BUSINESS STRATEGIES FOR FIRMS IN DECLINING INDUSTRIES CAUSED BY LOW COST IMPORT PENETRATION

By

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A Doctoral Thesis

Submitted in fulfilment of the requirement
for the award of

The Degree of Doctor of Philosophy of the
Loughborough University of Technology.

October, 1995

I dedicate this thesis to my wife Noor Aliza and my children; Noor Faizah, Noor Azimah, Badrul Hisyam, Noor Syafawati and Muhammad Luqman whose moral support has never diminished throughout my study.

ACKNOWLEDGEMENTS

I am grateful to many people where without their support and co-operation this research project might have been impossible. Many thanks go to the executive officers of the British Footwear Manufacturers Federation, the British Leather Goods Manufacturers Association and the British Leather Confederation for their participation in the early phase of the research and those 45 CEOs who voluntarily gave their precious time to answering and returning the questionnaire.

I am thankful to my supervisors, Professor Dr. Paul N. Finlay and Mr. Jim Saker who have patiently extend their constructive criticism and advise throughout the duration of my research project. My sincere thanks is also extended to Professor John Saunders and Dr. John Wilson who has alternately taken the directorship of the research panel and contributed constructively to the research direction. My special thanks is also conveyed to my Internal Panel Member Dr. Neil Doherty for his constructive advice and support throughout this research study.

I am grateful to Dr. David Coates who has given his time and expertise in explaining and clarifying the statistical aspect that helps to make my research more meaningful.

Finally, I would like to extend my gratitude to the following people for their assistance in one form or another to my research project: Irene Moody, Marion Aitkenhead, Phil Blake, Paul Izzard, David Lynes and all the staff at the Loughborough University Business School.

ABSTRACT

BUSINESS STRATEGIES FOR FIRMS IN DECLINING INDUSTRIES CAUSED BY LOW COST IMPORT PENETRATION

The major limitation of many studies on declining industries is the presumption that industrial decline is associated with the final stage of the industry life cycle. These studies often define the sample of their study as those firms where their dominant products are subjected to technological obsolescence and are experiencing a persistent decline in the demand of their products.

Conversely, the current study identified factors that the cause of the shrinking in demand of the UK industries was not generally obsolete technology. The decline of UK industries was partly due to severe low cost import penetration that stimulated the shift in demand from the UK manufacturers to the cheaper imported products from the over-seas low cost manufacturers.

Factor analytic technique was used to identify the strategic orientation of the firms from a set of 23 competitive methods operationalized in the questionnaire. Seven strategic orientations were identified: cost efficiency and specialized manufacturing, product variety, competitive standard of quality, flexible manufacturing, business alliance, differentiation and focus. These strategic orientations were used to identify strategic groups. Seven strategic groups were identified: The combination of business alliance and cost efficiency, differentiation, product variety, combination of business alliance and competitive standard of quality, flexible manufacturing, cost efficiency and 'stuck in the middle'. The study revealed that firms pursuing the flexible manufacturing strategy were generally satisfied with their performance while the stuck in the middle were generally dissatisfied with their performance.

The study also revealed that there are other factors besides the appropriate strategies that contribute to strategic success. The strategy success factors include customer loyalty, a firm's accessibility to IT and organizational entrepreneurship.

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Chapter 1.

THE NEED FOR THE RESEARCH AND THE DEVELOPMENT OF HYPOTHESES

Introduction.

The United Kingdom has suffered accelerating industrial decline since 1973. British industries have lost domestic market shares and suffered a marked decline in both output and employment (Williams et al., 1989; Lever 1982; Hirst and Zeitlin, 1989; The IEE, 1992).

Conversely during a similar period, the Japanese industrial success has stimulated western interest in the Japanese industrial achievements (Oliver and Wilkinson 1992), especially in the manufacturing of quality products and ability to market the products at low and competitive prices (Baden Fuller and Stopford, 1992, pp. 5).

The exceptional Japanese manufacturing performance has stimulated interest in the Japanisation of western management techniques (Brown and Blevins, 1989; Eisman, 1991; Samuel Ho, 1993) and management philosophy (Sullivan, 1992).

The decline of manufacturing and service industries in the UK Economy.

For a long time the UK economy has been dependent upon the contribution of the manufacturing sector for growth. In 1990 the manufacturing sector contributed 22.4% to the UK Gross Domestic Product (GDP) and manufactured goods made up 62% of total UK exports (The IEE, 1992). Even though the contribution of the UK manufacturing sector was comparable to the performance of its counterparts in France, USA and Italy in term of GDP, its performance was however much lower if compared to those in West Germany and Japan (The IEE, 1992).

The picture is similar for the export of manufactured goods. Even though the UK's 1990 performance improved on what it was ten years ago, the UK share in export market has declined relative to other major manufacturing countries (Williams et al., 1989 and The IEE 1992).

The next important sector that contributes to the UK economy is the service sector. This sector accounted for 25% of overseas exports in 1990. It has been experiencing a decline in its exports for the last 20 years (The IEE, 1992).

The decline of the manufacturing sector has caused the supporting industries to decline with it, especially the service industries whose income is generated from their complementary relationship with manufacturing.

As a consequence, industrial decline contributes to unemployment, loss of skilled labour and creates unpleasant social problems. It has become a pressing concern for the relevant authorities to overcome these associated problems.

The causes of industrial decline.

A working definition of 'industry' is the collection of firms engaged in similar activities and producing similar goods or services. [A fuller discusion and definition are given in the first part of Chapter 2]. An industry is in its declining stage due to an absolute reduction in demand of the products or services of that particular industry (Harrigan, 1980a; Porter, 1980). In their studies, Harrigan and Porter identified three major causes that would lead to a shrinkage in demand:

1. Creation of substitute products through technological innovation.
2. Shrinkage in the number of customers due to demographic changes.
3. Shrinkage in demand due to change in buyer needs or taste as a consequence of social change.

Besides these factors, globalization of trade and the free market policies of certain countries have created competition between local products and cheaper, imported substitutes. Pressure from cheaper import substitutes causes customers to shift their demand in favour of the cheaper substitute causing the local industries to decline. This is exemplified in the UK clothing, shoe, leather goods and textile industries.

The above causes of decline can be summarized into two consumer-centered causes; the first type is a decline caused by shrinkage in the consumer base and the second is a decline due to the decrease in consumer willingness to pay (Dierickx et al., 1991) as the consequence of low cost imports. The latter leads to the decline of market share for manufacturers in their home market (Grant, 1989).

The characteristics of declining industries.

Porter (1980) explained that a declining industry cannot be described as equivalent to the declining phase of a business cycle or other short term discontinuities in businesses. A declining industry is characterized by an absolute decline in sales over a sustained period (Harrigan, 1980a; Porter, 1980; Harrigan and Porter, 1983).

Harrigan (1980a) argued that the volatility of the declining environment is very dependent on the uncertainty surrounding the rate of decline. Information regarding the nature of the remaining and enduring demand for different market niches and information on whether demand is likely to be revitalized are especially important. Irregular patterns of decline can be disastrous because some firms might be trapped and unable to exit the industry in a timely manner.

