful episodes. The Fisher Exact Test⁵⁵ was then used to establish the significance of these factors. Consider the following hypothetical example.

Hypothesis: Episodes tended to be successful if market research was carried out prior to initiation.

Results:

Carried out
market research?

		Yes	No
		4	2
Success?	Yes		
	No		

By observation one notes a strong tendency for those episodes featuring market research to be successful. However, the same distribution might have occurred purely by chance. The Fisher Exact Test provides a means of calculating the probability that this distribution did, in fact, occur by chance. By calculation, such a distribution is found to have a 3% probability of occurring by chance. In statistical terminology, the conclusion drawn from the above distribution would be: "At the 0.03 level of significance, episodes tended to be successful if market research was carried out prior to initiation.

CHAPTER IV

DATA OUTLINE

4.1 INTRODUCTION.

The information gathered by questionnaires and interviews covers a wide range of issues. Much of it centres on the company's investment levels, market shares and other factors not available for public examination. Neither the company nor the new business development episodes are named in this thesis, but the level of descriptive information is such that, given some prior familiarity with the corporation, it may be possible to identify it. Consequently, some sensitive information has been omitted from this document, at the request of the company. Parameters such as funding levels are not identified in dollars, but are rather referred to as "low," "moderate" or "high."

This thesis seeks to identify critical variables that are important in new business development, in broad terms across all episode categories. In addition, each episode category is probed to identify further variables of significance relevant to that category. Specifics peculiar to individual episodes are therefore of secondary importance in this study and detailed case analyses are not included.

This chapter presents results obtained via interviews and questionnaires. Case outlines are included for each episode studied. These outlines are followed by hypotheses tested on the data using the methods described in section 3.4, together with their corresponding levels of significance. The list of hypotheses presented in this chapter includes only those found to have statistical significance. A complete presentation of all hypotheses and data is included as APPENDIX F.

4.2 CORPORATE OVERVIEW.

There were two basic corporate goals over the period 1971-1977: a minimum annual growth in earnings per share of 15% and a minimum return on equity of 15%. These goals had existed since 1965 and did not change over the period 1971-1977. However, they have changed since 1977. In 1979 the minimum growth and return levels were increased to 20% in order to take account of inflation. This move was not designed to change the goals in real terms.

The basic corporate strategy incorporating the above goals was introduced in 1971 and the main features still apply. This emphasized asset management and managing to plan (as outlined in section 3.2.3). Improvements in individual business element strategies were stressed and efforts towards diversification and growth were maintained. These efforts included a wide range of approaches, in particular acquisitions and internal development. Joint ventures and minority investments of venture capital were also exploited although opportunities for these approaches were encountered much less frequently. Maintenance of a high stock price to earnings ratio represented a further target.

Acquisitions formed a particularly important part of the company's growth over the period under consideration. The number completed totaled eighteen with four divestitures over the same period. This record of success continued, and since 1972, the success rate on acquisitions exceeds 80%.

Three features were stressed as of prime importance when undertaking diversification and growth. Firstly, it was considered very important to have a well managed base business. Secondly, it was considered important to have adequate resources, both in terms of management slack and financial slack. Thirdly, effective strategies were believed to be essential--in particular, a good understanding of market needs. Furthermore, speed of action on sub-standard performance was thought to be important. Things shouldn't be left to "bleed" for long when it becomes impossible to identify a strategic "way to win."

The organisational structure that existed over the period of consideration corresponds to that outlined in section 3.2.2. Basically, individual business elements were formed into divisions which were in

turn combined into six operating groups. Each group manager reported to the Chief Operating Officer. A separate group dedicated to a government service function reported directly to the Chief Executive Officer. This structure was not specifically designed to assist in diversification and growth, but did not seem to deter the process.

New business opportunities for internal development were identified at the business unit or division level. The formal strategic planning system encouraged new business opportunities to be declared so that resources could be allocated if considered desirable. However, no formal system for rooting out new ideas or opportunities was used and no incentives existed purely for idea generation. Consequently, systems akin to those of 3M or Texas Instruments outlined in section 2.4.3 did not (and still do not) exist.

Basic corporate strategy has not changed since the 1971-1977 period under study in this thesis. However, there has been one notable modification to planning. Divisions are now required to identify their strengths and areas of excellence, based on an examination of managerial factors, patterns of doing business, technologies and markets. They are then constrained to work within these areas of strength and excellence since these offer high potential for competitive advantage. They may address new products or markets providing that they are compatible with their areas of strength. This approach is believed to be much more fertile than one which permits ventures in unfamiliar areas outside proven fields of excellence.

4.3 NEW BUSINESS DEVELOPMENT EPISODE OUTLINES

The completed questionnaires and subsequent interviews were used to build pictures of each episode. Information contained within internal company publications was also found to provide useful information on particular subsidiaries or products. Case descriptions outlining the main features of each episode's life are included as EXHIBITS 13 to 26. Each episode is given a letter code; A to F are internal development episodes, G to L are acquisitions and the remainder, M and N, are minority investments. A, B, C and G, H, I represent the successful internal developments and acquisitions respectively. D, E, F and J, K, L represent the unsuccessful internal developments and acquisitions.

EXHIBIT 13

EPISODE A: SUCCESSFUL INTERNAL DEVELOPMENT.

Internal development A was undertaken in 1976 in an attempt to regain market share lost to a competitor. This base development involved the application of new microcomputer technology and related to the parent on the basis of technology, manufacturing, markets and potential for growth.

The new product used sonar equipment to map the seabed. It generated hard-copy maps in real time and also stored data on magnetic tape for future play-back to permit computer image processing. Potential customers were identified within both government and industrial sectors.

The market research undertaken before initiating the development sampled the existing market base. The analysis revealed the potential for the application of the new technology. The market was in a growth phase and a target market share of greater than 50% was established. Entry strategy for the new product was based on high performance at a premium price. Competitors initially ignored the new high price entry and never fully responded to its subsequent penetration of the market.

The business was established as a new element within an existing division. No incentives were offered but management was afforded a high level of independence. The new element was staffed by assigning existing employees.

The development absorbed moderate funding over two years before the first revenue was generated and the episode has been an outstanding success. High growth resulted in the required performance levels for gross margin and ROI being achieved within four years and the business is still growing profitably. A major factor influencing this success was the ability to convince the market that the high performance offered by the new product was worth the premium price.

EXHIBIT 14

EPISODE B: SUCCESSFUL INTERNAL DEVELOPMENT.

An established technological capability formed the basis of internal development B, which was initiated in 1969.* The episode therefore represented base development, using base technology to exploit a market niche.

The new business was devoted to lighting systems for tall structures. These systems were designed to satisfy new government regulations relating to such structures. Since the required technology was well established within the corporation, the new business related to the parent on the basis of technology, manufacturing and marketing, as well as satisfying potential growth requirements.

The new opportunity was identified with the aid of visits to the government agency generating the legislation. A major part of the market research before starting the development was devoted to continued contact with the agency in order to determine the precise requirements of the new legislation.

The market for the new products was at an introductory phase at the start of development since it was created by new regulations. No market goals were established. At the outset, approximately ten people were assigned to the new business and moderate funds were invested over three years before the first revenue was generated. Bonuses were offered as incentives to the management of the new business.

Five years elapsed before the new business took off and it took ten years to reach the required financial performance levels. The time required for this market development was much longer than anticipated. The episode was almost terminated three times. It basically survived as a result of the efforts of a "project champion" at the division level.

The new business element is the leader in a growing market and continues to provide an operating profit and ROI satisfying targets.

* Although this falls outside the period 1971-1977 which forms the focus of this thesis, the criteria which influenced initiation correspond to those which applied over 1971-1977. In addition, the major features of its life also occurred within this period.

EXHIBIT 15

EPISODE C: SUCCESSFUL INTERNAL DEVELOPMENT.

In 1976, the company was awarded a government service contract for the management and operation of a government-controlled contractor-operated facility. The company supplied the moderate funding required for all proposal work and classed the move as related diversification since it was based on the existing core business of managing similar facilities.

The new business which resulted from internal development C related to the parent on the basis of both technology and necessary management skills as well as satisfying financial performance requirements. This type of business effectively forms a low risk cash cow over the life of the contract.

Detailed "market" analysis was carried out over several years before submitting the proposal. This analysis was centred on monitoring the performance of the incumbent contractor. When the contract was awarded, the business was established as a new division with a high degree of independence in operating decisions.

In the proposal stage the episode was staffed by assigning existing employees. However, when the contract was awarded, staffing was achieved by recruiting both internally and externally. A variety of performance incentives was offered to management of the new division.

Initially the new business grew rapidly before stabilising and slowly declining as government emphasis shifted. Fees received were related to performance ratings and within one year, the top level of "excellent" had been achieved. This level of performance has been maintained.

The initial five year contract was renewed in 1981 and the business therefore remains profitable, generating a very high ROI at low risk, since the required company investment is low.

EXHIBIT 16

EPISODE D: UNSUCCESSFUL INTERNAL DEVELOPMENT.

In 1971, the parent organisation had significant resources dedicated to producing electrical cable connectors for military applications. Internal development D was initiated in order to exploit this capability in commercial markets by producing a high quality connector for a growing TV application. This was particularly appealing since the traditional military market was depressed. In addition the leader in the commercial market was in financial difficulties, thus reducing his capacity to react to a new entry into the market.

Since equivalent military connectors were already in production, the new opportunity related to the parent on the basis of technology and manufacturing. Significant growth potential also satisfied financial requirements.

Detailed market research was carried out before starting development. Literature was reviewed; suppliers, users and Federal standards authorities were consulted; electrical cable manufacturers were interviewed and efforts were made to participate at trade shows. The new commercial application implied that the market was in an introductory phase and an entry strategy based on a quality product at a premium price was selected. A target market share of 30% was established.

Initial development absorbed moderate funding over two years before the new product was launched. This initial work was staffed by both hiring new staff (notably marketing staff) and assigning existing staff. Management were given significant latitude for independent operating decisions and bonuses were offered as incentives.

The timing of the market introduction (in 1973) of the new connectors proved to be a major factor influencing the performance of the new business. Connector sales were directly dependent upon the growth of the new TV application, which was delayed by the economic recession that took place around 1974. In addition, the need for the high quality connector was never justified.

Consequently, although the business did have a long term potential, this did not compensate for the poor short term outlook. The business was divested in 1974.

EXHIBIT 17

EPISODE E: UNSUCCESSFUL INTERNAL DEVELOPMENT.

Episode E was an attempt to build from the government service businesses within defence and energy fields by undertaking similar contract work for the Department of Labor. The internal venture was initiated in 1971 and represented unrelated diversification. The company had no previous experience with that particular government agency nor with the required service work.

The venture involved the operation of job centres providing residential living, vocational training, counseling and medical support for disadvantaged youth. This addressed an established national social and economic need.

The government contracts operated on a cost plus fixed fee basis and therefore offered high ROI since they required negligible investment by the parent. This low risk had also attracted other large firms to the field, some examples being RCA, Westinghouse and ITT.

A key manager knowledgeable on the government program was hired and he carried out extensive market research. The market was in a growth phase and a target share was set at 12%.

A new division was established to accommodate the venture and it operated with a high level of independence from the parent. Staffing was achieved by hiring new people and by assigning employees from within the parent. Standard incentives of stock options and financial rewards were offered.

The new business grew rapidly from 1972 to 1975 and achieved a market share of 7%. Within two years the required financial performance levels were satisfied.

However, this trend did not continue. The business failed to win new contracts and collapsed when the renewal of the existing contract was lost to a competitor. The operation was therefore discontinued in 1976.

EXHIBIT 18

EPISODE F: UNSUCCESSFUL INTERNAL DEVELOPMENT.

Internal development F was initiated in 1977 in order to exploit a biological test capability that had been developed internally under government contract. This related diversification into commercial markets was based on the provision of a testing service to commercial firms typically in the pharmaceutical or chemical industries.

At the outset the venture showed considerable promise. The new state of the art tests cost less than 1% of the established equivalent test techniques and also afforded significant time advantages. In addition, increased government regulation was expected to step up demand for such testing services.

The new commercial test facility was set up as a new business element within an existing division and was staffed by assigning current employees. Opportunity for promotion was the main performance incentive, and the new business was allowed to operate with a high degree of independence from the parent.

Small-scale market analysis was undertaken before the decision was taken to proceed. On the basis of the anticipated increase in government regulation, the market was considered to be in an introductory (new) phase. A market share target of 18% by 1982 was established with entry strategy based on innovation--new test techniques.

Sales grew less rapidly than expected and the market was found to be smaller than anticipated. This was attributed to lack of experience and knowledge in the marketplace, plus an inability to convince the market that the new test was valid. In addition, some severe quality control problems were encountered. As a result, the facility was unprofitable for four out of the five years before it was divested in 1982.

EXHIBIT 19

EPISODE G: SUCCESSFUL ACQUISITION.

The high technology industries were perceived by the parent organisation to offer opportunities for high growth. A search for a suitable component supplier to these industries was carried out within the parent organisation and as a result, company G was acquired in 1976. The acquisition was completed approximately two years after the start of the search process and the move represented unrelated diversification.

Acquisition G was a thirty year old private company with about one thousand employees, producing cooling components for the electronics and computer industries. Its market strategy centred on providing a high reliability quality product and at acquisition it was market leader with a share of 55%. This market position was an important factor in the acquisition decision and market research was carried out before finalising the deal to confirm leadership.

The acquired company was established as a new group within the parent organisation. The immediate performance target was to hold or improve its dominant market share. Competitors adopted more aggressive tactics following announcement of the acquisition, probably attributing the acquisition to weakness within company G.

Post acquisition performance has been an outstanding success, with required performance being achieved within two years. It has held or possibly increased market share and both sales and operating profit tripled within four years. All hopes for growth were satisfied.

It is believed that part of the success is attributable to the rapid integration within the parent organisation that was achieved. The company was highly receptive to the parent's planning and control systems--the only constraints imposed.

Company G remains profitable although current performance is reflecting the depressed economic climate.

EXHIBIT 20

EPISODE H: SUCCESSFUL ACQUISITION.

The parent's attention was drawn to company H as a result of an offer by an investment broker. The company was eventually acquired in 1972 after a six month period of screening and negotiation. It operated in a similar field to one of the parent's established businesses by providing contract services to a government agency. At acquisition, it was a privately held firm less than ten years old, and had 125 employees.

The move represented base development since the new company filled a niche within the parent's base business. Company H was established as a new business element within an existing division involved in similar government service work.

The marketing research carried out before finalising the acquisition concentrated on questioning the customer--the government agency. The resulting feedback gave good recommendations. Initial market share was less than 5% and targets were set in the range 5% to 10%, since good growth potential existed. The planning and control system was the only major constraint imposed by the parent upon the operation of Company H.

The company succeeded in meeting the required financial performance within two years and has subsequently surpassed initial targets.

The success of the acquisition is largely attributed to the excellent management talent of company H, and the smooth integration within the parent which was achieved. In fact, the acquired company has subsequently taken over management of the division within which it was initially located.

EXHIBIT 21

EPISODE I: SUCCESSFUL ACQUISITION.