Declining industries become volatile when different strategic groups (see Chapter 2 for a full discussion and formal definition of starategic groups) are forced to compete for the same customers by the persistent decline in demand (Harrigan 1980a and Porter 1979). Hostility would also increase if excess capacity exists, and if there arepresence of strong customer industry, low customer switching cost (price insensitivity) and relatively low exit barriers (Harrigan, 1980a; Harrigan, 1980b).

The definition of declining industries.

In light of the above discussion of declining industries and their characteristics, this research defines a declining industry as one where in totality its businesses have been experiencing an absolute decline in demand of its products or services for a long period of time. The decline is not cyclical in nature. [this is discussed further in Chapter 2].

Excess capacity and firm exit behaviour.

Harrigan (1980a) and Shaw and Shaw (1983) pointed out that excess capacity is due to insufficient demand as the consequence of a reduced consumer base or the shrinking in the market share as a consequence of a reduction in the willingness of the consumer to pay for a particular product or service.

Baden Fuller (1990) identified two types of excess capacity; the intended and unintended excess capacity. Intended excess capacity is purposely planned during the growth stage of the industry to accommodate variability in demand and to achieve production economies of scale that increase the height of the entry barrier of that particular industry.

The existence of excess capacity in declining industries is predominantly due to the unintended excess capacity as the consequence of the change in customer values and life style.

The rivalry within a declining industry will continue as excess capacity develops (Harrigan, 1980a). Dutz (1989) argued that horizontal mergers may allow firms to retire older facilities. However, Smith-Bodden (1990a and 1990b) explained that the inefficiency of horizontal mergers may reduced the value of the business. A substantial exit barrier develops when firms become reluctant to sell their assets in a particular business because they cannot retrieve the value of their investment due to the depressed market and destructive price cutting activities (Harrigan, 1982)

Among studies that have been conducted on firms' behaviour in exiting declining industries are those conducted by Shaw and Shaw (1983), Ghemawat and Nalebuff (1985 and 1990), Lieberman (1990) and Dierickx et al., (1991).

Earlier prediction (Ghemawat and Nalebuff 1985 and 1990) suggested that the order of firms exiting a declining industry is also dependent upon the cost efficiency of the firms. Lieberman (1990) argued that the order of firms exiting a declining industry is dependent on the stability of the price of their products. In the absence of cost differences, smaller firms can remain profitable for a longer period as demand declines. While both assumptions have empirical support, Lieberman's (1990) study shows that small firms had a higher rate of closure and most of the exiting firms were small in size.

In their study on the European Fibre Industry, Shaw and Shaw (1983) observed that in the absence of a government sponsored cartel, most competitors have to reduce competition between themselves by choosing to withdraw from their weaker market areas and concentrate their effort on a narrow product range.

From the above research evidence one could conclude that firms may contemplate exiting a declining industry on the basis of the favourability of the market areas that they have served and firms with greater ability to liquidate their assets will exit the industry first.

Strategic choices of firms in declining industries

Several strategic options have been reported as appropriate for the firms operating in declining industries. These strategies are different from the harvesting strategy discussed by Harrigan (1980a) and Porter (1980). The strategic options range from single generic strategies (Porter 1980) to a combination of cost efficiency and differentiation (Hall, 1980; Hill, 1988), specialization with low cost (Grant, 1986), improving product quality, investing in the growth segment of the market (Van Doren and Spielman, 1989) and a reactive strategy that has to take into account the salient characteristic of the industry (Parker and Helms, 1992).

However, there is no single generic strategy for superior performance in a declining environment. Due to the different reasons that cause the decline in demand, differences in the business unit's mission and combinations of competitive strengths, firms tend to pursue different strategies (Harrigan, 1980b, pp.3). In reacting to the external and internal environment, firms should explore the possibility of using mixed strategies that combine a product strategy with operating efficiency (Parker and Helms, 1992).

Generally, the accepted strategy in declining industries is a "harvesting strategy" (Van Doren and Spielman, 1989) which is characterized by liquidation and elimination of assets to generate maximum cash flow from the business and eventually end up by divesting the business (Porter, 1980: pp. 254).

In consonance with the 'harvesting' philosophy, the choice of strategy by businesses in declining industries frequently revolved around building up competitive position in the enduring market niches (Harrigan,1980a; Porter,1980) and engaging in an end-

game strategy when conditions are appropriate for exit (Harrigan, 1980b; Porter, 1980; Ghemawat and Nalebuff, 1985, 1990a, 1990b; Baden Fuller and Stopford 1989).

However, not all environments of industrial decline are alike. An appropriate strategic choice when dealing with a declining environment is dependent upon the salient characteristics of that particular industry (Parker and Helms, 1992), such as the attractiveness of the industry in question and the relative competitive strength of the particular firm (Harrigan 1980a).

The attractiveness of continuing investment in a declining industry increases when there exist pockets of enduring demand, strong product differentiation, price stability and the existence of mobility barrier to protect the strategic groups from new entrants (Harrigan, 1980a).

The competitive strength of firms in declining industries is determined by the factors that could withstand the harsh reality of shrinking demand and excess capacities. Harrigan (1980a) explained that in a declining environment, factors such as established relationships with customers in the enduring and lucrative pockets of demand, customers' brand loyalty, plant that could operate efficiently when under utilized, a large market share for firms producing a commodity-like product, a strong distribution network, a favourable market niche, flexible assets and the firm's diversification posture are key competitive strengths.

Market specialization or niche strategy

According to Miller (1993, pp. 131), as an industry decline, there often remain a pocket of demand capable of supporting one or more businesses in the industry. Specialisation in a market segment or niche with an enduring demand would be a strategic option for continuing investment in a declining industry (Harrigan, 1980a). Following Miller (1993) and Harrigan (1980a), the current study defines the niche strategy as a marketing strategy that focus on a specialized market segment due to its attractiveness in term of its enduring demand and low customer sensitivity to a price change.

The attractiveness of the remaining pocket of demand depends on the price elasticity in demand and the intensity of competion from the low cost imports. The combination of low price elasticity and low import competition indicates that there is

little competition and customer is not sensitive to the price change (Dess and Miller, 1993, pp.131; Grant, 1986).

However, according to to Miller (1993) and Grant (1986) the size of the specialized market normally are too small to support production efficiency and the economies of scale. The benefit of market specialization strategy lost when too many firms seek to specialized in the same direction.

Specialized vs flexible manufacturing strategy

The definition of specialized manufacturing strategy differs from the market specialization strategy or niche strategy in the sense that the specialized manufacturing strategy is characterized by narrow product lines (that is, by producing a few models or just one product type). The specialized manufacturing emphasizes on mass produce large scale production and uses special purpose automated machineries to achieve economies of scale, high productivity and cost efficiency (Baden Fuller and Stopford (1992); pp. 70 - 72).

In a declining environment where demand is declining due to low cost imports, the large scale mass production (termed as specialized manufacturing in this study) becomes disadvantageos and suffers inefficency in production cost due to excess capacity and increase in holding cost of inventories developed by the large scale manufacturing system (Harrigan 1980a).

The problem of excess capacity could be adjusted by installing flexibility in the manufacturing system. The flexible manufacturing system is not only capable of coping with uncertainty of future demand but also helps firms operating in the declining industries to maintain a lean manufacturing system and adapt products to the specific requirements of the customers (Slack, 1991; pp. 77).

Slack (1991, pp. 79) pointed out that flexibility provides the means to a manufacturing operation to maintain and improve performance in spite of variation in the range of predictable output levels and lack of knowledge due to the absence of coherent strategic direction. Flexibility also allows the manufacturing operation to cope with uncertainties in expected demand as well as market conditions without affecting the performance negatively.

The Flexible Manufacturing System fits well with manufacturing firms operating in a declining industry because the system is capable of producing batches with smaller volume without penalizing the economies of scale, it increases machine utilization, and ultimately helps to increase manufacturing efficiency by reducing the cost/time of a manufacturing operation (Boer, 1994, pp. 87).

Slack (1991; pp. 95) explains flexibility in a manufacturing system is limited by the question of how far the operation can change (range of the flexibility) and how fast the system can respond to change (response change). The range - response dimension of flexibility shows the extent of change is possible for varying response time.

Despite of the observed limitations, Boer (1994; pp. 87) explains a flexible manufacturing system is capable of providing a faster response to market demands for increasing product diversity and innovation - a market characteristic of most mature industries (Baden Fuller and Stopford, 1992; pp. 36 - 37). The system helps to shorten the delivery time and improve the reliability in product delivery. The system thus helps to improve operation management by increasing scheduling flexibility and linking the production control and manufacturing process.

The current study defines a flexible manufacturing as a system that capable of manufacturing a variety of products, able to operate on a make-to-order basis or a moderately customized order winning method and making use of numeric control or computer aided machinery (Parish, 1990 and Mansfield, 1993).

Research in declining industries.

Most of the early theoretical background on strategies in declining industries has been contributed by Harrigan (1980a and 1980b), Porter (1980), Harrigan and Porter (1983) and Baden Fuller (1985, 1986a,1986b and 1989).

The major limitation of these contributions is the presumption that industrial decline arises from falling demand associated with the final stages of the industry life-cycle (Grant, 1986). For example, Harrigan (1980a) defines her sample of study as those firms whose dominant products are subjected to technological obsolescence and decline in the number of customers.

Conversely, the factors that caused the shrinking in demand for the products of the UK industries considered in this study did not generally include technological

obsolescence. The decline in UK industries was partly due the failure to recognize the competitive advantage of the foreign competitors in the non-price factors such as superior design, product quality and services (Grant, 1986). The non-price factors, when coupled with the capability in low cost production, caused the shift in UK demand toward imports - even at a premium price whenever the value of product differentiation was not matched by the UK manufactured goods (William et al., 1983; Grant, 1986; Wolfe and Asch, 1992).

The need for the study and its objectives

The implications for business strategy that arise from industrial decline due to the growth of low cost import competition are rather different from those where the decline is a consequence of obsolete technology or where the industry is in the final stage of its life cycle. While the strategic options for firms operating in a declining industry due to the final stage of industry life cycle revolve around investment in enduring market niches and subsequently divestment, the options for businesses in declining industries where the decline is caused by low cost import competition are numerous. There is a distinct differences between the revitalization concept and the end game strategy for the business (Rafferty, 1987).

Identification of successful business strategies relative to the nature of their declining environment would help to reduce the vulnerability of the industries, the business community and society in general.

An identified pattern of successful business strategies would lend impetus towards theory building. Firms that are plagued by a fall in demand due to similar industrial decline may select a strategy based upon some form of strategic pattern identified in this research.

Objective of the study

The main objective of this study is to determine strategies that lead to business success and profitability in an environment of a declining industry caused by low cost import penetration, and the factors that contribute to this success.

Additionally, the study aims to provide guidelines to managers and strategic planners of businesses operating in declining industries.

Hypotheses of the study

As described in the previous section, the cause of industrial decline may be categorized into two general categories; shrinkage in demand as the result of a reduced consumer base and shrinkage due to a decrease in the consumers' willingness to pay.

Each cause of decline has its own set of problems and requires different approaches to address them. The ability to make a distinction between the sources of decline is important for strategy identification and implementation (Grant, 1989). Firms' perceptions on how demand is affected in their respective industries will influence the strategic choice perceived as appropriate (Harrigan 1980b, pp.32).

A review of earlier researches into UK declining industries, especially in the textile and knitwear industries (Shaw and Shaw, 1983; Stopford and Baden Fuller, 1990 and Baden Fuller and Stopford 1992), the UK steel casting industry (Baden Fuller and Stopford, 1989), the cutlery industry (Grant 1989) and the home appliance industry (Baden Fuller and Stopford 1991) revealed that the pattern of decline among UK industries was generally caused by the decrease in consumer willingness to pay as the result of high import penetration by the standardized and low cost products from Eastern Europe and the Far East.

The most direct response to the threat of low cost import competition is to exercise a cost efficiency strategy that emphasizes cost control in fixed cost expenditure and in the purchasing of inputs. However, cost efficiency alone might not be sufficient if the product quality is not being upgraded or maintained at the competitive standard against the low cost imports.

Hall (1980) had observed that a small group of firms exhibited high profitability by pursuing a combination of low cost relative to their competitors and emphasizing acceptable product quality. Hall's (1980) reasoned that upgrading or maintaining product quality could be achieved without incurring extra investment if efficiency in cost of inputs could be achieved by economical purchasing and meticulous attention given to the quality of the finished products.

The above argument leads to the first hypothesis of the study:

Hypothesis 1: Firms that adopt the cost efficiency strategy and maintain a competitive standard of quality are more successful than those pursuing purely the cost efficiency strategy.

Grant (1989) argued that when industrial decline is due to a substantial cost advantage of the overseas suppliers; capacity adjustment and cost reduction is of limited value. Capacity reduction does little to restore profitability because the actual problem is not an absolute shrinkage of demand but is rather because consumers are switching to cheaper and compatible imported products. Similarly with a cost reduction strategy; it has limited effectiveness when overseas suppliers have substantial cost advantages.

Stopford and Baden Fuller (1990) suggested that the supply condition of the cost advantaged overseas manufacturers could be altered in favour of manufacturers in the technologically advantaged countries by offering product variety or variety in product features, because most of the low cost suppliers were concentrating on standardized low cost products.

The above view leads to the second hypothesis:

Hypothesis 2: Firms that adopt a combination of a cost efficiency and a product variety strategy perform better than those which follow solely one or the other.

The study has explained in page 7 and 8 that the economies of scale enjoyed by standardized mass producers frequently become a disadvantage in an environment where demand is persistently declining (Harrigan 1980a). Manufacturing technology that could reduce the minimum scale required for efficient operation of manufacturing process, which enables the producers to offer a broader range of products with product variety and dovetailing market needs, could alter the competitive position from the low cost supplier to the technologically advantaged UK industries (Baden Fuller and Stopford, 1992, pp. 48).