Company I, acquired in 1977, was a small entrepreneurial organisation producing seismographic instrumentation. The move represented related diversification and provided a new product which could be targeted at a market already being served by the parent. Consequently, the existing marketing and sales resources could be applied to the new business. The product also used familiar technology, and the necessary electronic manufacturing facilities were similar to those already in use within the host division of the parent.

The acquisition was strategically appealing since it offered potential for high growth in state of the art high technology instrumentation. The move was driven by an enthusiastic advocate within the parent who carried out extensive financial analysis following an internal search for candidates. The total search, selection and acquisition process took approximately six months.

The market for the new product was totally understood and specific marketing research before acquisition was therefore unnecessary. The market was in a growth phase and a target of 40% share within four years was established.

Some initial integration difficulties were encountered. These were associated with the move from independent entrepreneurial operation into a highly controlled parent and some product redesign was necessary in order to cure cost problems. Although the parent's planning and control systems were imposed, the company still operated with a high degree of independence.

Competitive reaction did not prove significant following acquisition. However, competitors did try to block the move before it was finalised.

The acquisition effectively unleashed an entrepreneur into an area of mutual technological interest, and has been a major success. The target market share of 40% was achieved in two rather than four years. Sales multiplied by a factor of ten within four years. This performance is attributed to a large degree to the high level of synergy which existed.

EXHIBIT 22

EPISODE J: INCOMPATIBLE ACQUISITION.

Acquisition J was a process company producing a non-assembled product. At acquisition in 1972 the company was eighty years old, employed 155 people and had been privately held. This episode represented unrelated diversification into a totally unfamiliar area, since the only fit with the parent was attributable to its ability to generate cash. However, this ability did match corporate strategy in that it could act as a cash cow to fund other growth opportunities.

The acquisition was finalised in 1972 after a two year period of search, selection and negotiation. The initial opportunity to acquire arose via an offer from an investment broker.

Since the company had no fit with the parent on the basis of existing technologies, manufacturing or markets, it was established as a new, self-contained division reporting directly to the CEO. It operated with a high degree of independence in all aspects except planning and control.

The market of company J was in a mature phase. The company failed to achieve any real growth, but did consistently generate cash until 1981.

However, competing technologies emerged which threatened to displace the specialised products of the company. This fact, coupled with the absence of growth potential and a downturn in cash generation, led to divestiture in 1982.

EXHIBIT 23

EPISODE K: INCOMPATIBLE ACQUISITION.

Company K was acquired in 1972 in an effort to diversify into the health care and medical service area. This represented unrelated diversification, the only fit with the parent being on a financial basis.

The acquired company had been established for about four years, employed 81 people and had formerly been privately held. It operated ten clinical laboratories to provide services at the community level, and its market was basically composed of physicians, hospitals and health clinics. It was selected for acquisition following a search for suitable candidates carried out within the parent organisation. The search and acquisition process took about six months.

The acquisition was made because company K fitted the parent's new strategy for the biomedical sphere which had been identified as a future growth area. A new division was established to accommodate company K and further acquisitions were added over the period 1972 to 1976 to build this division. It was afforded a relatively high degree of independence by the parent in operating decisions, the only exception being planning and control activities.

Considerable market analysis was carried before the acquisition was made. However, although the market was in the growth phase, the changes which took place in the market after acquisition were not anticipated and the new division eventually became incompatible with company strategy.

This strategic incompatibility, together with the heavy support effort required from corporate headquarters, led to the company being divested in 1978.

EXHIBIT 24

EPISODE L: INCOMPATIBLE ACQUISITION.

Company L, which specialised in electronic measurement equipment, was acquired in 1977 in an attempt to diversify into a new high growth market. This growth opportunity represented the only fit with the parent, with both the technology and markets being unfamiliar areas.

The acquisition opportunity was brought to the attention of the parent by an investment broker and the deal was completed within two months.

At acquisition, the company was three years old, employed approximately 100 people and had been privately held. It specialised in the design and manufacture of digital dimensional measurement instruments, including microcomputer equipment, for applications in quality control and machine tools--highly cyclical international markets.

The acquisition was established as a new division and since there was no related business within the parent, the division was placed under a group dedicated to government work.

The acquired company had an initial market share of 10-15% with a target of market leadership at greater than 40%. However, no marketing research was carried out prior to making the acquisition.

The first strategic planning after acquisition revealed that the strategic position was not consistent with the parent's objectives. Consequently, the company tended to be constrained by the parent in order to ensure that it fitted as closely as possible these objectives. However, the company never achieved the targets for market position and profitability. It was eventually divested in 1981 at a sales level significantly lower than that at acquisition.

EXHIBIT 25

EPISODE M: SUCCESSFUL MINORITY INVESTMENT.

In 1978*, minority investment M was made in a new company producing electro-optical systems for inspecting integrated circuit masks. This new product permitted higher speed data acquisition than established mechanical techniques and its electro-optical sensor was produced by part of the parent organisation. This area was appealing to the parent organisation since it applied familiar high technology to a state of the art product in a familiar high growth market.

The opportunity for the investment arose as a result of a direct approach to the parent by the entrepreneur managing the new venture. There was no broker involvement. The entrepreneur had an excellent track record and his presentation was well received by senior management. These factors, coupled with the appealing technology and growth market were the major stimulants for the investment decision. However, it also represented a possible first step towards acquisition and provided an opportunity for increased returns on excess cash.

Little market research was undertaken before the investment was made. The parent basically relied upon the entrepreneur's company.

A moderate/large direct investment was made in the new company and the parent was one of three investors. The parent provided one board member and part of the planning system was introduced. In addition, the parent assisted in making some major distributor contacts for the investee within the large Japanese market.

Despite the fact that it took the investee two years to get the new product to market, the investment has been an outstanding success. There is now very rapid growth at between 30% and 40% per annum. Success is basically attributed to the fact that the new product represented a technological breakthrough.

The investee has now become a public company. The resulting large increase in value of the investment represented an unanticipated return to the parent. This experience has encouraged the parent to undertake other such minority investments of venture capital.

* This falls outside the 1971-1977 period which forms the centre of attention in this thesis. However, sufficient time has passed to ensure that the performance of the investment is clearly visible.

EXHIBIT 26

EPISODE N: SUCCESSFUL MINORITY INVESTMENT.

Minority investment N was made in 1969* in a new company intending to produce flexible computer information systems for hospitals. At this time the parent perceived itself as innovative and oriented towards high technology. The use of venture capital investments was viewed as innovative, the new company's business was viewed as satisfying the high technology orientation and it also offered good growth potential. The venture provided a window on a new technology and a first step towards possible acquisition in an unfamiliar business area.

There was no broker involvement in the investment. The opportunity arose as a result of a direct approach to the parent by those involved with the new company. The size and structure of the investment were determined by means of extensive interviews with the principals of the new firm.

Virtually no market research was carried out prior to making the minority investment.

A moderate/large direct investment was made in the new company which had significant dependence upon that investment. The parent provided two board members out of seven and a close relationship was maintained through this board participation. The parent has provided substantial input to major decisions.

Prior to the mid-1970's, the new company did not generate high performance. It was rejected for acquisition as being in a business that the parent didn't wish to pursue, although there was some modest interaction with some of the parent's other medical-based businesses. The book investment was reduced to below half of its original level at this time. However, board participation did continue.

The new company became successful after 1976 following some major strategic decisions to focus on standard products. The company is now a major success with an annual growth rate of greater than 30% and gross margin around 40%. However, because the company is not fully integrated within the parent, the return is viewed as attractive but not spectacular.

* Although this falls outside the 1971-1977 period, the major elements of the investment's life did occur within this time span.

4.4 HYPOTHESIS TESTS.

Various hypotheses were generated on the basis of the main points identified in the literature review of chapter II. The significance of these hypotheses was tested on the data gathered by the questionnaires and interviews using the Fisher Exact Test.⁵⁵ Hypothesis testing was carried out on the internal development and acquisition data but not on minority investment data since the latter's sample size was too small for analysis.

A total of 33 hypotheses were tested. These are listed in APPENDIX F together with the relevant data used for the tests and the resulting levels of significance. In this appendix, tests 1 to 21 are general tests which apply to both internal development and acquisition episodes. A data base covering 12 episodes (6 internal development episodes plus 6 acquisitions) was therefore used for these tests. Tests 22 to 28 are dedicated to internal development and tests 29 to 33 to acquisitions. Consequently, these latter tests operate on smaller data bases comprising 6 episodes each.

It must be stressed that all samples are small, especially those relating specifically to internal development or acquisitions. The testing of all hypotheses is therefore limited to a large extent by the sample sizes. However, the testing was not carried out in order to accept or reject the hypotheses. It was rather used to assess the degree to which some critical variables differentiate success from failure in the range of episodes studied. A significance limit of 0.30 was imposed, above which it was assumed that no significant relationship existed.

EXHIBIT 27 lists the hypotheses found to be significant. Five hypotheses show strong significance (less than 5%) and these are marked in the exhibit. They indicate that relatedness on the basis of technology and marketing, familiarity with marketing and the required patterns of doing business, and market research in familiar markets tended to be the most critical variables in relation to episode success for the particular events studied.

EXHIBIT 27

SIGNIFICANT HYPOTHESES

TEST NUMBER ⁺	HYPOTHESIS	LEVEL OF SIGNIFICANCE
	Episodes tended to be successful if:	
1	- they represented either base development or related diversification	0.12
2	- they were related to the parent on the basis of technology	0.03*
3	- they were related to the parent on the basis of marketing	0.01*
4	- they were related to the parent on the basis of manufacturing	0.17
5	- there was prior familiarity with the technology of service	0.12
6	- there was prior familiarity with the required marketing	0.01*
7	- there was prior familiarity with the relevant manufacturing	0.17
8	- there was prior familiarity with the market's required pattern of doing business within the host division	0.01*
9	- market research was carried out before initiation	0.09
10	- <u>market research in familiar markets</u> was carried out before <u>initiation</u>	0.01*

⁺ Corresponding test number in APPENDIX F.

* Level of significance less than 0.05.

EXHIBIT 27 (cont.)

TEST NUMBER ⁺	HYPOTHESIS	LEVEL OF SIGNIFICANCE
	Episodes tended to be successful if:	
11	- they addressed growth markets	0.27
14	- market share targets were set above 20%	0.28
15	- market share targets were set above 40%	0.12
16	- they were located within an established division	0.28
19	Successful episodes tended to be initiated in the second half (post 1974) of the period under consideration (1971-1977)	0.28
21	Successful acquisitions tended to achieve the required performance levels faster than successful internal development	0.20
31	Acquisitions tended to succeed if there was technological or marketing synergy in addition to managerial synergy	0.20

In order to emphasize the data which led to the identification of the five most significant hypotheses, the corresponding tests included within APPENDIX F are repeated below.

Test 2: Episodes tended to be successful if they were related to the parent on the basis of technology.

TECHNOLOGY RELATED?

	Yes	No
Success	A B C G H I	
Failure	D F	E J K L

Level of significance = 0.03

Test 3: Episodes tended to be successful if they were related to the parent on the basis of marketing.

MARKETING RELATED?

	Yes	No
Success	A B C H I	G
Failure		D E F J K L

Level of significance = 0.01

Test 6: Episodes tended to be successful if there was prior familiarity with the required marketing.

MARKETING FAMILIARITY?

	Yes	No
Success	A B C H I	G
Failure		D E F J K L

Level of significance = 0.01

Test 8: Episodes tended to be successful if there was prior familiarity with the market's required pattern of doing business within the host division.

BUSINESS PATTERN FAMILIARITY?

	Yes	No
Success	A B C G H I	
Failure	E	D F J K L

Level of significance = 0.01

Test 10: Episodes tended to be successful if market research in familiar markets was carried out before initiation.

FAMILIAR MARKET RESEARCH?

	Yes	No
Success	A B C H I	G
Failure		D E F J K L

Level of significance = 0.01

CHAPTER V

DATA INTERPRETATION: FIT WITH LITERATURE

5.1 INTRODUCTION.

This thesis studies new business development within one diversified corporation. Previous research has examined new business development in broad terms across ranges of diversified companies, but the author is unaware of any previous efforts to study performance within a single company. This chapter attempts to relate the published literature presenting this earlier research on ranges of companies (discussed in chapter II) to the data outlined in chapter IV.

The chapter is divided into two major sub-sections. The first section examines internal development and acquisition, as both a combination and as independent categories. The second section concentrates on the minority investments of venture capital.

It is emphasised that this study is based on small samples. This must be borne in mind when drawing generalised conclusions from the data and the factors discussed are those which were found to be particularly significant. This does not imply that other factors commonly believed to be important are not critical, but rather that they were not found to play an influential role in the episodes of this study.

5.2 INTERNAL DEVELOPMENT AND ACQUISITION.

5.2.1 GENERAL FACTORS.

Substantial portions of past research on new business development have studied factors equally relevant to internal development or acquisition. These general factors are now discussed in relation to the results of this research. Levels of significance calculated in data analysis are included in parentheses, together with the corresponding test number in APPENDIX F.

Relatedness.

The data indicate that successful episodes tended to represent base development or related diversification (0.12--Test 1). This fits somewhat with Rumelt's findings⁵ which indicate that companies which have diversified into related business areas have been more successful than those which have attempted to address unrelated areas. The results also underline Peters' comments⁴² on 37 "well managed" U.S. organisations, which point to the fact these organisations had all identified and built upon their strengths. They had not entered potentially attractive but unrelated areas which required skills that the companies did not possess.

Recent research by Meyer⁵⁷ on ten small high technology firms has revealed similar effects. It was found that the most successful firms in terms of growth had concentrated on one key technological area and introduced product enhancements related to that area. In contrast, the poorest performers had all tackled "unrelated" new technologies in attempts to diversify into new product-technology areas.

The data show more specifically that marketing relatedness was the most significant form of relatedness in successful episodes (0.01--Test 3), followed by technology or service relatedness (0.03--Test 2). Relatedness on the basis of manufacturing had lower significance (0.17--Test 4).

Familiarity.

Relatedness must be distinguished from familiarity since a company may be totally unfamiliar with a market or technology that is nevertheless related to its existing business. It was found that the most significant factors of familiarity which tended to influence success were marketing familiarity (0.01--Test 6) and familiarity with the patterns of doing business appropriate to the new market within the division hosting the new business (0.01--Test 8). Typical patterns are performance/premium price and minimum cost. Although corporate familiarity with managing the appropriate pattern is important, this familiarity may not reside in the division hosting the new business. It is the familiarity of the divisional management with the appropriate business pattern that ultimately influences the success of the new business. Familiarity with the technology or service embodied in the product was also significant (0.12--Test 5) as was familiarity with manufacturing (0.17--Test 7).

These results match the comments of Biggadike⁸ who states that a major problem faced by managers entering markets where they have not previously competed is their lack of familiarity with some or all of the skills required in the entered market. Based on his study of internal development and acquisition within FORTUNE 200 companies he concludes that entry into new product-markets where a firm has no previous experience is difficult.

Gilmore and Coddington⁴⁸ also stress the importance of market familiarity. They state that major errors can occur if this is absent.

Market Analysis.

It was found that analysis of market factors was significant in successful episodes (0.09--Test 9). In particular if the market was familiar, consideration of market factors was highly significant (0.01--Test 10).