The above view suggests that volume flexibility is required in industries where short term demand is volatile and difficult to forecast (Greenhalgh, 1991). The implemental role of technology in the strategic management process (Parthsarthy and Sethi, 1992)

requires a linkage between the market driven business strategy and a flexible production system that can most efficiently accommodate the minimum scale required.

A flexible manufacturing system is defined as a production unit capable of producing a range of discrete products with a minimum of manual intervention. It consists of production equipment workstations linked by a material handling system to move parts from one work station to another, and it operates as an integrated system under full programmable control (Mansfield, 1993).

A flexible manufacturing system is characterized as capable of manufacturing a variety of products, able to operate on a make-to-order basis or a moderately customized order winning method and making use of numeric control or computer aided machinery (Parish, 1990 and Mansfield, 1993). A flexible manufacturing system is also characterized as making use of information technology (Baden Fuller and Stopford, 1992, pp. 37; Parish, 1990) and able to contribute many economic advantages that include its capability to operate on a shorter machine running time that increases the machine utilization to accommodate the varieties in demand (Mansfield, 1993).

This leads the third hypothesis of the study:

Hypotheses 3: Firms that adopt a flexible manufacturing strategy are more successful than those which are highly specialized in their production.

Harrigan (1980a) argued that the appropriate strategic options of strategic business units (SBUs) operating in declining industries lies in the interplay between investment in a stable market niche and harvesting before exiting the industry. Grant (1989) suggests that superior performance of firms in declining industries was associated with the harmonious combination of investment within comparatively sheltered market segments, and exploitation of the locational factor to achieve differentiation in any enduring market niches.

Differentiation is a strategic option that emphasizes non-price factors, such as the physical appearance of the product, advertising and brand promotion and auxiliary services such as customer relations, credit facilities and after sales service (Porter, 1980: pp. 37). Differentiation creates something that is recognized as unique, thus permitting the firm to command a premium price (Porter, 1980: pp. 37). Brand

loyalty and control of distribution channels developed through a differentiation strategy and the substantial capital investment required to implement the strategy, create mobility barriers (Dess and Miller, 1993, pp. 57).

The current study takes the view that firms in a declining industry need to be cautious when they contemplate investment to achieve differentiation in a sheltered market segment. As the influx of firms into the sheltered market segment becomes prominent, the segment will become saturated and firms belonging to different strategic groups will have to compete for the same customers making the segment volatile (Harrigan, 1980a).

The current study forecasts that firms that have an established differentiation strategy in an enduring segment of the market before the influx of new entrants would enjoy mobility barriers and will generally be more successful than the new entrants.

The fourth hypothesis follows from the above discussion:

Hypothesis 4: Firms that have been pursuing a differentiation strategy will be more successful than new entrants.

The key determinant for successful strategy is the organization's distinctive competence (Hofer and Schendel 1978: pp. 66) and the organization's capability for strategic actions (Lenz 1980). Hofer and Schendel (1978: pp. 25) argued that the organization's distinctive competence is the unique resource and resource deployment pattern engaged by a firm to create a competitive advantage vis-a-vis the firm's competitors.

According to Lenz (1980), a firm's ability for strategic action does not solely rely on the resources that the organization owns or controls but on the support from the environment within which the firm is operating in pursuit of its strategy. Lenz's (1980) dimensions of strategic capability includes the firm's skill and knowledge base for value creation (which is parallel to Hofer and Schendel's distinctive competence), the firm's capacity to generate and acquire resources from its environment and the organization's general management technology.

A firm's relative success in a declining industry is affected by the relative strength and the attractiveness of the environment within which it operates (Harrigan, 1980a). The key strength of a firm operating in the declining industry could be its deployment of

its skill and knowledge base and the ability to acquire strategic support from customers, suppliers and members of the financial institutions by pursuing functional relationships and developing their attitude and commitment to consistently support the organization (Lenz, 1980). The capability to use these resources may create a sustainable competitive advantage.

The above discussion leads to the fifth hypothesis of the research:

Hypothesis 5: The success of a business strategy is a function of the firm's strategic capability.

Studies of organizational entrepreneurship revealed that the more dynamic and hostile the environment within which the firm operates, the more entrepreneurial the firm will be (Miller, 1983; Guth and Ginsberg, 1990; Zahra, 1991).

The entrepreneurial dynamism of a firm is dependent on the influence of the characteristics, beliefs and vision exerted by the CEOs or other strategic leaders of the organization (Guth and Ginsbserg, 1990). Entrepreneurial managers will influence their own firms to adopt entrepreneurial strategies (Miller, 1983; Khan and Manopichewattana, 1989) by introducing an innovative way of doing things and delivering services that challenge the existing competitors and the rules of competition (Baden Fuller and Stopford, 1992, pp. 38).

The traditional approach has been to identify entrepreneurship with the dominant, independent minded individuals such as CEOs or owner/managers who make strategic decisions for their own firms. Recently, the emphasis has shifted to view the firm as a whole as an entrepreneurial entity (Jennings and Lumpkin, 1989). According to Miller (1983), an entrepreneurial firm actively engages in the product/market innovation, undertakes risky business ventures and is proactive in the market place: conversely, a non-entrepreneurial firm innovates very little, is highly risk aversive and tends to imitate the actions of competitors.

The prime focus of entrepreneurial firms is with giving value to their customers in term of product quality or services and to undertake market and/or technological leadership. This could be exemplified by the Japanese producers capturing large market share both in the USA and European market through their ability to provide efficient and reliable services with unmatched product innovation and invention (Baden Fuller & Stopford, 1992, pp. 92). Covin and Slevin (1989) advanced the

theory that in highly competitive and hostile environments, an entrepreneurship posture of a firm appears to promote high levels of performance.

This leads to the sixth hypothesis of the study:

Hypothesis 6: Entrepreneurial firms are more successful than those which are not entrepreneurial.

The attractiveness of a declining industry is dependent on the relative certainty in the industry on how rapidly demand would decline for the different market niches and whether demand was likely to be revitalized in the future (Harrigan, 1980a). As the firm's environment becomes more uncertain, there is a need for more information-processing capacity at the SBU level for decision making (Govindarajan, 1986) and information-processing is an important dimension to the strategy making process (Miller, 1989).

To make effective strategic decisions, managers must continuously monitor general trends and events in the macro and the operating environments within which the firm operates (Dess and Miller, 1991, pp. 38).

Information technology (IT) is capable of collecting, assembling, transmitting and retrieving business related information (Bharadwaj, Varadarajan and Fahy, (1993). Indeed, IT has been cited by many researchers as a source of sustainable competitive advantage because of its role in processing and transmitting vital information to the decision makers that can influence the competitive position of a firm vis-a-vis its competitors (Porter and Millar, 1985; Kettinger, et al., 1994).

The foregoing discussion, leads to the seventh hypothesis of the research:

Hypothesis 7: The success of a strategy is directly related to the use of IT in the strategy formulation and implementation process.

Conclusion

The hypotheses developed in the foregoing discussion are underpinned by the view that business performance is the ultimate dependent variable whose value is a consequence of a firm's strategic posture. Antecedents to the successful strategic

posture are implicitly or explicitly related to the firm's capability for strategic action, the firm's entrepreneurship posture and the firm's use of IT in the strategy formulation and implementation process.

Chapter 2.

THEORETICAL BACKGROUND, TERMS AND DEFINITION USED IN THE STUDY

Introduction.

A study that involves 'industry' as a unit of analysis is inevitably faced with the ambiguities found in the definition of industries and their boundaries.

Industrial organization theorists view industries as having a homogeneous internal structure, where all firms in a particular industry are assumed to engage in similar activities and are insulated by a common entry barrier from new entrants (Bains, 1959). This traditional view has been challenged by more recent researchers in the field of strategic management (see for example, Hatten and Schendel, 1977; Porter, 1979, McGee, 1985, Hatten and Hatten, 1987).

Hatten and Schendel (1977), in their longitudinal study on the conduct of firms in the US brewing industry from 1957-1971, revealed that the relationship between profitability, conduct and the structural environment of an industry is not always constant within an industry. Their findings were that the interfirm differences in performance are not merely due to the variation of market structure within which the firms operate but are also attributable to the firms' market conduct. This revealed that firms in a particular industry are not alike. As noted by Porter (1979) " they follow very different strategies along dimensions such as their degree of vertical integration, breadth of product line distribution arrangements and ... etc.". Thus industries should not be viewed as composed of homogeneous units.

The problem in defining industry.

Most research in strategic management implicitly subscribes to the view that firms differ in their strategies but not to the extent that they are so unique that they cannot usefully be sorted into groups (Thomas and Venkatraman, 1988).

The above view implies that an industry is composed of groups of firms where each group consists of firms pursuing similar strategies (Porter, 1979 and Miles et al., 1993). Porter described these groups as strategic groups. A strategic group could encompass all firms in the industry or just a single firm.

Defining 'industry' simply on the basis of the nature of the strategic groups within it is problematic because some firms may pursue similar strategies yet do not compete with one another (see Hatten and Hatten, 1987) because the firms may operate in different markets or different countries.

McGee (1985) and McGee and Thomas (1986) argue that the boundaries of industries that are described by the market and technology criteria have their own drawback. The inconsistency in the boundary of industries persists as many large firms are capable of producing a wide range of products and compete in a number of different industries. Similarly, on technology grounds substitute products could be produced using different technologies and compete for the same customer.

An official source of industry classifications is the Standard Industrial Classification scheme (SIC). The SIC is defined by the primary product produced by firms in the industry (Stiles, 1992). It has been prepared with the objective of reflecting and matching the firms with the structure of the industries and trades within national boundaries. The coding scheme in SIC has taken into considerations all relevant factors such as the commodity produced or services rendered, the major materials used and the nature of the production processes (cf. Devine et al., 1979; CSO, 1979).

Despite the implicit acceptance of SIC as a pre specified boundary of an industry by many researchers in the past, Stiles (1992) argued that the industries and commodities produced by a particular industry are not always perfectly matched. The complication in the industry boundaries is characterized by product differentiation and technological changes in the economic environment (Miles, 1968; Thomas and Venkatraman, 1988; Stiles, 1992) and the products may also be produced as a secondary product by a number of different industries (Stiles, 1992). Thus the use of

SIC codes to delineate industries as a homogeneous group of firms engaged in similar activity to produce similar products, is hardly valid.

The national or regional boundaries that are enshrined in the SIC scheme act as another source of limitation. Thomas and Venkatraman (1988) argued that the boundary of an industry that is defined by the firms' dominant output or product within certain national or regional boundaries has become a limiting factor for the generalizability of the research findings across geographical boundaries. Thus the scheme restricts the applicability of the research finding to certain geographical regions.

Definition of industry adopted by this study.

This study is concerned with the decline in demand of certain products made by UK manufacturers where the decline in demand has been caused by low cost import penetration. The primary unit of analysis of the current study is the firm which manufactures the affected product. Therefore, classifying the primary units for analysis or the firms on the basis of their dominant output is most relevant for analytical purposes; it is the very reason for the conduct and existence of the industry (Miles, 1968).

The above justification fits well with the SIC definition of industry. This study therefore adopts the UK SIC classifications to delineate groups of UK manufacturing firms.

The strategic business unit.

The fuzziness in the industry boundaries is partly due to the multi-industry nature of some of the large corporations. To balance and coordinate strategies in diversified business investments, the large corporations have to decentralize their business components. This decentralized business component is often a strategic business unit (SBU): a strategically separable unit managed independently from its parent organization (Salveson, 1974). An SBU groups together all activities within the multi-business corporation that produce a particular type of product or service and treat them as single business unit (Hofer and Schendel, 1978, pp. 60; Stoner and Winkle, 1986, pp. 119-120).

Salveson (1974) described SBUs as having the following characteristics:

1. The SBU has a distinct business concept and mission, sensibly independent of any others.
2. The SBU has its own competitors.
3. The SBU is a competitor in its market, and not dominantly an internal corporate supplier.
4. It is able to manage its strategy in a manner which sensibly is independent of other businesses within the corporation.
5. It contains all the components essentials to the conduct of its business mission, e.g., technology, marketing and finance so that its strategies may be implemented independently of others.

The difference between a single business firm and an SBU is that the SBU is responsible only for the formulation and implementation of the business level strategy while the single business firm has to fulfilled both its corporate and business level strategies.

Even though the SBUs are described as being decentralized and autonomous from their parent organizations, an SBUs' performance is moderated by the corporate-SBU relationship (Golden 1992, Davis et al., 1992). To optimize the effectiveness of an SBU's strategy, Govindarajan (1986) proposed that the decision making authority delegated to the general manager of the SBU should be closely aligned with the nature of the SBU's strategy. The degree of decentralization of the decision making authority is dependent upon the environmental uncertainties, technology and interdependency or relatedness of the various SBUs in the organization.

The SBU is the appropriate unit of analysis in the current study because it corresponds to the business strategy; the level of strategy that is concerned with how to compete effectively in a particular environment. Corporate strategy is inappropriate since it is oriented toward the issue of what business should the organization be in (Hofer and Schendel, 1978, pp. 27; Hambrick, 1983b).

Strategic groups; some early definitions and their issues.

The term strategic group was first coined by Hunt (1972). He defined a strategic group as a group of firms or SBUs (subsequently SBUs will be referred to as firms in this report) within an industry that are highly symmetrical with respect to the cost structure, degree of product diversification, formal organization, control system and managerial reward and punishment (cf: McGee, 1985). Newman (1973) and Porter (1973) applied the same principle to identify the presence of groups of firms following similar strategies in their studies (cf: Porter, 1979; McGee, 1985; Hatten and Hatten, 1987).