Biggadike's results⁸ once again fit these findings. He concluded that technical and marketing knowledge relevant to the entered market was very important. Zaic²⁰ indicated that marketing was the single most

important factor determining success in his study of new ventures. Similarly, Andrews⁴⁵ found that consideration of market factors was a strong predictor of success in commercial diversification.

Market Growth.

Entry into growth markets tended to be a characteristic of successful episodes (0.27--Test 11). This matches Biggadike's findings⁸ for his sample of FORTUNE 200 companies in diversification. He found that improved performance could be obtained by entering markets in the growth phase.

Entrants in the growth phase do not face the market development task that must be undertaken on entry in the new or introductory phase. Similarly, the market penetration task before entrants in the mature phase is also absent.

Market Share.

It was found that the presence of high market share targets tended to be a feature of successful episodes. The level of significance was 0.28 (Test 14) for share targets greater than 20% and 0.12 (Test 15) for targets greater than 40%.

Biggadike¹⁸ stresses that large scale entry and ambitious market share targets are critical to financial success. The data of this thesis seem to fit this statement.

Competition.

Competition and competitive reaction were not found to have had major influence upon the success or failure of the particular internal development and acquisition episodes studied in this research. Clearly this does not imply that the influence of competition is never important. Most episodes were targeted at "new" or "growth" markets, with the remainder addressing "mature" markets. In a new market, participants are not yet deriving substantial revenue from that market. Consequently, entrants into a new market do not have a large impact on

the incumbents' total corporate revenue streams and competitive reaction is seldom severe. In contrast, entrants into a mature market must threaten the market share of the incumbents, and therefore their revenues. In this circumstance, competitive reaction is common. Entry into a growth market also decreases the market share of the incumbents. However, since the total market is growing, reduced market share may not result in reduced revenue. Competitive response is therefore less likely to be severe.

Competitive reaction is least likely in new or growth markets, which are the focus of most episodes in this thesis. Hence, it is not surprising that competitive reaction has not been found to be significantly related to failure. However, it is interesting to note that Biggadike⁸ also found that incumbent reaction to market entry did not substantially influence performance in his studies of corporate diversification.

Organisational Location.

It was found that there was a tendency for new business development episodes to succeed if they were located within an established division (0.28--Test 16). No literature has been identified which specifically addresses this sort of issue. However, Miller's comments on acquisitions²⁴ may be relevant. He argues that the parent should set up communication systems with the new business element or division so that the parent's understanding of the new business may gradually increase. It may be possible that these communication systems suggested by Miller are more rapidly and effectively developed through an established division than via a new division.

Performance Trends in Business Development.

If corporate learning effects exist then one would expect to see a trend towards increased success in new business development over time. In order to test this the 1971 to 1977 period under consideration was divided in half. The distribution of successful and unsuccessful episodes was then studied and it was found that successful episodes did

tend to occur in the second half of the period under consideration (0.28--Test 19). This crude test does suggest the possibility of a trend towards improved performance in new business development.

5.2.2 FACTORS PECULIAR TO INTERNAL DEVELOPMENT.

Successful internal development episodes A, B and C reached profitability in 2 years, 5 years and 1 year respectively--an average of 2.7 years. The corresponding times to reach the required performance levels were 4 years, 10 years and 1 year--an average of 5 years.

In his studies of diversification Biggadike^{8,18} found that it took typically 8 years for ventures to reach profitability and performance did not match that of a mature business until a period of 10 to 12 years had elapsed. Gilmore and Coddington⁴⁸ agree that in internal development the time to break even tends to be long. They indicate that typically more than 5 years is required.

There is clearly a marked contrast between the results of past research and the performance achieved by the company under examination in this thesis. Weiss's comments⁴⁰ are useful in explaining this difference. In his study of independent start-ups he found that they took, on average, 4 years to reach profitability--half of the 8 year figure suggested by Biggadike for corporate ventures. Weiss attributes this higher performance of independent start-ups to more ambitious targets and better initial strategy. In addition, he suggests that corporate ventures often experience continued funding in situations which would have led to the termination of an independent venture.

An examination of the corporate overview of section 4.2 reveals that each of the explanatory factors identified by Weiss was a feature of corporate strategy of the company under study. The company was dedicated to growth. Ambitious targets were established and implemented via a rigorous planning system. Improvements in business element strategies were also stressed as was the importance of speed of action on sub-standard performance. Things weren't left to "bleed" for long when it became impossible to identify a strategic route to success.

Now Weiss suggests that by adopting the correct approach, large corporations should be able to achieve performance equivalent to that of

the best independent start-ups. It is proposed that the performance of the successful business development episodes under study form examples of precisely this situation. Each of Weiss's criteria for improved performance are satisfied and, in fact, the average time to profitability of 2.7 years is better than the Weiss average of 4 years.

5.2.3 FACTORS PECULIAR TO ACQUISITIONS.

Achievement of Required Performance.

Successful acquisitions G, H and I reached the required performance levels in 2 years, 2 years and 3 years respectively--an average of 2.3 years.

Gilmore and Coddington⁴⁸ indicate that a major benefit of acquisition over internal development is speed of market entry. This implies a shorter time to achieve required performance levels and is exactly the situation suggested by the research data of this thesis. The average time required for successful internal development episodes to reach the required financial performance levels was 5 years, compared to 2.3 years for acquisitions.

Miller²⁴ believes that a major problem in the acquisition process is that it involves the diversifying company in important guidance problems before it is properly oriented towards the new business. Although this may be true, a more significant decision is often made before the diversifying company is properly oriented--the acquisition decision itself. Episode K in EXHIBIT 23 illustrates this problem. In this case, although extensive market analysis was carried out prior to acquisition, the undercurrents of change in the market were not detected. This contributed significantly to the subsequent failure of the acquisition.

Execution Time.

Rappaport¹² and Miller²⁴ both point out that the competitive nature of the acquisition market may require companies to respond quickly when attractive candidates become available. The acquisition data

outlined in this thesis indicate that this is by no means always the case. The spread in execution time of the six acquisitions studied ranged from two months to two years, including all activities related to identification, screening and negotiation. The average execution time was eleven months. The data do not point to any relationship between execution time and success of acquisitions.

Management Talent.

A growing company requires increasing levels of managerial effort. Companies growing through acquisition may benefit from the management talent in the acquired company, some of whom may enter the parent organisation.

Useful management talent was thought to have been obtained in each of the three successful acquisitions studied. The corresponding level for all acquisitions (including incompatible episodes) was four out of six. Transfer of staff to the parent following acquisition took place in four of the acquisitions studied. Transfers in the opposite direction, parent to acquired company, occurred in three cases.

The data do not indicate any tendency for staff transfers between parent and acquired company to be linked to success.

Synergy.

Almost all acquisitions studied were believed to feature some managerial synergy. This was mostly attributed to the sophistication of the parent's planning system which was always introduced to the acquired companies. However, there was a tendency for successful acquisitions to feature technological and marketing synergies with the parent in addition to managerial synergy (0.2--Test 31).

5.3 MINORITY INVESTMENTS.

Roberts²² and Aguren¹⁵ both suggest that one of the prime motives for large non-financial corporations to act as venture capital sources is the desire to obtain "windows" on new technologies. This was found to be appropriate to the two minority investments studied in this research. Indeed, both investments were made with a view to the possibility of more than just a window on technology; they were also considered to be a possible first step towards acquisition.

Aguren also proposes that a further motive may be the desire to obtain increased returns on excess cash. This was found to be appropriate in one of the investments (Episode M).

Venture nurturing is the title used by Roberts to describe the situation in which a corporation not only invests venture capital, but also provides managerial assistance to the investee. This situation took place in both of the investments studied. In each case members of the board of directors were provided and the parent assisted in the major decisions of the investee. The nurturing was especially important in Episode M, in which part of the parent's planning system was introduced and assistance was given in establishing distributor connections.

Both of these investments involved direct funding and both were successful. This therefore verifies Rind's belief⁵² that although it may be difficult, it is possible to achieve success in direct investment of venture capital by means of internal management.

Roberts²² and Greenthal and Larson⁵¹ both suggest that venture capital alone is unlikely to succeed in contributing significantly to overall corporate growth. While this may be generally true, Episode M shows that major gains can be made in addition to any access to new technologies or markets. The investee is currently growing at between 30% to 40% per annum and the public issue of stock yielded a substantial increase in the value of the investment.

CHAPTER VI

STRATEGIC IMPLICATIONS

6.1 INTRODUCTION.

Previous chapters have outlined the data gathered in this research, the consistently significant factors that may be identified within that data and their relationship to the results of previous research. This chapter now seeks to evaluate these factors and attempts to deduce from them some strategic implications.

The implications centre on entry strategy into attractive new business areas. The research results presented and discussed in Chapters IV and V emphasize the importance of familiarity with a new business area. A new conceptual framework is now presented which relates entry strategy for potentially attractive new business areas to the level of corporate familiarity with those areas. A FAMILIARITY MATRIX is proposed and some optimum entry strategies are suggested, based on position within the matrix.

Frequently companies concentrate on one particular approach to new business development and often attempt to grow by means of internal development, or alternatively, by means of acquisition. The conceptual framework presented in this chapter indicates that although this may yield satisfactory results for business areas within the sphere of corporate familiarity, this approach may be totally inappropriate outside that sphere.

One method of preventing inappropriate use of these strategies is to constrain new business development within the sphere of familiarity. However, an alternative and perhaps more fruitful approach is presented which is based on building familiarity with unfamiliar areas. To achieve this, a multi-faceted approach is used, including not only internal

development and acquisition but also joint ventures and venture capital minority investments. The author believes that a multi-faceted approach of this type can make available a much broader range of opportunities than would otherwise be possible.

6.2 ENTRY STRATEGY.

Corporate strategy defines the businesses in which a company will compete. Many techniques are now available to assist in this decision and two of the business portfolio tools were presented in section 2.4.2. Of these, the BCG growth/share matrix is probably the most popular. It identifies an optimum cash flow from CASH COWS (high market share, low growth businesses providing healthy cash supplies) to QUESTION MARKS (low market share businesses in high growth markets requiring large cash inflows to finance growth). This is designed to develop these QUESTION MARKS into STARS (high market share businesses in high growth markets).

New businesses normally enter a corporate portfolio as QUESTION MARKS, and key decisions in strategic planning relate to these new businesses. A basic strategic question is therefore:

Which product-markets should we enter?

The answer to this question involves a corporate strategy decision. Once this decision has been made, another question must be posed:

How should we enter this product-market?

The decision on this latter factor is frequently made at a functional rather than corporate level.

Although these questions are fundamentally different, they should not be made independently of one another. Biggadike⁸ specifically acknowledged this issue and investigated the impact of entry strategy on performance. However, his study concentrated on variables such as entry scale, market growth, innovation, price and quality. He did not explore a variety of mechanisms such as internal development, acquisition, joint ventures and minority investments.

The strategies included within this variety of mechanisms each make different demands upon the parent. Some, such as internal development, require high involvement by the parent. Others, such as venture capital investment, require much lower levels of involvement. What benefits do

each of these entry mechanisms offer? When should each be used? An attempt is now made to answer these questions by means of a new conceptual framework based on the level of corporate familiarity with the various dimensions of a new business area.

6.3 CORPORATE FAMILIARITY.

In his discussion of the management problems of diversification, Miller²⁴ proposes that acquisitive diversifiers are frequently required to participate in the strategic and operating decisions of the new subsidiary before they are properly oriented towards the new business. In this situation the parent is "unfamiliar" with the new business area. It is logical to conclude that if the new business is unfamiliar after acquisition, it must also have been unfamiliar before acquisition. How then can the parent have carried out comprehensive screening of the new company before executing the acquisition? Most probably pre-acquisition screening overlooked many factors, turning the acquisition into something of a gamble from a business portfolio standpoint.

In contrast to operation in "unfamiliar" areas, new business development in "familiar" areas is probably much less risky. Screening activities carried out prior to the decision to enter the new business are much less likely to overlook important factors. When the important factors are identified, appropriate analysis is much more likely to be carried out. Finally, when the entry is made, the parent may immediately participate in strategic and operating decisions. A period of "familiarisation" is not required.

This argument leads to a very simple hypothesis which applies to technological, market and managerial factors:

Hypothesis: New business development in areas within the sphere of corporate familiarity is more likely to succeed than new business development outside that sphere.

It is proposed that a company is only competent to analyse opportunities that lie within its own sphere of familiarity. If the company steps outside that sphere, it is likely to make incorrect decisions on the basis of perhaps extensive, but nevertheless inappropriate analysis. Important factors are liable to pass undetected and unaddressed due to a lack of awareness.

Furthermore, one would also expect the probability of success to decrease as the degree of familiarity with the new business area decreased. Hence, the highest success rate would be expected when products embodying base technologies are targeted at base markets. Similarly, the lowest success rate should occur in situations in which products embodying unfamiliar technologies address unfamiliar markets.

6.4 THE FAMILIARITY MATRIX.

In order to test this hypothesis it is first necessary to define several terms. New business development may address new markets, new products or both. In addition, these new areas may be familiar or unfamiliar. The terms "new" and "familiar" are now defined:

"NEWNESS OF A TECHNOLOGY OR SERVICE"

- The degree to which that technology or service has not formerly been embodied within the products of the company.

"NEWNESS OF A MARKET"

- The degree to which the products of the company have not formerly been targeted at that particular market.

"FAMILIARITY WITH A TECHNOLOGY"

- The degree to which knowledge of the technology exists within the company, not necessarily embodied in products.

"FAMILIARITY WITH A MARKET"

- The degree to which the characteristics and business patterns of a market are understood within the company, not necessarily as a result of participation in the market.

Market factors* associated with the new business area may be characterised as BASE, NEW FAMILIAR, OR NEW UNFAMILIAR. Similarly, the technologies or services embodied in the product for the new business area may be characterised on the same basis. EXHIBIT 28 illustrates some tests that may be used to distinguish between "base" and "new" areas. EXHIBIT 29 lists questions that may be used to distinguish between

* Here, market factors refers not only to particular characteristics of the market and the participating competitors, but also includes the appropriate pattern of doing business that may lead to competitive advantage. Some typical patterns are performance/premium price and lowest cost producer.