Even though many researchers have implicitly accepted the above definition of strategic groups, there is no generally accepted scheme for operationalizing the strategic groups in strategic management research (McGee, 1985).

Cool and Schendel (1987) argued that strategic group analysis would be meaningless if the group formation process does not take into account the scope and resource commitment decisions that are the central concern in the strategy formulating process of a particular strategic group. In their study they took the view that strategic group membership should involve firms competing in similar industries on the basis of a similar combination of scope and resource commitments.

Characteristic of strategic groups.

Although there is no consistency in the strategic dimensions used to define a strategic group, it appears to be generally accepted that the major characteristics of strategic groups includes the following (McGee, 1985; McGee and Thomas, 1986 and Thomas and Venkatraman, 1988):

1. Each group is composed of firms (or businesses) that follow a similar strategy.
2. Firms within a group resemble one another more closely than any other firm outside the group.
3. Firms within a group are likely to respond similarly to market opportunity or threat.

In addition to the above characteristics, strategic group membership was empirically substantiated by Cool and Schendel (1987) as a relatively stable phenomenon in an industry. The stability of group structure in an industry was mainly due to the fact that a firm within a strategic group cannot readily imitate the strategic decisions made by firms outside the group without incurring substantial costs and often at considerable risk (McGee and Thomas, 1986). Such mobility barriers were actually the combination of the entry and exit barriers that provides a persistence advantage to the firms in one strategic group over the firms in other strategic groups (Caves and Porter, 1977).

The mobility barriers.

Porter (1979) explained that stable differences in competitive strategy of firms within an industry and persistent intra-industry differences are inherent in the concept of strategic groups and mobility barriers. Porter's (1979) explanation was supported by Caves and Ghemawat (1992) where they describe mobility barriers as the factors associated with sustained intra-industry profit differentials.

Hatten and Hatten (1987) contended that mobility barriers are not always symmetrical for all groups throughout the industry. They postulated that the shifting structure of an industry from a concentrated to consolidated position is a direct consequence of asymmetric mobility barriers. Indeed, they contended that the entry barriers may be quite different from the exit barriers as could be observed from the Harrigan (1980a) study: the same mobility barrier that provides advantage to the member firms over the others, could act as a trap for groups especially in a case of diminishing market demand.

Strategic groups and industry life cycle.

Porter (1980) explains that the life cycle concept applies to industries as well as to individual products. The industry life cycle follows an S-shape curve due to innovation and diffusion of new products.

Primeaux (1985) posits that not all firms in an industry are at the same point in the industry life-cycle due to the changes in concentration as that particular industry develops. These changes indicate a pressure moving firms towards different stages of the life cycle as well as towards membership of different strategic groups within the same industry. Indeed, a normal life cycle is occasionally broken by new conditions

such as product innovation and differentiation, where rejuvenation of an industry's stage in the life cycle can occur (Porter 1980, pp. 158-162).

The foregoing discussion suggests that strategic groups in the decline stage of a particular industry could be rejuvenated, provided the strategic group is capable of implementing strategies that could introduce innovative changes (Baden Fuller and Stopford, 1992, pp. 35).

Operationalizing strategic group in the current research.

Strategic group analysis is a powerful tool to investigate the consequence of strategies implemented by firms in an industry. Hatten and Hatten (1987) explained that a strategic grouping scheme preserves information on the differences along the underlying dimensions of the strategic posture pursued by different strategic groups. Investigation of the differences in strategic posture used by different strategic groups increases the understanding of the possible reasons of success.

A strategic grouping scheme that uses a narrow conceptualization of strategy would be unlikely to capture the complexity of the strategy construct and thus limit the descriptive and predictive purpose of the strategic groups (Thomas and Venkatraman 1988).

Hatten and Hatten (1987) suggested that the appropriate approach to conceptualize strategy is by using a multivariate approach. The multivariate approach is capable of highlighting the differences in the key dimensions of the strategy construct. Venkatraman (1989) has termed these key dimensions the 'strategic orientations' and this term will be used in this study.

The current study agrees with Hatten and Hatten (1987) and Venkatraman (1989) that a multivariate approach facilitates a broader conceptualization of strategy by probing more deeply into the strategic decisions of firms. In many cases a firm's strategic decisions are reflected in the competitive methods used (see Dess and Davis,1984; Parker and Helms, 1992).

Following Venkatraman (1989) and Dess and Davis (1984), the current study employs factor analysis to measure the differences in the set of the competitive methods that together characterise the strategic orientations pursued by the firms in the study.

The strategic groups were derived empirically (a posteriori) by clustering firms with similar strategic orientations.

Are strategic groups a natural phenomenon or merely an analytical convenience?

Porter (1979) explained that the structural elements in an industry originated with firms exploiting differences in their initial assets. Firms developed their own strategies and resource commitments in order to gain competitive advantage. As the industry developed, firms tried to outdistanced each other by investment in advertising, research and development and development of their in-house service capability. Porter argued that such developments lead to strategic grouping since some firms are prone to risk such investments more than the others due to their differences in organizational goal and risk posture.

Explanations of the existence of strategic groups and mobility barriers in an industry, are supported by studies that empirically observed the sustained differences in intra-industry profitability and growth (Dess and Davis, 1984; Caves and Ghemawat, 1992; Cool and Dierickx,1993). On the other hand, Hatten and Hatten (1987) contended that strategic groupings are merely an analytic construct for research convenience. To them, the groupings are only a device to segment industries into sets of competitors whose actions and results are relevant to each other.

The current study takes the perspective that strategic groups are a natural phenomenon and that such groups are useful as a tool to motivate the research design and for data interpretation. The current study intends to exploit both arguments in strategic group analysis as a means of analysing the consequences of different strategies.

Advantage of operationalizing the concept of strategic group in strategic management research.

Hatten and Hatten (1987) explained the advantage of operationalizing strategic group in strategic management research as follows:

1. It helps to preserved information that characterized the strategy of the individual firms.

2. It allows multiple firms to be investigated concurrently and able to assess the effectiveness of their strategic actions to be assessed..

3. It facilitates an assessment of the consequences of the collective movement by many firms in similar strategic posture or verify similarity of strategy of strategic directions across industry.

In addition to the above mentioned advantages, the strategic group approach provides statistical homogeneity for firms following a similar strategy as opposed to the characteristics of the industry as a whole.

The definition of strategy.

The survival of an organization is dependent upon how it develops and maintains an appropriate alignment between its internal and external environments. The mechanism that guides the organization to maintain this desired alignment is termed 'strategy' by theorists (Snow and Hambrick 1980).

The definition of strategy put forward by Chandler (1962) and Andrew, et al. (1965) has included determination of goals and objectives as parts and parcel of a strategy besides the courses of action that need to be taken toward achieving these ends. Not withstanding Chandler (1962) and Andrew (1965), Ansoff (1965) included only the courses of action as strategy, excluding the goals. These differences, invited Hofer and Schendel (1978, pp. 16) to question what should actually be included in a strategy.

To Hofer and Schendel (1978, pp. 20-25) the goal setting process should be considered separately and they described strategy as "a fundamental pattern of present and planned resource deployments and environmental interactions that indicate how the organization will achieve its objectives". Indeed, most researchers have excluded goal setting as part of strategy formulation process (Hambrick 1984).

Mintzberg's (1978) concluded that strategy formation could be viewed as an interplay between the intended and realized strategy. In this interplay, not all intended (developed purposefully and consciously) strategy would be realized. The failure in realizing the intended strategy was generally due to unrealistic expectations by the management at the strategy formulation stage or to the occurrence of some other

compelling force in the environment in the implementation stage of the strategy. Indeed, strategy could be formed 'unconsciously' (emergent strategy) and realized as the result of situational forces.

Mintzberg (1978) suggested that the researcher should view strategy as the pattern of organizational decisions and actions to capture the interplay between the intended and emergent strategy. Typically the decisions will be directed at maintaining alignment between the organization and the environment and managing its major internal interdependencies.

Miles and Snow (1978, pp. 7) took a similar view to Mintzberg (1978) where they described strategy as a pattern or a stream of major and minor decisions about the organization's future domain. Decisions would be meaningful only when they are implemented through the organizational structure and process.

The resource base view of competitive strategy suggests that the key building block of strategy at the business level is the organization's distinctive competence and the ability of the competencies to create competitive advantage vis-a-vis the competitors (Hofer and Schendel, 1978: pp. 66 ; Cool and Schendel, 1987).

Hambrick (1980 and 1983b) posits that strategy could therefore be "generally viewed as the pattern of important decisions that guides an organization in its relationships with the environment, affects the internal structure and the process of the organization and centrally affect organizational performance."

Motivated by the definition of strategy expounded by Mintzberg (1978), Miles and Snow (1978) and Hambrick (1980), this study defines strategy at the business level as a pattern in the organization's decisions and courses of action directed at maintaining optimal alignment between the firm and its external environment and coordinating its internal as well as external resources to maintain competitive advantage.

Problems and Issues of research on Business-level Strategy.

Regardless of the progress and the vast array of research conducted on business strategy, its mundane achievement is not without issues and problems. Major issues and problems in strategy research lie in:

1. The theoretical aspect of strategy,
2. Methodological aspects of operationalizing the strategy concepts and
3. Measurement of business performance.

Issues in the theoretical aspect of strategy.

The core of strategic management is performance development. Business performance was assumed by many researchers to reflect the fulfillment of the business goals of the implemented strategy (Venkatraman and Ramanujam, 1986). Issues that are prevalent to the theoretical aspects of strategy are rooted in the followings :

1. The issue of linkages between strategy making process with business performance,
2. The issue of intended vs. realized strategies in business performance, and
3. The issue of linkages between the organization's distinctive competence with business performance.

1. The issue of linkages between strategy making process and performance.

The existence of a dichotomy between the intended and emergent strategy has raised the question of possible contribution of the strategy making process to business performance.

Dess (1987), in examining the relationship between organizational performance and consensus in the strategic planning process within top management teams of a highly fragmented industry found that top management team consensus in either the objective or the strategic methods for competition are positively related to performance. The empirical evidence that there is a relationship between strategic planning process and performance was also advanced by Powell (1992).

Miller (1989) investigated the relationships between Porter's (1980) generic strategy and the process of strategy making. The study explicitly concluded that the strategy making process has many implications for the strategic content and vice versa. However, the study did not make any empirical attempt to relate the 'competencies' required in strategy making to business performance.

Due to lack of consistency in the research findings, the current study takes the view that the strategy making competencies, which are related to the skill and aptitude required in the strategy making process, has a direct implication in designing an appropriate strategy, but it does not guarantee successful performance of the strategy. However, lack of such competencies would contribute to a poor strategy design.

The current study postulates that what is more important in ascertaining the successful performance of a well articulated strategy is the organization's capability to undertake a strategic action (see Lenz, 1980).

2. The issue of intended vs. realized strategy.

The main concern of the current study is to identify the linkage between the business strategy and business performance. The critical issue that needs to be addressed in analyzing the linkage between business strategy with business performance is the dichotomy between the intended and the emergent strategy as observed by Mintzberg (1978). The issue arises because many researchers have defined strategy as explicit and develop in advance which according to Mintzberg (1978), could be classified as an intended strategy.

The current study agrees with Mintzberg (1978) what actually contributes to the performance of a firm is the implemented strategy, regardless of whether it was a realized or an emergent strategy. Mintzberg (1978) argued that by looking at the intended strategy one might obtain a false view on the consequential effect of a strategy to performance.

To overcome the dispute between the realized and emerged strategy, Mintzberg (1978) suggested that strategy should be viewed as a pattern of the organization's decisions and Child (1972) writes that the organization's major and minor decisions could be identified from the strategic choice of the organizations as they address the environment within which the organization operates (which was previously described as strategy).

The most appropriate way to identify the strategic choice made by a firm is by examining the methods used to establish a competitive position. These methods are termed 'competitive methods' in the current research (see Dess and Davis, 1984). The competitive methods pursued by the firm reflects the management's strategic choice

of the firm's competitive strategy and reflect the implemented strategy of the organization regardless of whether they are realized or emergent strategies (Dess and Davis, 1984; Parker and Helms, 1992).

3. The issue of the linkages between organization's strategic capability and performance.

Most research designs assume a direct link between an organization's strategy and its business performance (Hofer and Schendel, 1978, pp. 203). There is a lack of empirical evident concerning this linkage (Lenz 1980).

Hofer and Schendel (1978, pp. 66), postulate that one of the key determinants for successful strategy performance is the organization's distinctive competence (resource deployment). The ability to use this competence creates a competitive advantage in its strategic actions and helps to achieve its economic goals and objectives. Hofer and Schendel's distinctive competence is confined to those resources that the organization owns and controls and that cannot be easily imitated by others.

Chamberlain (1968) takes the view that an organization's capability for strategic actions is embodied in its network of interdependence both within the firms and from its environment (cf: Lenz 1980). Chamberlain's (1968) distinctive competence could be achieved by pursuing functional relationships, attitude and commitments to customers, suppliers and members of the financial community.

Lenz (1980) defined strategic capability as "the capability of an enterprise to successfully undertake action that is intended to effect its long term growth and development". It refers to organizational total capability, which includes support that may be obtained from the environment.

Lenz (1980) states that there are three dimensions of strategic capability :

1. The width and depth of a firm's knowledge-technique base for value creation.

2. Its capacity to generate resources from its day-to-day activities and its capacity to acquire support as the results of its goodwill with other organizations in its environment.

3. General management technologies; which covers knowledge about competitive relationships and the psychology of interfirm rivalries in a market, expertise about factors that affect the viability of the entire industry and expertise about the social fabric of an organization.

Lenz (1980) argued that an organization's capability for strategic action extends beyond the resources that the organization owns and controls. The capacity of an organization to generate and mobilize these resources may facilitate strategic action to take place or otherwise.

Issues related to the methodological aspect of a strategy research.