EXHIBIT 28

TESTS OF "NEWNESS"

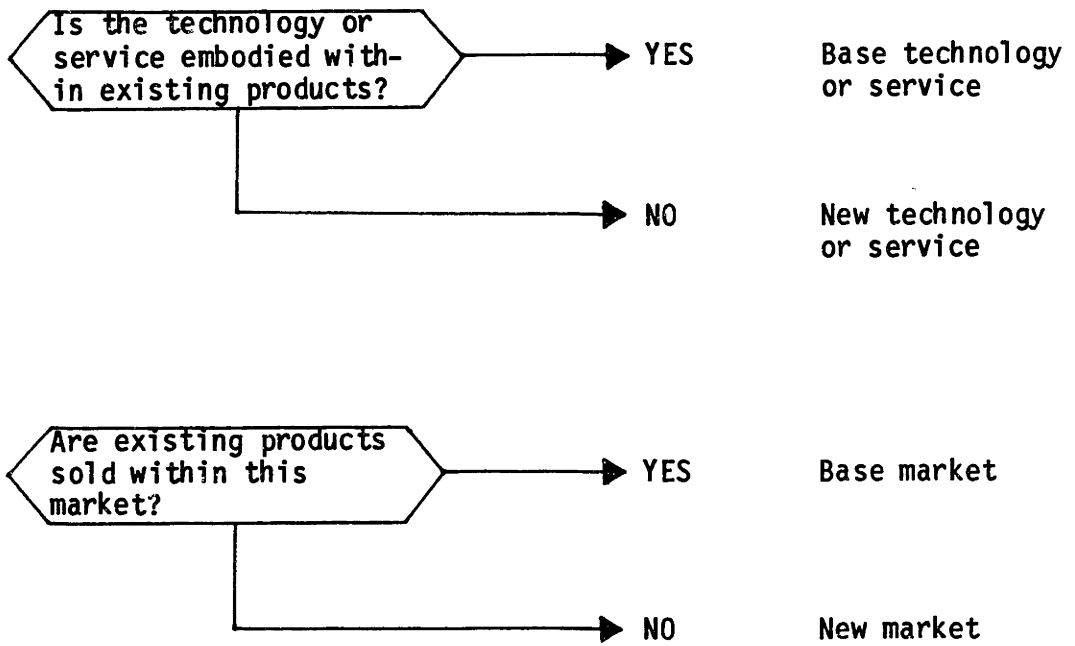



EXHIBIT 29

TESTS OF TECHNOLOGICAL FAMILIARITY

- DECREASING
FAMILIARITY
- 
- 1) Is the technological capability used within the corporation without being embodied in products e.g. required for component manufacture (incorporated in processes rather than products)?
 - 2) Do the main features of the new technology relate to or overlap with existing corporate technological skills or knowledge e.g. coating of optical lenses and aluminising semiconductor substrates?
 - 3) Do the technological skills or knowledge exist within the corporation without being embodied in products or processes e.g. at a central R&D facility?
 - 4) Has the technology been systematically monitored from within the corporation in anticipation of future utilisation e.g. by technology assessment group?
 - 5) Is relevant advice available from external consultants?

familiar and unfamiliar technologies. (Equivalent tests may be applied to services.) Questions to distinguish between familiar and unfamiliar markets are given in EXHIBIT 30.

The application of these tests to any new business development opportunity enables it to be located on a 3 x 3 technology/market FAMILIARITY MATRIX. This has been done for the fourteen business development episodes studied in this thesis and the results are illustrated in EXHIBIT 31.

If the familiarity hypothesis given above is valid, one would expect to observe a tendency for successful episodes to be clustered in base or familiar sectors. By a logical extension of the familiarity hypothesis, a trend towards decreasing performance or success rate on moving outwards from the BASE MARKET FACTORS/BASE TECHNOLOGIES would be expected. Although the data base obtained in this research does not enable this latter trend to be explored, examination of EXHIBIT 31 indicates that the former "clustering" effect is generally the case. (This is not surprising in view of the results of chapter IV. These indicated that familiarity with markets and appropriate business patterns, and to a lesser extent technological factors, was significantly related to success in internal development or acquisition episodes.) There are, however, two notable exceptions which require explanation: episodes G and N were successful in an area of both unfamiliar markets and technologies.

In order to examine more closely the distribution of episodes, separate matrices were developed for acquisitions, internal development episodes and minority investments of venture capital. These separate matrices are illustrated in EXHIBITS 32, 33 and 34 respectively. Relative magnitude is represented on each of these matrices by the diameter of the episode circle. Acquisitions are scaled on the basis of annual sales at acquisition (corrected for inflation). Internal development episodes are scaled on the basis of total funding prior to the generation of revenue (again corrected for inflation). Minority investments are scaled on the basis of size of investment with the same scale as that used for internal development.

EXHIBIT 33 shows that successful and unsuccessful internal development episodes are clearly segregated on the basis of familiarity.

EXHIBIT 30

TESTS OF MARKET FAMILIARITY

- 1) Do the main features of the new market relate to or overlap with existing product markets? e.g. base and new products are both consumer products.
- 2) Does the company presently participate in the market as a buyer (relevant to backward integration strategies)?
- 3) Has the market been monitored systematically from within the corporation with a view to future entry?
- 4) Does knowledge of the market exist within the corporation without direct participation in the market (e.g. as a result of previous experience of credible staff)?
- 5) Is relevant advice available from external consultants?

DECREASING
FAMILIARITY



EXHIBIT 31

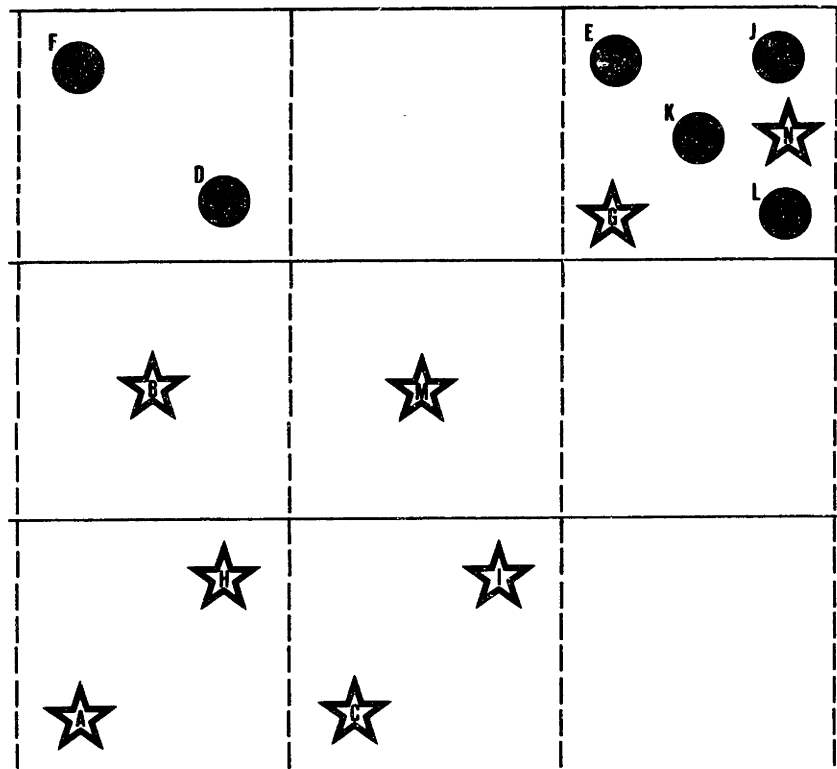
EPISODE SCATTER ON THE FAMILIARITY MATRIX

MARKET FACTORS

NEW UNFAMILIAR

NEW FAMILIAR

BASE



BASE

NEW FAMILIAR

NEW UNFAMILIAR

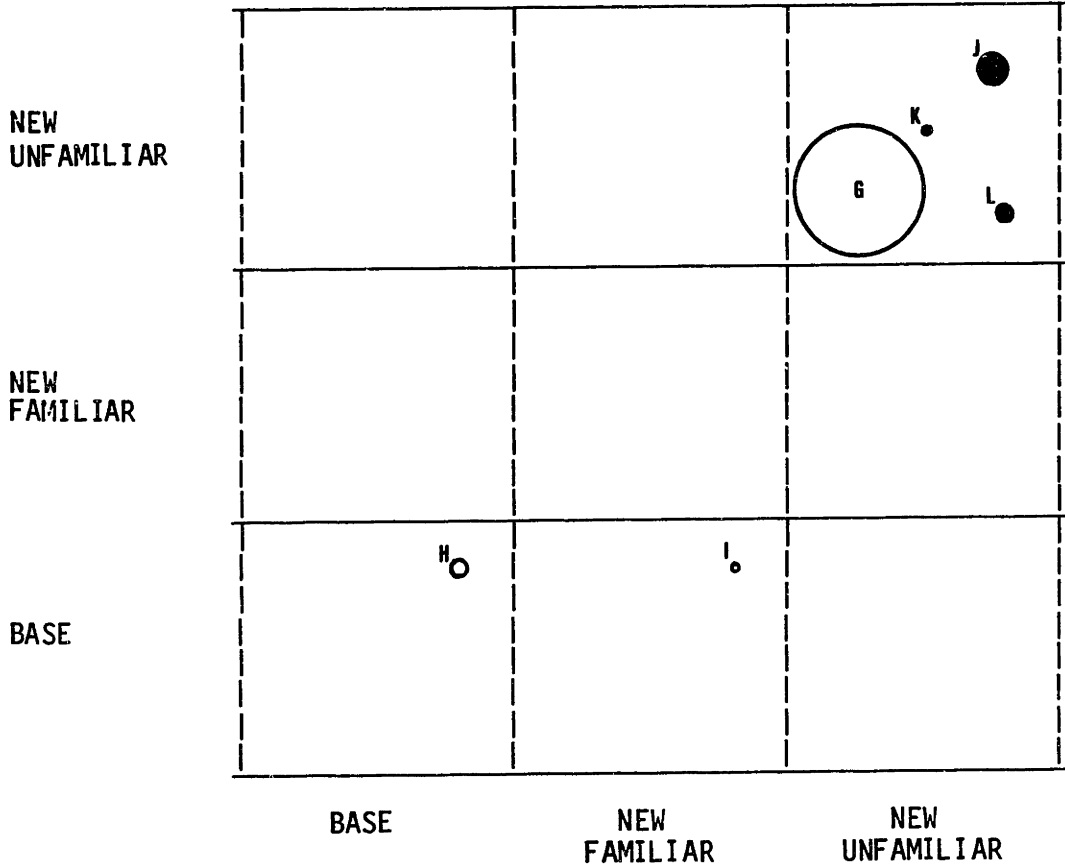
TECHNOLOGIES OR SERVICES EMBODIED IN THE PRODUCT

KEY:

- ★ = SUCCESS
- = FAILURE

EXHIBIT 32

ACQUISITION PLOT ON THE FAMILIARITY MATRIX



TECHNOLOGIES OR SERVICES
EMBODIED IN THE PRODUCT




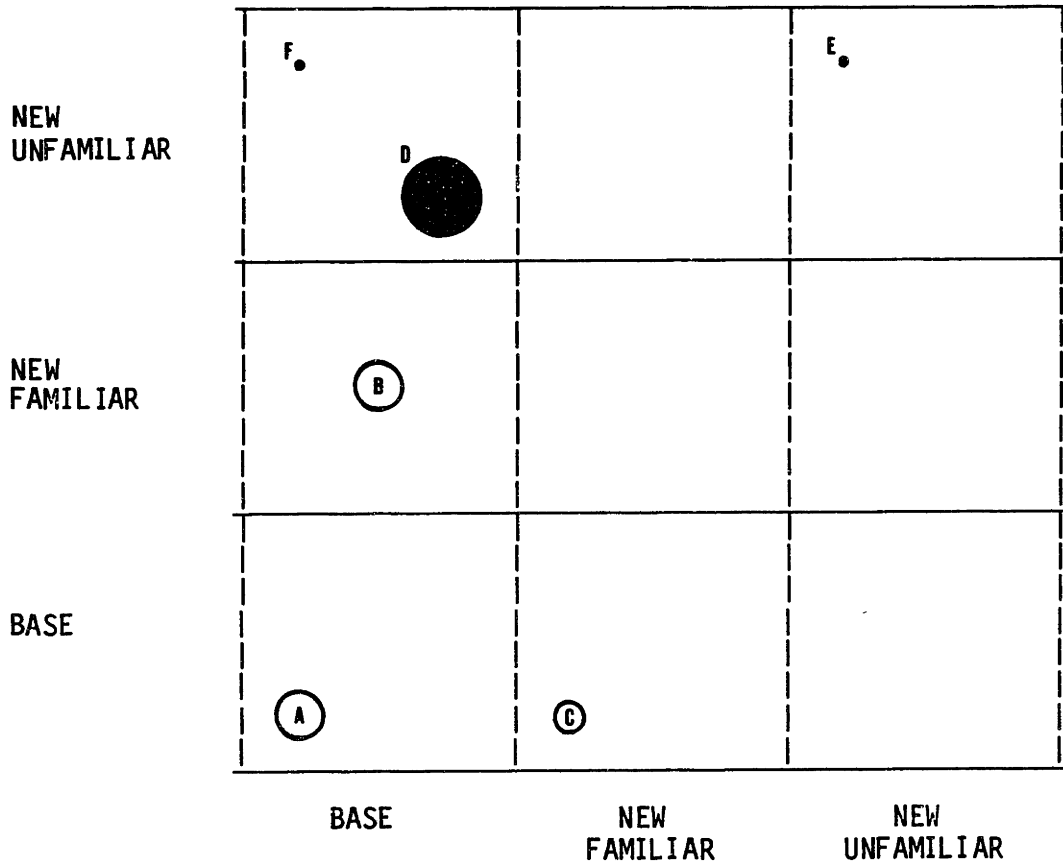
- KEY:
-  = SUCCESS
 -  = INCOMPATIBLE
 -  DIAMETER INDICATING RELATIVE SALES AT ACQUISITION (ADJUSTED FOR INFLATION)

EXHIBIT 33

INTERNAL DEVELOPMENT PLOT ON THE FAMILIARITY MATRIX



TECHNOLOGIES OR SERVICES EMBODIED IN THE PRODUCT

KEY:



= SUCCESS



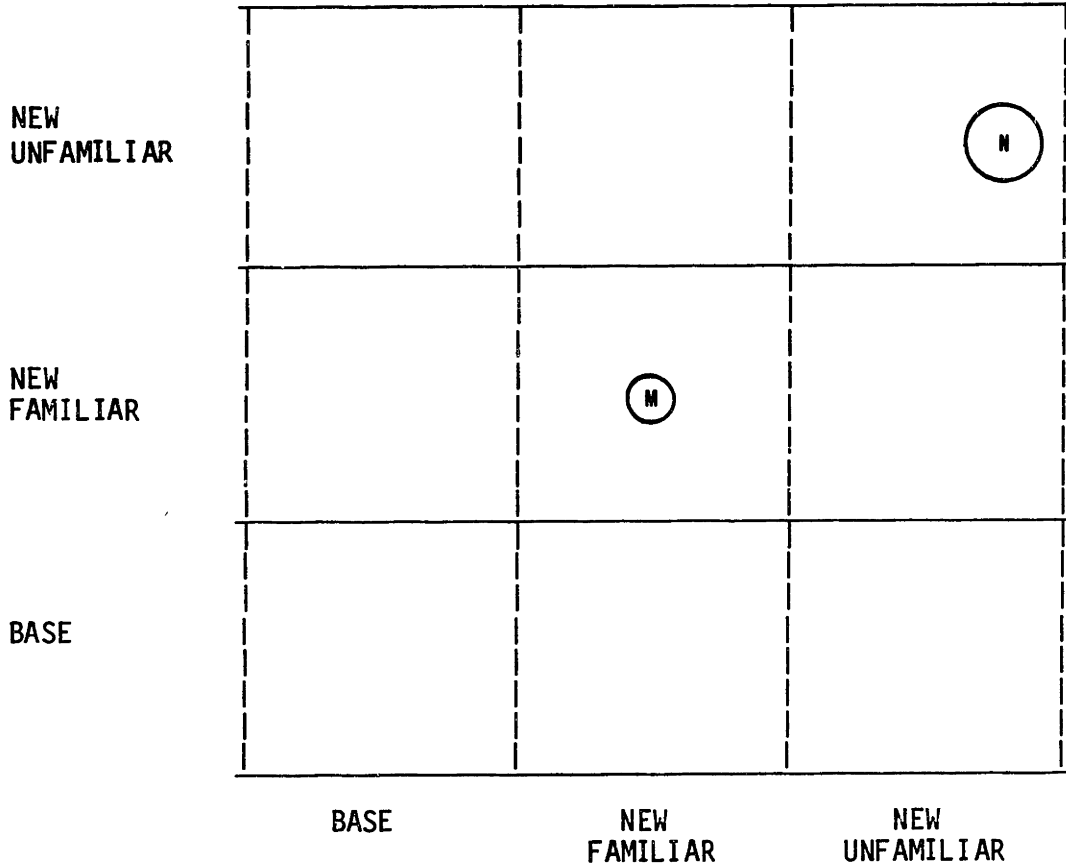
= FAILURE



DIAMETER INDICATING RELATIVE FUNDING LEVELS PRIOR TO GENERATION OF REVENUE (ADJUSTED FOR INFLATION)

EXHIBIT 34

MINORITY INVESTMENT PLOT ON THE FAMILIARITY MATRIX



TECHNOLOGIES OR SERVICES EMBODIED IN THE PRODUCT

KEY:



= SUCCESS



= FAILURE



DIAMETER INDICATING RELATIVE INVESTMENT LEVELS (ADJUSTED FOR INFLATION)

However, the acquisitions shown in EXHIBIT 32 include episode G, one of the exceptions. The second success in unfamiliar areas is episode N, one of the minority investments illustrated in EXHIBIT 34.

Examining firstly episode G, it can be seen from EXHIBIT 32 that it is by far the largest of the acquisitions studied. In addition, the details presented in EXHIBIT 19 indicate that the only constraint imposed upon company G was the parent's planning system and in fact the company was highly receptive to the introduction of this system. This tends to indicate that company G was not tightly integrated with the parent and that the constraint imposed did not severely disrupt the established operating procedures of the company.

All factors surrounding the acquisition of company G--its size, growth market, low level of constraint and low disruption by the parent--all suggest that company G may also have been successful even if it had not been acquired. Representatives of the parent agreed that this might be the case although they pointed out that the levels of performance obtained following acquisition might not have occurred if company G had remained independent. This leads to the following hypothesis explaining the success of episode G in an unfamiliar product-market region of the FAMILIARITY MATRIX.

Hypothesis: If an acquired company is big enough to stand alone and is not tightly integrated with the parent, its success is independently determined by itself.

It is important to point out that in this type of situation, identification of synergy becomes difficult. Synergy must exist in any acquisitive development if economic value is to be created by the move.³

The other success in unfamiliar areas, episode N, is a minority investment of venture capital. By the very nature of minority investments, corporate involvement is limited to a low level. Although some influence may be exerted via board participation, the investee is again not tightly bound to the parent. Consequently, the success of the investee tends once again to be determined to a large extent by itself.

Detailed examination of episodes G and N has therefore suggested that there may indeed be a good reason for their success in unfamiliar sectors--they didn't require a significant input to decision making from the unfamiliar parent. This suggests that there may be ways to increase new business development success rate in unfamiliar areas by holding corporate input to the decision making process at low levels.

6.5 OPTIMUM ENTRY STRATEGIES.

The results of this research tend to support the hypothesis that new business development within the sphere of corporate familiarity is more likely to succeed than new business development outside that sphere. However, corporate strategic planning may identify opportunities in unfamiliar areas that still represent attractive new business possibilities. How, then, should entry into these attractive but unfamiliar areas be achieved? Entry strategy is now related to corporate familiarity for each sector on the FAMILIARITY MATRIX.

6.5.1 BASE/FAMILIAR SECTORS.

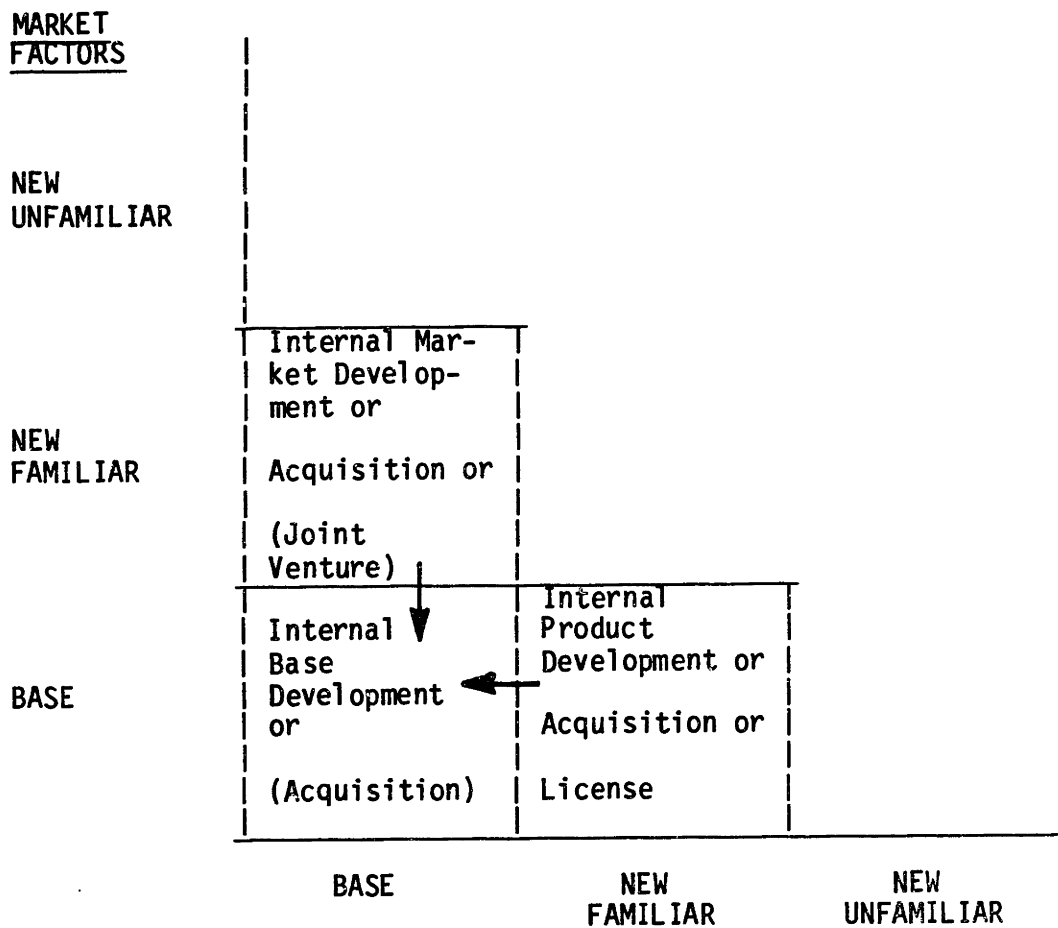
Within the base/familiar sector combinations illustrated in EXHIBIT 35, a corporation is fully equipped to undertake all aspects of new business development. Consequently, the full range of entry strategies may be considered, including internal development, joint venturing, licensing, acquisition or minority investment of venture capital. However, although these are all valid from a corporate familiarity standpoint other factors suggest optimum entry approaches.

In each of these base/familiar sectors, both the technologies and market factors are well understood. In a new familiar market, joint venturing may provide rapid access to distribution channels. However, the potential of conflict with the partner may reduce the appeal of a joint venture unless international market development makes it essential to have a partner rather than subsidiary in the new country.¹⁶ Minority investments also offer little benefit since the investee would do nothing that could not be done internally. If such investments were made, this could simply generate competition and interference with comparable work being carried out internally.

The most attractive entry mechanisms in these sectors probably include internal development, licensing and acquisition. Internal development may be appropriate in each of these sectors, since the required expertise already exists within the corporation. Licensing may be an attractive alternative in the base market/new familiar technology sector since it offers fast access to proven products. (In this

EXHIBIT 35

BASE/FAMILIAR SECTORS



TECHNOLOGIES OR SERVICES EMBODIED IN THE PRODUCT

KEY:



= TRANSITIONS OVER TIME

situation, the corporate familiarity with the technology means that the license is not a substitute for technical competence. Killing¹³ stressed the danger in attempting to license when technical competence did not already exist within a corporation.) Acquisition may be attractive in each sector but may be infeasible in the base/base region as a result of anti-trust legislation.

It may be concluded that in these base/familiar sectors, although the full range of entry strategies may be feasible, the optimum range may be limited to internal development, licensing and acquisition for the reasons identified above. This optimum range is illustrated in EXHIBIT 35. In all cases a new business developed in each of these sectors is immediately required to fulfill a role within the corporate business portfolio, most likely as a QUESTION MARK. For this reason, acquisitions in these sectors will be referred to from now on as "portfolio" acquisitions.

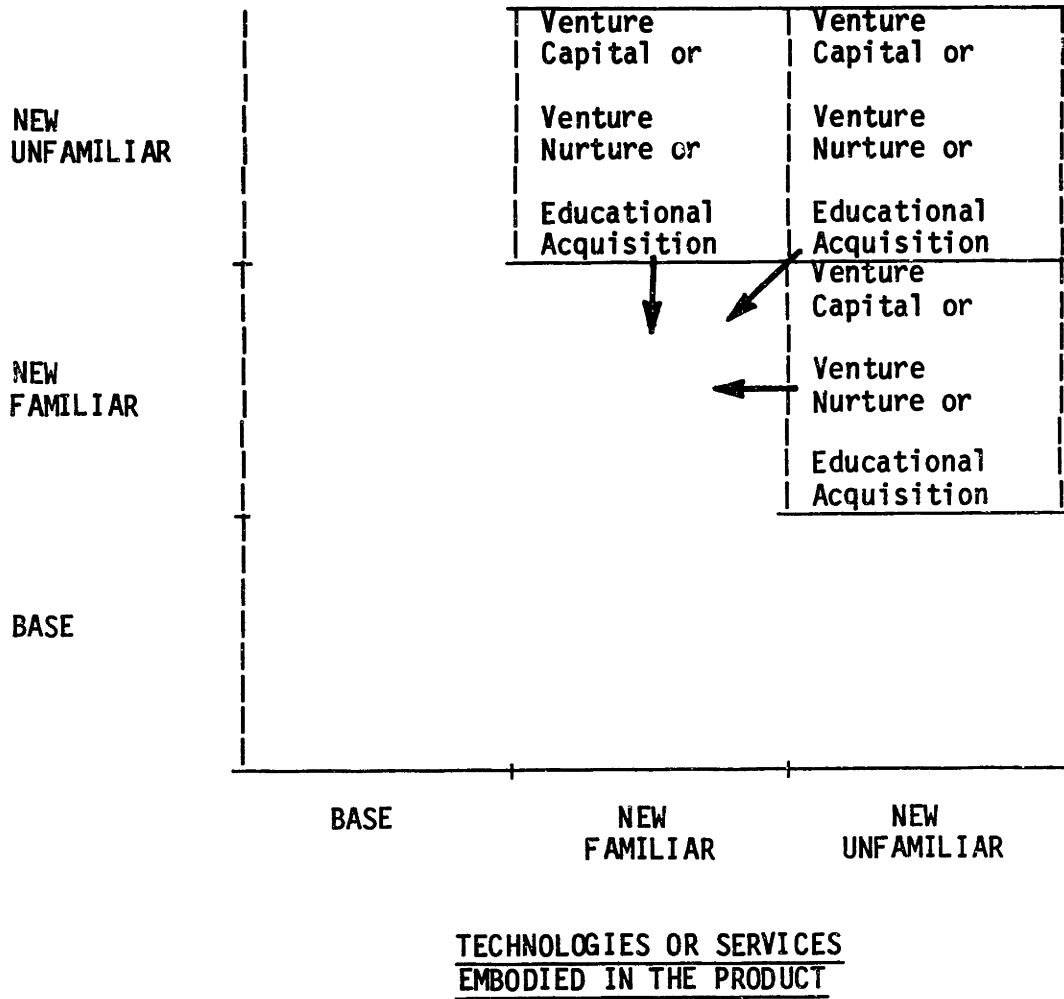
Finally, since new businesses within the base market/new familiar technology and new familiar market/base technology sectors immediately enter the corporate business portfolio, they transfer rapidly into the base/base sector. These transitions are illustrated in EXHIBIT 35.

6.5.2 FAMILIAR/UNFAMILIAR SECTORS.

EXHIBIT 36 illustrates the sectors of lowest familiar from a corporate standpoint. The research has shown that there is a high probability of failure if internal development or acquisition is attempted in these regions. Research has also shown that investments which subsequently require low corporate involvement in operating decisions can succeed in unfamiliar areas. Both these findings suggest a logical approach to new business opportunities in these sectors.

It has already been proposed that a company is only competent to carry out totally appropriate analysis on new business opportunities which lie within its own sphere of familiarity. Large scale entry decisions outside this sphere are liable to miss important characteristics of the technology or market, so reducing the probability of success. Furthermore, if the unfamiliar parent attempts to exert

EXHIBIT 36
FAMILIAR/UNFAMILIAR SECTORS



KEY: ↘ = TRANSITION OVER TIME

strong influence on the new business, the probability of success will be reduced still further.

These factors suggest that a two stage approach may be best when entering unfamiliar new business areas. The first stage should be devoted to building corporate familiarity with the new area. Once this has been achieved, the parent is then in a position to decide whether to allocate more substantial resources to the opportunity and, if appropriate, to select a mechanism for developing the business.

Venture capital provides one vehicle for building corporate familiarity with an unfamiliar area. By nurturing a venture capital minority investment the parent can monitor, at first hand, new technologies and markets.* Over time the new opportunity moves into a familiar market/technology region, as illustrated in EXHIBIT 36, from which the parent can now exercise appropriate judgment on the commitment of more substantial resources.

Targeted small acquisitions can fulfill a similar role to a venture capital minority investment and, in some circumstances, may offer significant advantages. In an acquisition of this type, the parent immediately obtains people familiar with the new business area, whereas in a minority investment, the parent relies upon its existing staff building familiarity by interacting with the investee. Acquisitions for educational purposes may therefore represent a faster route to familiarity than the venture capital "window" approach. Staff acquired in this manner may even be used by the parent as a basis for redirecting a corporation's primary product-market thrust. The Harris Corporation (formerly Harris-Intertype) entered the computer and communication systems industry using precisely this mechanism to acquire skills and knowledge.

There are also potential drawbacks in this "educational acquisition" approach. It probably requires a higher level of financial commitment than minority investment and therefore increases risk. In addition, it is necessary to ensure that key people do not leave soon after the

* It is clearly essential that if the investment is to be worthwhile, the investee must be totally familiar with the technology/market. These must be his base business.

acquisition due to the removal of entrepreneurial incentives. A carefully designed acquisition deal may be necessary to ensure that incentives remain.

It is also important that the performance of acquisitions of this type be measured according to different criteria from those used to assess the "portfolio" acquisitions discussed in the previous section. These "educational" acquisitions should be measured on their ability to provide increased corporate familiarity with a new technology or market, and not on their ability to perform as QUESTION MARKS or CASH COWS with the corporate business portfolio.

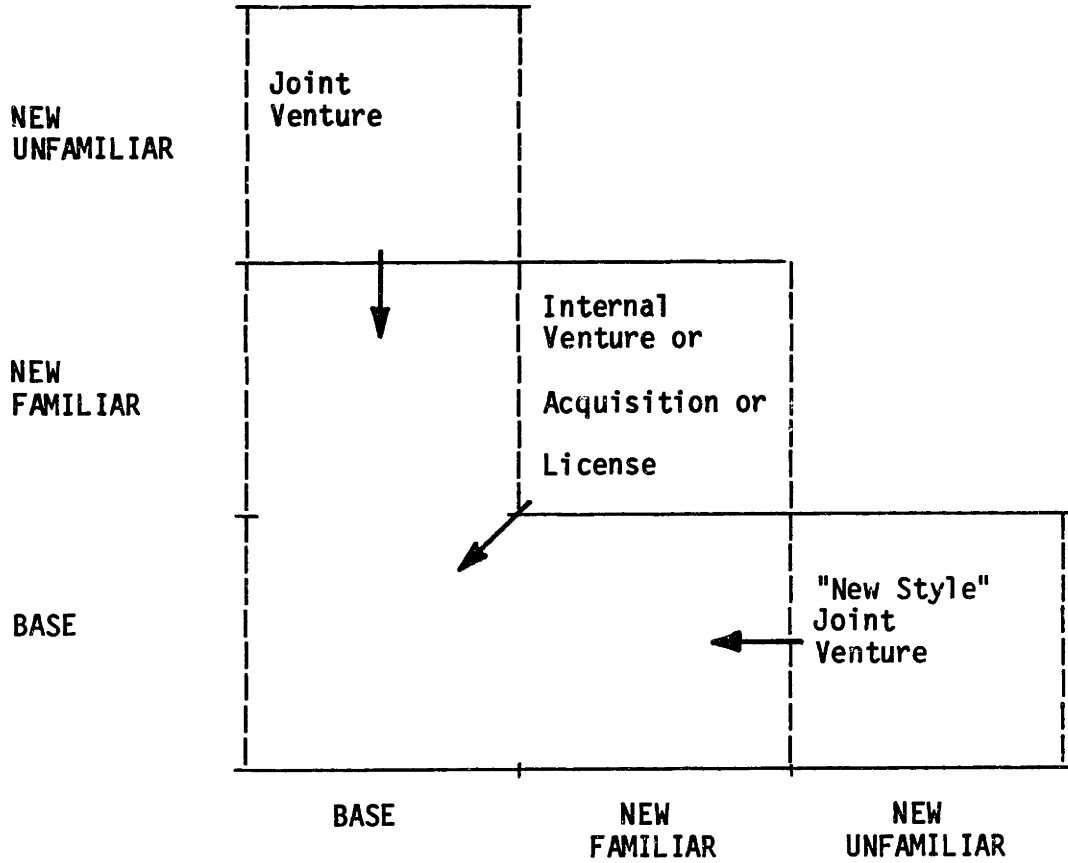
6.5.3 MARGINAL SECTORS

The marginal sectors of the matrix are the base/new unfamiliar combinations plus the new familiar market/new familiar technology area, as illustrated in EXHIBIT 37. In each of the former sectors, the company has a strong familiarity with either markets or technologies, but is totally unfamiliar with the other dimension of the new business. Moreover, the company is visibly familiar with the technology or market since it is associated with its base business. In these situations joint venturing may be very attractive to the company and prospective partners can see that the company may have something to offer. In the new familiar/new familiar region this is not the case since the company's base business does not advertise familiarity with that technology or market. Hence, although the company might view a joint venture as attractive, prospective partners may not perceive that such a relationship would yield any benefit to them.

In the base market/new unfamiliar technology sector the "new style" joint venture discussed by Roberts²² and Hlavacek et al.¹⁷ is appropriate. The parent provides the marketing channels and a small company provides the technological capability in a union that can result in a very powerful team. The complement of this situation may be equally attractive in the new unfamiliar market/base technology sector.

Joint ventures such as these not only provide a means of fast entry into a new business sector, but also offer increased corporate familiarity over time. The transitions which take place over time are

EXHIBIT 37
MARGINAL SECTORS



TECHNOLOGIES OR SERVICES EMBODIED IN THE PRODUCT

KEY:



= TRANSITIONS OVER TIME

illustrated in EXHIBIT 37. Hence, although a joint venture may be the optimum entry mechanism into the new business area, future development of that business may be best achieved internally as discussed in the earlier Base/Familiar Sectors section. (Attempts at internal development before this familiarity has grown are risky.) Alternatively an acquisitive strategy could be used for further development. Indeed the joint venture partner may be ripe for acquisition.

In the new familiar market/new familiar technology sector, the company may be ideally placed to undertake an internal venture. Alternatively, licensing may provide a useful means of obtaining rapid access to a proven product embodying the new technology. Minority investments can also succeed in this sector as illustrated by Episode N. However, since familiarity exists, a higher level of corporate involvement and control may be desirable.

Acquisitions may be potentially attractive in all marginal sectors. However, in the base/new unfamiliar areas this is dangerous since the company's lack of familiarity with the technology or market prevents it from carrying out comprehensive screening of candidates. In contrast, the region of new familiar market/new familiar technologies does provide adequate corporate familiarity to ensure that screening of candidates covers most significant factors. In this instance an acquisitive strategy is reasonable.

6.5.4

SECTOR INTEGRATION.

The foregoing discussion has proposed optimum entry strategies for attractive new business opportunities based on their position on the FAMILIARITY MATRIX. EXHIBIT 38 integrates these proposals to form a tool for selecting entry strategy based on corporate familiarity.

The theme which forms the basis of this proposal is that corporate familiarity with the new business area should exist before a decision is taken to commit substantial resources to the business. Since familiarity already exists in base/familiar sector combination, internal development or acquisition is entirely appropriate. However, in familiar/unfamiliar sector combinations, familiarity must be developed before major decisions are taken. Venture capital minority investments, venture nurturing and

EXHIBIT 38

OPTIMUM ENTRY STRATEGIES

NEW UNFAMILIAR	Joint Venture	Venture Capital or Venture Nurture or Educational Acquisition	Venture Capital or Venture Nurture or Educational Acquisition
	Internal Market Development or Acquisition or (Joint Venture)	Internal Venture or Acquisition or License	Venture Capital or Venture Nurture or Educational Acquisition
BASE	Internal Base Development or (Acquisition)	Internal Product Development or Acquisition or License	"New Style" Joint Venture
	BASE	NEW FAMILIAR	NEW UNFAMILIAR

TECHNOLOGIES OR SERVICES
EMBODIED IN THE PRODUCT

small targeted "educational" acquisitions are recommended as ideal means of developing familiarity.

In marginal sectors with base/unfamiliar combinations, joint venturing seems best. The remaining marginal sector, a familiar/familiar combination, shows no existing base capability but nevertheless familiarity is high. Hence large scale decisions on internal venturing or acquisition are appropriate. This is the sector which receives the formerly unfamiliar business opportunities as the venture capital, venture nurturing or "educational" acquisitions breed familiarity over time.

6.6 SUMMARY.

This chapter has covered an extensive range of arguments and proposals. These are now summarised below.

The research results suggest that prior familiarity with the technological and market dimensions of a new business tends to increase the probability of success of the new business. A new conceptual framework based upon the concept of corporate familiarity has been presented. This uses tests of technological and market familiarity to permit an attractive new business opportunity to be characterised on the basis of these two dimensions. This then permits opportunities to be located on a two-dimensional technology/market "familiarity" matrix.

It has been proposed that optimum entry strategies into attractive new business areas vary according to their location on this matrix. Within familiar sectors a company is fully capable of evaluating and executing a wide range of entry strategies. However, in unfamiliar areas, although a company may think it is fully equipped to undertake major entry based upon internal development or acquisition, it is liable to miss the subtleties of the new area due to a lack of familiarity. In order to avoid a high risk of failure in these sectors, familiarity should be developed before large scale entry is undertaken and this may be achieved by means of minority investments of venture capital, venture nurturing, or small "educational" acquisitions. Joint ventures may also be used to address areas of mixed familiarity.

A general tool for selecting entry strategy based upon position in the familiarity matrix has been proposed, primarily directed at the established technologies which form the basis of most business opportunities. This framework can no doubt be broadly extended for application to emerging technologies as well.

The major conclusions that may be drawn centre on the benefits of a mixed strategy. By exploiting a range of strategies such as internal development, acquisition, joint ventures, venture nurturing and venture capital, a much broader range of opportunities may become available at lower risk than would otherwise be possible.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION.

The research which forms the basis of this thesis centred on an investigation of five issues which were identified in chapter III during the discussion of the research focus. The five basic questions are now listed again.

- How should a medium/large company stimulate and maintain the innovative process in order to develop new business and promote growth?
- What organisational structure should such a company adopt to best accommodate new business, whether this results from acquisition or internal development?
- Which critical variables differentiate successful from unsuccessful new business development?
- What is the nature of the impact of these variables on new business development success?
- Does a multi-faceted approach to new business development encompassing a range of both internal and external development offer real benefits over alternative strategies concentrating on, for example, internal development?

This chapter now attempts to address these questions by drawing conclusions from the results obtained during the research.

7.2 ADDRESSING THE GOALS OF THE THESIS.

7.2.1 PROMOTING GROWTH.

The company studied in this thesis had maintained outstanding growth for over a decade by building and managing a diverse set of technological businesses. This performance may be attributed to a large extent to the sophisticated strategic planning and control system which was introduced after 1969, the only loss year in the company's history. Prior to this time, although the company had attempted growth through acquisition, the resulting portfolio of businesses was not controlled and configured in a manner which guaranteed consistent performance. This resulted in the loss in 1969.

Strategic Planning and Control

Tight planning and control requires standard approaches to the short and long term across all diverse business elements in the corporate portfolio. It may be one of the few threads of consistency across the diverse set and is therefore of great importance. Once standard frames of measurement have been imposed, the relative performance of business elements can be examined so that sub-standard performance may be readily identified and addressed. The achievements of the company studied are also attributed to a large extent to speed of action on sub-standard performance. Things shouldn't be left to "bleed" for long when a strategic route to success cannot be identified.

Successful growth requires a solid base business from which to build. The company studied also believes that an ability to manage to plan, the presence of both financial and managerial slack and a view of real market needs are also critical in achieving consistently above average growth goals. All mechanisms and directions for growth must be used to achieve this high performance and continued business development is therefore necessary.

A further factor of importance is the configuration of the portfolio of business elements that is built through growth. Ideally this should be made as robust as possible so that the impact of changes in

environmental or economic factors is minimised. If consistently above average growth is to be maintained, such immunity should be built into the business portfolio. The company studied had achieved this by means of planned and controlled diversification. There was no single predominant product line and business elements were configured so that unforeseen difficulties encountered by any one element would not strain the resources of the corporation as a whole.

Speed to Required Performance.

The results of the research show that successful internal development episodes achieved profitability and the required performance levels in, on average, 2.7 years and 5 years respectively. This is very fast when compared with the corresponding figures of 8 and 10 to 12 years observed in previous research on diversified corporations.¹⁸ This performance may be attributed to the setting of ambitious targets and the monitoring of subsequent performance through a rigorous planning and control system. The average figures are also held low by the speed of action on sub-standard performance.

Although these figures are unusual for corporate development they are comparable with results observed in independent start-up ventures.⁴⁰ Important factors in promoting high growth may therefore be the setting of ambitious targets, careful monitoring of subsequent performance and the creation of an independent "small company" climate.

Instant Cash Cows.

A balanced business portfolio of the form advocated by BCG (see section 2.2.4) includes CASH COWS, QUESTION MARKS and STARS, with as few DOGS as possible. Traditionally new businesses enter the portfolio as question marks and are funded by cash cows so that they may grow into stars. Once a star, a business eventually becomes a cash cow as its market growth slows.

This transition from question mark to star can take significant time. It would therefore be of considerable benefit from a corporate growth standpoint if businesses could be introduced into the corporate

portfolio as cash cows. The company studied in this thesis generated these "instant cash cows" by means of service contracts.

Episode C outlined in EXHIBIT 15 illustrates the concept. By developing high technical and managerial credibility, the company was able to win a five year contract to manage a government facility. During the life of such a contract the investment required is negligible and a low risk cash stream flows to the company. This effectively represents an "instant cash cow" and if credibility with the service contract awarding authorities can be maintained, so may the flow of service contract funds.

This concept may be particularly useful for growth-oriented technological companies. Selling services, not necessarily to government agencies, can provide low risk cash flows to finance other business unit growth. It may also provide a means of maintaining high technical capability within the company without an excessive overhead. Indeed, internal and external spin-offs from service divisions have taken place in the company studied. Although no examples in the former category have occurred in the recent past, several new companies have been formed by staff leaving service divisions. Hence, these divisions may be useful sources of new businesses providing that the creative and entrepreneurial resources of these divisions can be harnessed.

Idea Generation.

Innovation feeds upon ideas. Consequently, in order to stimulate and maintain the innovative process, sources of ideas are required. Technical organisations with internal research and development facilities may have a wealth of ideas within these facilities which can be tapped and exploited to develop new businesses. This thesis has outlined examples of the systems used by 3M and Texas Instruments for just this purpose.

No such system existed within the company studied. Although the strategic planning and control system did encourage business elements and divisions to declare new business ideas, there was no specific system dedicated to this task. Clearly the growth record of the company shows that this has not hampered performance. However, it is possible that a

wider range of internally generated new business possibilities might become available by harnessing the creativity of staff across divisions. Requests for new business ideas from single business elements or divisions may tend to constrain proposals within the existing field of business of the division. In contrast, a formal system such as the CST adopted by T.I. might make available the benefits of inter-division synergies.

An idea searching system may not be an essential component of diversification and growth. However, it may be an extremely useful means of exploiting fully the technical and creative resources within a corporation. If the introduction of a permanent system is considered infeasible, then alternatives are also possible. For example, Pilkington Brothers P.L.C. recently ran a "quest" throughout its divisions to identify any opportunities that were not being exploited. This was achieved by means of a temporary system that took approximately six months to introduce and execute.

7.2.2 ORGANISING FOR DIVERSIFICATION AND GROWTH.

The structure adopted by the diversified corporation studied was based on the grouping of in excess of 150 business elements into 36 divisions. These were in turn formed into 6 groups which were directed from the corporate level. This had not been specifically designed to assist in diversification and growth but it had been found to function well under these conditions.

Although the strategic planning system was imposed rigorously throughout the organisation, business units were otherwise afforded high latitude for independent action within their own market area. This was designed to cultivate a "small company" environment within the much larger parent.

One potential benefit of this structure has already been discussed--it may contribute to the high speed with which internal new business ventures achieve required performance levels. However, other benefits may also exist. A structure formed on the basis of an array of relatively independent business elements simplifies the incorporation of acquisitions or the establishment of new business elements resulting from

internal development. Any "culture shocks" experienced by newly acquired companies tend to be limited to reaction to the imposition of the planning system, and extensive discussions on integration now take place before an acquisition is finalised.

Attempts are now made to locate new business elements such that technological and marketing synergies with established businesses are maximised. Management talent within the new business is also utilised to the fullest extent. Episode H outlined in EXHIBIT 20 illustrates the principle. Following acquisition it became apparent that the high performance of company H was largely attributable to its excellent management. This company has now taken over the management of the division within which it was initially located.

At present, business elements are formed into divisions according to technology or market linkages. As a corporation becomes increasingly diversified, this may become more and more difficult. It may then become useful to group business elements on the basis of appropriate managerial factors or patterns of doing business, rather than force a less natural grouping on the basis of other criteria. In this situation, divisions would specialise in one particular business pattern, such as providing high performance at a premium price, rather than attempting a range of patterns.

It may be concluded that the "small company" concept upon which the main organisation is based may yield significant benefits in relation to diversification and growth. Business elements and divisions benefit from the small company climate and the corporate strategic planning system ensures that they are all directed towards the common purpose of the parent organisation.

7.2.3 CRITICAL VARIABLES.

The results of this research show that, for the range of new business development episodes studied in this thesis, some significant variables distinguish successful from unsuccessful episodes. Successful episodes tended to feature the following characteristics which were not present in unsuccessful episodes:

- familiarity with marketing and its relatedness to base capabilities.
- familiarity with the required patterns of doing business.
- familiarity with the technology or service and its relatedness to base capabilities.
- market research in familiar markets.

Other variables were also noted to show some tendency to distinguish successful from unsuccessful episodes, but those identified above featured the highest statistical significance. They may therefore be classed as the critical variables in the new business development episodes studied in this thesis.

7.2.4 IMPACTS OF CRITICAL VARIABLES.

The main features of a new business area may be characterised on two dimensions: technologies or services embodied in the product and market factors. Here, market factors includes both market-related parameters that were found to be critical variables from a familiarity standpoint. These parameters are marketing, and the required patterns of doing business in the market.

Familiarity with these dimensions of a new business opportunity is important if a company is to make appropriate strategic and operating decisions on that new business. If familiarity is absent, a company is liable to make inappropriate decisions on the basis of perhaps extensive, but nevertheless inappropriate analysis. Episodes studied in the research encountered precisely this problem, with extensive market research prior to acquisition completely missing the undercurrents of change that existed within the market.

It may be concluded that all critical variables identified in this research reflect aspects of corporate knowledge of the new business. When knowledge of (or familiarity with) the new area is high, a company is in a strong position to make appropriate strategic and operating

decisions. If familiarity is not present the company may unwittingly be gambling, or worse still, imposing totally inappropriate beliefs upon the new business.

There are two ways to overcome this problem. Firstly, new business development may be constrained within areas of familiarity so that the probability of appropriate analysis and decision is high. Alternatively, unfamiliar areas may be addressed by first building the company's familiarity with the new area before major decisions are taken.

Recent changes in the corporate strategy of the company studied effectively ensure that the former approach is adopted. Divisions are now required to identify their strengths and areas of excellence based on examination of managerial factors, patterns of doing business, technologies and markets. They are then constrained to work within these areas of strength and excellence since these offer high potential for competitive advantage. If all divisions operate within proven areas of excellence, then the corporation as a whole must remain within its sphere of familiarity.

In their recent book, Peters and Waterman⁵⁶ suggest that successful American companies have tended to "stick to the knitting." They state that organisations which branch out (whether by acquisition or internal diversification) but stick very close to their knitting outperform the others. They also believe that the most successful are those which have diversified around a single skill and give, as an example, 3M's diversification around coating and bonding technology. "Sticking to the knitting" would seem to be equivalent to constraining operations within the sphere of corporate familiarity.

Constraining operations within familiar areas is indeed one way to ensure that corporate capabilities are always adequate for the new business areas addressed. However, this eliminates the possibility of entering potentially attractive but unfamiliar new business areas. This thesis has proposed one logical way to address these areas which does not involve high risk. The method involves a two stage approach, the first concentrating on building familiarity with the area and the second concentrating on development of the area if it is still considered attractive.

7.2.5 BENEFITS OF A MULTI-FACETED APPROACH.

A new conceptual framework designed to assist in selecting entry strategy into potentially attractive new business areas has been proposed in this thesis. This concentrated on the concept of "corporate familiarity" with the new business area and a matrix was used to relate familiarity to optimum entry strategy.

In this concept, no one strategy is ideal for all new business development situations. Within familiar sectors, virtually any strategy may be adopted and internal development or acquisition are probably most appropriate. However, in unfamiliar areas these approaches are very risky and familiarity should be built before they are attempted. Minority investments and small targeted "educational" acquisitions form idea vehicles for building familiarity and are therefore the preferred entry strategies in unfamiliar sectors. In marginally familiar sectors, joint venturing may be best.

It is therefore concluded that if new business development is constrained within familiar areas, concentration on internal development or acquisition may be reasonable. However, it is the author's belief that a multi-faceted approach encompassing internal development, acquisitions, joint ventures and venture capital minority investments, can make available a much broader range of opportunities than would otherwise be possible.

7.3 RECOMMENDATIONS FOR FUTURE RESEARCH.

This study is the first known to the author which has concentrated on a range of new business development episodes within one corporation. Consequently, a great deal remains to be done to verify or disprove the entry strategy proposals that have been made.

Parallel studies in other firms across ranges of industries would provide a much broader data base on which to test the proposals. Such studies could not only examine the location of success and failure on the FAMILIARITY MATRIX but could also examine any performance trends that may exist on moving outward from the base region of the matrix. Attempts should be made to relate the optimum entry strategies proposed in this thesis to successful new business development episodes within the various sectors of the matrix. By this means, the validity of the proposed strategies could be tested.

If additional work on this topic is undertaken, the author would hope that the methodology adopted in this study and the questionnaires that were developed to gather data, could provide a basis for the research.

APPENDIX A

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APPENDIX B

STRUCTURED INTERVIEW AT THE CORPORATE LEVEL

1. What were the major corporate goals over the period 1971-1977 (the period of venture inception under consideration)?
 - a) If they underwent change during this period, describe the nature of the changes and the reasons for these changes.
2. How long had these goals existed?
3. Have these goals changed since 1977? (Check one.)
Yes _____
No _____
4. If yes, please explain.
5. Please outline the principal features of corporate strategy over the period 1971-1977 designed to achieve the major corporate goals identified in question 1. above.
6. How long had this strategy been active?
7. Has this strategy changed since 1977? (Check one.)
Yes _____
No _____
8. If yes, please explain.
9. What was the organisational structure over the period 1971-1977?

10. How did this assist or deter diversification and growth?
11. Has this structure changed in the past ten years? (Check one.)
Yes _____
No _____
12. If yes, please explain.
13. In your view, what are the important points that a company must consider when organising for diversification and growth?
14. Please rank the relative preference of the following categories that held over the period 1971-1977.
- i) Acquisitions _____
 - ii) Internal ventures (development) _____
 - iii) Venture capital (minority investments) _____
 - iv) Joint ventures _____
 - v) Other (please specify) _____
15. Please explain the philosophy behind this ranking.
16. For each category identified below, please indicate the number initiated over the period 1971-1977.

NUMBER INITIATED
1971-1977

Acquisitions _____
Internal Ventures (development) _____
Venture capital (minority investments) _____
Joint ventures _____
Other (specified above) _____

Please also give:
Divestitures _____
Discontinued businesses _____

17. Please give the annual sales and growth rates over the period 1971-1977.

YEAR	ANNUAL SALES	GROWTH RATE
1971		
1972		
1973		
1974		
1975		
1976		
1977		

18. What were the relative contributions of each category identified in question 14 towards the sales and growth figures specified in question 17?

19. Does a formal system exist to identify and exploit new products/businesses? (Check one.)

Yes _____
No _____

20. If yes, please describe.

21. If no, how do new business opportunities arise?

22. What incentives exist for idea generation? (Check one.)

i) Promotion _____
ii) Stock options _____
iii) Financial _____
iv) Other _____
v) None _____

23. Please mention any additional information which you feel would be useful in outlining the historical setting and corporate strategy over the period 1971-1977.

APPENDIX C

QUESTIONNAIRE FOR INTERNAL NEW BUSINESS DEVELOPMENT VENTURES

PART I This section contains general background questions on the venture.

1.1 What was the nature of the venture? (Specifics of the new business, new product, etc.)

1.2 What were the important features of the venture?

1.3 Please categorise the venture (Check one):

Unrelated Diversification

Related Diversification

Base Development

1.4 How did it fit with corporate goals and strategies?

1.5 When was the venture initiated? Year _____

1.6 Please describe the process of analysis and approval which led to the initiation of the venture.

1.7 At what level in the organisation was approval granted?

1.8 How did the new venture relate to the parent? (Check as appropriate.)

Technology relatedness

Marketing relatedness

Vertical integration

Financial relatedness (met growth targets)

Manufacturing relatedness (permitting benefits of scale economies)

1.9 Estimate the parent company's familiarity with the following functional skills required for the new venture. (Circle one.)

	TOTALLY UNFAMILIAR	TOTALLY FAMILIAR
a) R&D	1 2 3 4 5 6 7	
b) Manufacturing	1 2 3 4 5 6 7	
c) Marketing	1 2 3 4 5 6 7	
d) Business Pattern	1 2 3 4 5 6 7	

1.10 What marketing research was carried out prior to undertaking the new venture?

1.11 Please characterise the initial market of the new venture (on the basis of the product life cycle "S-curve" model). (Check one.)

- i) Introductory (new) phase _____
- ii) Growth phase _____
- iii) Mature phase _____
- iv) Decline phase _____

1.12 What was the market entry strategy for the new venture? (Was it based on price, quality, innovation, etc.?)

1.13 Please describe competitors' reaction to the market entry of the new venture

1.14 What were the market share targets

1.15 How well did actual performance meet these targets?

1.16 What was the source of the idea that formed the basis of the internal venture?

PART II This section contains questions on venture performance.

2.1 What was the ROI of the venture:
 expected prior to initiation? _____ %
 after two years? _____ %
 after four years? _____ %
 after eight years _____ %

a) Please also give the corresponding sales and operating profits.

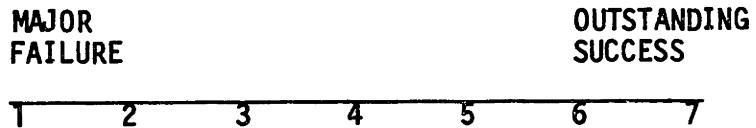
2.2 Briefly describe major elements of the venture's life to date.

2.3 How long did it take for the venture to reach the required financial performance levels? (Please specify these levels.)

a) Did this match expectations? (Check one.) Yes _____
 No _____

2.4 Would you describe the venture as a success? Yes _____
 No _____

a) Please rate the degree of success.

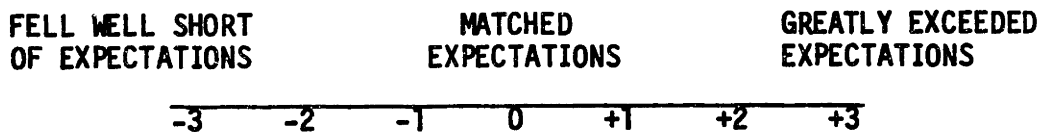


b) Please specify and quantify the basis of this rating.

2.5 If the venture was successful, why did it succeed?

2.6 If the venture was a failure, why did it fail?

2.7 Estimate the success of the venture in meeting expectations:



2.8 Please describe any unanticipated problems or benefits encountered in the venture.

2.9 What is the present status of the venture? (Profitable, terminated, divested etc.)

PART III This section contains questions on specific aspects of internal ventures.

3.1 What was the magnitude and source of the funding in the initial stages of the venture? (Please identify separately R&D and marketing funding for each year prior to the generation of revenue.)

3.2 How did the company accommodate the new venture? (Check one.)
Within existing elements/divisions? _____
As a new business element/division? _____

a) Please describe.

3.3 How was the new venture staffed? (Check as appropriate.)
Hiring new people? _____
Assigning internally? _____
Recruiting internally? _____

b) Please describe the staffing policy which existed.

3.4 Who was directly responsible for the new venture in its early stages?
TITLE: _____

3.5 Who was directly responsible for the new venture in its mature stages?
TITLE: _____

3.6 What incentives were offered to venture management in the early stages? (Check one.)
i) Promotion _____
ii) Stock Options _____
iii) Financial _____
iv) Other _____
v) None _____

3.7 What was the organisational structure of the new enterprise at its inception?

3.8 How much latitude for independent action was given to the venture manager?

HEAVILY
CONSTRAINED
BY PARENT

TOTALLY
INDEPENDENT
OF PARENT

1 2 3 4 5 6 7

3.9 Did an advocate of the venture exist within top management of the parent? (Check one.)

Yes _____
No _____

If yes, please give title: _____

3.10 Did a "project champion" exist at the venture management level? (Check one.)

Yes _____
No _____

If yes, please give title: _____

3.11 Please list any information that has not been covered which you consider would be helpful in explaining the success or failure of the venture and the relationship of the venture to the parent organisation.

APPENDIX D

QUESTIONNAIRE FOR ACQUISITIONS

PART I This section contains general background questions on the acquisition.

1.1 What was the nature of the acquisition? (New business area, filling niche, etc.)

1.2 What were the important features of the acquired company?

1.3 Please categorise the acquisition (Check one):

Unrelated Diversification

Related Diversification

Base Development

1.4 How did it fit with corporate goals and strategies?

1.5 When did the acquisition take place? Year _____

1.6 Please describe the process of analysis and approval which led to the acquisition.

1.7 At what level in the organisation was approval granted?

1.8 How did the acquired company relate to the parent? (Check as appropriate.)

Technology relatedness

Marketing relatedness

Vertical integration

Financial relatedness (met growth targets)

Manufacturing relatedness (permitting benefits of scale economies)

1.9 Please estimate the parent company's familiarity with the following functional skills of the acquired company. (Circle one.)

	TOTALLY UNFAMILIAR						TOTALLY FAMILIAR
a) R&D	1	2	3	4	5	6	7
b) Manufacturing	1	2	3	4	5	6	7
c) Marketing	1	2	3	4	5	6	7
d) Business Pattern	1	2	3	4	5	6	7

1.10 What marketing research was carried out prior to making the acquisition?

1.11 Please characterise the initial market of the acquired company (on the basis of the product life cycle "S-curve" model). (Check one.)

- i) Introductory (new) phase _____
- ii) Growth phase _____
- iii) Mature phase _____
- iv) Decline phase _____

1.12 What was the basis of competition in the acquired company's market? (What did it have to do well to succeed?)

1.13 What was the acquired company's market share on acquisition?

1.14 What were the market share targets

1.15 How well did actual performance meet these targets?

1.16 Please describe any competitive reaction experienced by the acquired company following acquisition.

PART II This section contains questions on the performance of the acquired company.

2.1 What was the ROI of the venture:
 expected prior to initiation? _____ %
 after two years? _____ %
 after four years? _____ %
 after eight years _____ %

a) Please also give the corresponding sales and operating profits.

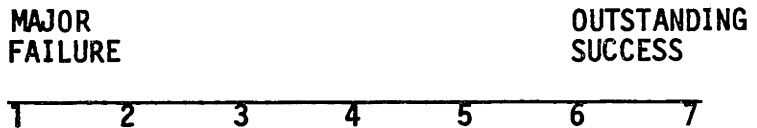
2.2 Briefly describe major elements of the acquisition's life to date.

2.3 How long did it take for the acquired company to reach the required financial performance levels? (Please specify these levels.)

a) Did this match expectations? (Check one.) Yes _____
 No _____

2.4 Would you describe the acquisition as a success? Yes _____
 No _____

a) Please rate the degree of success.



b) Please specify and quantify the basis of this rating.

2.5 If the acquisition was successful, why did it succeed?

2.6 If the acquisition failed, why did it fail?

2.7 Estimate the degree to which the acquisition met expectations:

FELL WELL SHORT OF EXPECTATIONS	MATCHED EXPECTATIONS			GREATLY EXCEEDED EXPECTATIONS		
-3	-2	-1	0	+1	+2	+3

2.8 Please describe any unanticipated problems or benefits resulting from the acquisition.

2.9 What is the present status of the acquisition? (Profitable, terminated, divested etc.)

PART III This section contains questions on specific aspects of the acquisition.

3.1 Please indicate:

Sales of the acquired company at acquisition \$ _____

Earnings of the acquired company at acquisition \$ _____

Number of employees of the acquired company at acquisition _____

Market Value of the acquired company at acquisition \$ _____

Financial packaging of the purchase (cash, stock issue, etc.) _____

3.2 Please describe briefly the characteristics of the acquired company:

Public/Private _____

Age _____

Management structure _____

Products _____

Markets _____

Additional comments _____

- 3.3 How was the acquired company selected? (Check one.)
- i) By an internal search for suitable candidates? _____
 - ii) By an external search for suitable candidates? _____
 - iii) Via an offer by an investment broker? _____
 - iv) Other (please specify) _____
- 3.4 What were the principal criteria in identifying/assessing candidates for acquisition?
- 3.5 Was a formal acquisition selection and screening system used?
- Yes _____
No _____
- a) If yes, please describe.
- 3.6 Roughly how long did it take to execute the total search, selection and acquisition?
- 3.7 Which resources of the parent organisation assisted the acquired company?
- 3.8 How did the parent organisation accommodate the acquired company? (Check one.)
- Within an existing division? _____
 - As a new business element/division? _____
- a) Please describe.
- 3.9 Were the management or management systems of the acquired company modified after the acquisition? (Check one.)
- Yes _____
No _____
- 3.10 If yes, how were they modified?
- 3.11 Do you consider the acquired company to have been a useful source of management talent? (Check one.)
- Yes _____
No _____

3.12 How many members of the acquired company's management have been moved to other positions within the parent organisation?

3.13 How many members of the parent company management have been injected into the acquired company?

3.14 If the acquired company had formerly been owned and run by an entrepreneur, was an incentive purchase used, relating for example, future performance to final sale price? (Check one.) Yes _____
No _____

3.15 If yes, please describe the incentive.

3.16 Please list any information that has not been covered which you consider would be helpful in explaining the success or failure of the acquisition and the relationship of the acquired company to the parent organisation.

APPENDIX E

QUESTIONNAIRE FOR MINORITY INVESTMENTS

PART I This section contains general background questions on the investment.

1.1 What was the nature of the investment? (New business, new product, etc.)

1.2 What were the important features of the venture?

1.3 Please categorise the venture (Check one):

Unrelated Diversification

Related Diversification

Base Development

1.4 How did it fit with corporate goals and strategies?

1.5 When was the venture initiated? Year _____

1.6 Please describe the process of analysis and approval which led to the investment of venture capital.

1.7 At what level in the organisation was approval granted?

1.8 How did the new venture relate to the parent? (Check as appropriate.)

Technology relatedness

Marketing relatedness

Vertical integration

Financial relatedness (met growth targets)

Manufacturing relatedness (permitting benefits of scale economies)

1.9 Estimate the parent company's familiarity with the functional skills of the investment recipient. (Circle one.)

	TOTALLY UNFAMILIAR						TOTALLY FAMILIAR
a) R&D	1	2	3	4	5	6	7
b) Manufacturing	1	2	3	4	5	6	7
c) Marketing	1	2	3	4	5	6	7
d) Business Pattern	1	2	3	4	5	6	7

1.10 What marketing research was carried out prior to undertaking the new venture?

PART II This section contains questions on investment performance.

2.1 What was the ROI of the venture:
expected prior to initiation? _____ %
after two years? _____ %
after four years? _____ %
after eight years? _____ %

2.2 Briefly describe major elements of the investment's life to date.

2.3 How long did it take for the venture to reach the required financial performance levels? (Please specify these levels.)

a) Did this match expectations? (Check one.) Yes _____
No _____

2.4 Would you describe the venture as a success? Yes _____
No _____

a) Please rate the degree of success.

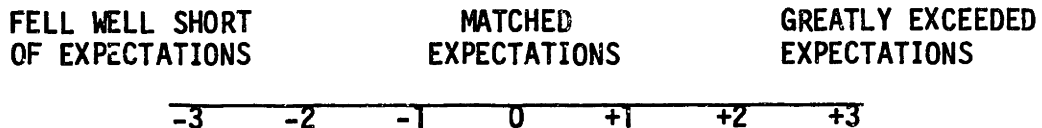
MAJOR FAILURE							OUTSTANDING SUCCESS
1	2	3	4	5	6	7	

b) Please specify and quantify the basis of this rating.

2.5 If the investment was successful, why did it succeed?

2.6 If the investment failed, why did it fail?

2.7 Estimate the success of the venture in meeting expectations:



2.8 Please describe any unanticipated problems or benefits encountered in the venture.

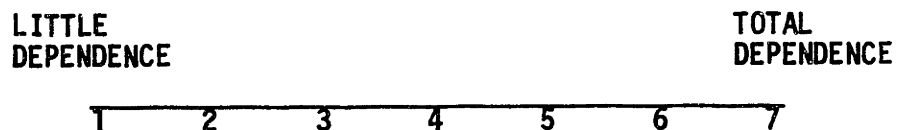
2.9 What is the present status of the venture? (Profitable, terminated, divested etc.)

PART III This section contains questions on specific aspects of the minority investment.

3.1 How did the opportunity for venture capital investment arise?

3.2 How much was invested?

3.3 Please assess the dependence of the recipient of the investment funds on that investment. (Circle one.)



3.4 Was capital channeled to the investment via an external investment fund or did the company fund the venture directly?

3.5 What criteria determine whether pooled investment funds or direct funding is selected for venture capital minority investments?

3.6 What were the motives for venturing with a minority investment? (Check as appropriate.)

- To provide a window on new technology? _____
- A first step towards possible acquisition? _____
- To provide increased returns on excess cash? _____
- Other (Please specify) _____

3.7 What actions were taken by the investor after the investment had been made? (Please indicate any areas of influence or assistance between the investor and recipient, the nature of any linkage that existed, and the level of effort devoted by the investor to the investment.)

3.8 What benefits were obtained from the investment? (Check as appropriate.)

- Technology _____
- People _____
- Information (manufacturing, marketing, etc.) _____
- Revenue _____
- Other (Please specify) _____

a) Please explain.

3.9 What effects did the investment have on the subsequent actions of the investor?

3.10 Please list any information that has not been covered which you consider would be helpful in explaining the success or failure of the venture and the relationship of the venture to the parent organisation.

APPENDIX F

HYPOTHESIS TESTS AND DATA BASE

<u>TEST NUMBER</u>	<u>HYPOTHESIS</u>	<u>DATA DISTRIBUTION</u>	<u>SIGNIFICANCE*</u>								
1	Episodes tended to be successful if they represented either base development or related diversification	<table border="1"> <thead> <tr> <th colspan="2">BASE/RELATED?</th> </tr> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>A B C H I</td> <td>G</td> </tr> <tr> <td>D F</td> <td>E J K L</td> </tr> </tbody> </table>	BASE/RELATED?		Yes	No	A B C H I	G	D F	E J K L	0.12
BASE/RELATED?											
Yes	No										
A B C H I	G										
D F	E J K L										
2	Episodes tended to be successful if they were related to the parent on the basis of technology	<table border="1"> <thead> <tr> <th colspan="2">TECHNOLOGY RELATED?</th> </tr> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>A B C G H I</td> <td></td> </tr> <tr> <td>D F</td> <td>E J K L</td> </tr> </tbody> </table>	TECHNOLOGY RELATED?		Yes	No	A B C G H I		D F	E J K L	0.03
TECHNOLOGY RELATED?											
Yes	No										
A B C G H I											
D F	E J K L										
3	Episodes tended to be successful if they were related to the parent on the basis of marketing	<table border="1"> <thead> <tr> <th colspan="2">MARKETING RELATED?</th> </tr> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>A B C H I</td> <td>G</td> </tr> <tr> <td></td> <td>D E F J K L</td> </tr> </tbody> </table>	MARKETING RELATED?		Yes	No	A B C H I	G		D E F J K L	0.01
MARKETING RELATED?											
Yes	No										
A B C H I	G										
	D E F J K L										

* According to the Fisher Exact Test outlined in Section 3.4.

4 Episodes tended to be successful if they were related on the basis of manufacturing

(Does not apply to C, E, H)

	MANUFACTURING RELATED?	
	Yes	No
Success	A B I	G
Failure	D	F J K L

0.17

5 Episodes tended to be successful if there was prior familiarity with the technology or service

TECHNOLOGY/SERVICE FAMILIARITY?

	TECHNOLOGY/SERVICE FAMILIARITY?	
	Yes	No
Success	A B C H I	G
Failure	D F	E J K L

0.12

6 Episodes tended to be successful if there was prior familiarity with the required marketing

	MARKETING FAMILIARITY?	
	Yes	No
Success	A B C H I	G
Failure		D E F J K L

0.01

7 Episodes tended to be successful if there was prior familiarity with the relevant manufacturing (Does not apply to C, E, H)

	MANUFACTURING FAMILIARITY?	
	Yes	No
Success	A B I	G
Failure	D	F J K L

0.17

8 Episodes tended to be successful if there was prior familiarity with the market's required pattern of doing business within the host division

BUSINESS PATTERN FAMILIARITY?

Yes	No
A B C G H I	
E	D F J K L

Success

Failure

0.01

9 Episodes tended to be successful if market research was carried out before initiation

MARKET RESEARCH?

Yes	No
A B C G H I	
D E K	F J L

Success

Failure

0.09

10 Episodes tended to be successful if market research in familiar markets was carried out before initiation

FAMILIAR MARKET RESEARCH?

Yes	No
A B C H I	G
	D E F J K L

Success

Failure

0.01

11 Episodes tended to be successful if they addressed growth markets

GROWTH MARKET?

Yes	No
A C G H I	B
E K L	D F J

Success

Failure

0.27

12 Episodes tended to be successful if they encountered negligible or less competition

	LOW COMPETITION?	
	Yes	No
Success	A B C H I	G
Failure	D F J L	E K

NOT
SIGNIFICANT

13 Episodes tended to be successful if market share targets were established

	MARKET SHARE TARGETS?	
	Yes	No
Success	A C G H I	B
Failure	D E F J L	K

NOT
SIGNIFICANT

14 Episodes tended to be successful if market share targets were set above 20%

	SHARE TARGET ABOVE 20%?	
	Yes	No
Success	A C G I	B H
Failure	D L	E F J K

0.28

15 Episodes tended to be successful if market share targets were set above 40%

	SHARE TARGET ABOVE 40%?	
	Yes	No
Success	A C G I	B H
Failure	L	D E F J K

0.12

16 Episodes tended to be successful if they were located within an established division

WITHIN ESTABLISHED DIVISION?

	Yes	No
Success	A B H I	C G
Failure	D F	E J K L

0.28

NOT SIGNIFICANT

17 Episodes tended to be successful if they were afforded a high level of independence in operating decisions

HIGH INDEPENDENCE?

	Yes	No
Success	A B C G H I	
Failure	D E F J K	L

18 Episodes tended to be successful if they were approved above division level

APPROVED AT HIGH LEVEL?

	Yes	No
Success	B C G H I	A
Failure	D E F J K L	

NOT SIGNIFICANT

19 Successful episodes tended to be initiated in the second half (post 1974) of the period under consideration

INITIATED AFTER 1974?

	Yes	No
Success	A C G I	B H
Failure	F L	D E J K

0.28

20 Performance of acquisitions tended to match expectations more closely than that of internal development episodes

CLOSE TO EXPECTATIONS?	
Yes	No
J	G H K L I
	A B C D E F

Acquisition

Internal Development

NOT SIGNIFICANT

21 Successful acquisitions tended to achieve the required performance levels faster than successful internal development

PERFORMANCE ACHIEVED WITHIN 3 YEARS?	
Yes	No
G H I	
C	A B

Successful Acquisition

Successful Internal Development

0.20

22 Internal development tended to succeed if the business was staffed via some internal recruitment (as distinct from internal assignment or external hiring)

INTERNAL RECRUITMENT?	
Yes	No
C	A B
	D E F

Success

Failure

NOT SIGNIFICANT

23 Internal development tended to succeed if incentives were offered to management

INCENTIVES OFFERED?	
Yes	No
B C	A
D E F	

Success

Failure

NOT SIGNIFICANT

24 Internal development tended to succeed if a high level sponsor at the corporate level (VP or above) existed

	HIGH LEVEL SPONSOR?	
	Yes	No
Success	A C	B
Failure	D E	F

NOT SIGNIFICANT

25 Internal development tended to succeed if a "project champion" existed

	PROJECT CHAMPION?	
	Yes	No
Success	A B C	
Failure	D E F	

NOT SIGNIFICANT

26 Internal development tended to succeed if the idea originated at or above division manager level

	IDEA SOURCE AT OR ABOVE DIVISION MANAGER?	
	Yes	No
Success	A B	C
Failure	D	E F

NOT SIGNIFICANT

27 Internal development tended to succeed if market entry strategy was based on innovation

	ENTRY BASED ON INNOVATION?	
	Yes	No
Success	A B	C
Failure	F	D E

NOT SIGNIFICANT

28 Successful internal development episodes tended to feature higher funding rates than unsuccessful episodes

	HIGH FUNDING RATE?	
	Yes	No
Success	A C	B
Failure	D	E F

NOT SIGNIFICANT

29 Acquisitions tended to succeed if they were identified by means of an internal search

	INTERNAL SEARCH?	
	Yes	No
Success	G I	H
Failure	K	J L

NOT SIGNIFICANT

30 Acquisitions tended to succeed if a formal screening system was used

	SCREENING SYSTEM USED?	
	Yes	No
Success		G H I
Failure	K	J L

NOT SIGNIFICANT

31 Acquisitions tended to succeed if there was technological or marketing synergy in addition to managerial synergy

	TECHNOLOGICAL OR MARKETING SYNERGY?	
	Yes	No
Success	H I	G
Failure		J K L

0.20

32 Acquisitions tended to succeed if there was some staff transfer between the parent and the acquired company

	STAFF TRANSFER?	
	Yes	No
Success	G H I	
Failure	K L	J

NOT SIGNIFICANT

33 Successful episodes tended to feature longer screening and execution periods than failures

	EXECUTION PERIOD LONGER THAN 6 MONTHS?	
	Yes	No
Success	G	H I
Failure	J	K L

NOT SIGNIFICANT