The main methodological issue of strategy research is the problem relating to the validity of strategy construct operationalized in the research design and the approach used to measure a firm's performance as the outcome of the strategy pursued by the firm.

These issues could be grouped into two categories; firstly, issues related to the approach used in gathering information about a firm's strategy and conceptualization of strategy in the research design. Secondly, are those issues related to the approach used in measuring the business performance.

1. The issue related to the conceptualization of strategy in research design.

There is an array of methods available for identifying and measuring strategies in research designs. Snow and Hambrick (1980) expounded that the different approach in measuring strategy could be used in combination or independently.

The four methods of identifying strategy outlined by Snow and Hambrick (1980) are:

1. The investigator inference; researchers use all the information available in assessing the organization's strategy. The technique is commonly use in a case approach of strategy investigation.

2. Self typing or the manager's own evaluation on the component of strategy or competitive method used by their own organization (e.g., in Miles and Snow ,1978 and Dess and Davis ,1984).

3. External expert assessments; the approach will lend credence to the reliability of strategy measured by investigator inference or the self typing by the organizational manager (e.g., in Dess and Davis ,1984).

4. Objective indicators; An approach which relies on published product-market data. [e.g., Miller and Friesen ,1978].

Each of these options has its own advantages and disadvantages in measuring organizational strategy depending on the research issues that the research scheme is addressing. The investigator inference technique for example, is commonly use in a case approach of strategy investigation where the philosophical abstraction of strategy is best made by narrative description (Venkatraman,1989). The investigator inference technique is a relatively weak approach to strategy measurement often less accurate and applicable to relatively small samples only (Snow and Hambrick, 1980).

Snow and Hambrick (1980) take the view that the four techniques for identifying and measuring strategy when use in combination will converge to portray a particular strategy pursued by the firm. This convergence would help the researcher to validate and generalize the organizational strategy.

Notwithstanding Snow and Hambrick's (1980) view, Venkatraman and Grant (1986) as well as Venkatraman and Ramanujam (1986) pointed out that the issue of generalizability of findings and convergence of data across the different approach for identifying and measuring strategy remains a fundamental one.

Another source of problems in operationalizing a strategy construct is the notion that similar firms within the same environment may choose to address the environment differently and strategy is also being observed as an integration of several strategic dimensions that could be configured in many combinations (Porter, 1980, pp. 127; Buzzel, 1987; pp. 20).

Strategies have been classified either typologically (for example, see Miller and Friesen, 1978; Miles and Snow, 1978) or taxonomically (for example, see Hambrick, 1984, Morrison and Roth, 1992). It is important to note that there are distinct differences between typologies and taxonomies. Typologies are normally referred to a conceptually derived scheme of strategy while the taxonomies are empirically derived scheme of strategy construct (Venkatraman, 1989). Even though typologies represent

a theorist attempt to make sense out of non-quantified observations, they however are not inferior to the empirically derived taxonomies (Hambrick, 1984)

A classificatory scheme either empirically or conceptually developed suffers from the weaknesses that are rooted in the process of the respective classificatory scheme itself. According to Venkatraman (1989), the weakness of the conceptual classification (the typology) lies in the fact that a typology can even be based on a single strategic dimension and support any philosophical orientation of strategy. Venkatraman (1989) also explained that whilst the conceptually developed strategy classification is not empirically validity, the empirically derived taxonomic approach of strategy classification often does not reflect within group differences along the underlying dimensions of the firm's strategy.

One of the solutions that overcomes the methodological issues and encompass the theoretical aspect of strategy is to engage a multivariate approach in identifying and measuring strategy of an organization (Thomas and Venkatraman, 1988; Venkatraman, 1989).

Consistent with the approach planned for the strategic group formation (that has been discussed earlier), the current study identifies and measures the key dimensions that describe the strategy constructs empirically by the multivariate approach.

The strategic dimensions pursued by a particular firm could be represented by the competitive methods used by the firm in the industry (Dess and Davis, 1984; Parker and Helms, 1992). This approach requires CEOs of the firms or designated officers to act as respondents on behalf of the firms to reveal the competitive methods that are pertinent to their firms in competing against the low cost import competition. The CEOs are important informants for the firm's business strategy because their perceptions and opinions largely determine the organizational strategy (Miles and Snow, 1978, pp. 19-21; Dess and Davis, 1984).

The current study used the factor analytic technique to measures the differences along a set of the competitive methods. The underlying pattern of competitive methods identified in the factor analysis describes the strategic orientation or the strategy constructs pursued by the firms in the study.

2. Issue of measuring business performance.

Strategy was previously explained in this chapter as a mechanism for an organization to maintain alignment with its environment. Strategy was generally viewed as a pattern of important decisions that guides an organization's relationships with its environment. Most critical to the discourse of this study is its implications to business performance.

Most researchers either implicitly or explicitly imply that business performance tests the achievement of the business goals of the implemented strategies (Lenz, 1981; Dess and Robinson, 1984; Venkatraman & Ramanujam 1986). Indeed, Capon et al., (1994) as well as Powell (1992) in their analysis on the impact of strategic planning to financial performance concluded that a positive relationship exists and persists between strategic planning and performance.

The main issue in measuring business performance lies in the source of the performance data (Dess and Robinson, 1984; Venkatraman and Ramanujam, 1986). The source of the problem lies in two factors that are common in a research setting; the business unit of multi-industry firms and independent private firms (Dess and Robinson, 1984).

Major problem faced by researchers in assessing performance of business unit in multi-industry firms is in allocating the assets, sales, etc., of the multi-industry firms among the industries within which the multi-industry firms do business (Dess and Robinson, 1984).

In the privately held firms, access to performance data is severely restricted because the performance data and the related information are not publicly available and managers are believed to be sensitive and biased in reporting organizational performance (Dess and Davis, 1984; Venkatraman and Ramanujam, 1986) and often used different terms in describing strategy (Hambrick, 1980; Snow and Hambrick, 1980 and Dess and Davis, 1984). As a consequence, the validity of the performance data is affected.

To overcome the problem of validity of performance data of multi-industry firms the current study adopted a sampling scheme that selects only single product firms that fall in the UK SIC and are listed in the Company's Information volume of the Kompass Business directory as a firm manufacturing only one type of product.

The study also operationalized both the subjective and objective financial indicators to elicit performance data from the respondents to ameliorate the problems associated with sensitive data. To ensure the success of gathering the performance data, information regarding the objective financial indicators was elicited on voluntary basis from the respondents.

Measurement of business performance used in this study

Under the hostile environment of low cost import competition and persistent decline in demand for the products manufactured by the UK manufacturers, sales growth and profitability are the logical concern of the manufacturers. Indeed, profitability is a good predictor of a firm's ability to sustain business operation and to attract outside support in term of financial investment, supply of raw material and customer's loyalty (Dess and Miller, 1993; pp. 27-28).

The return on sales (ROS), return on investment (ROI), return on assets (ROA) and sales growth are ratios often used by researchers to measure the business performance of a firm (Buzzel and Gale, 1987, pp. 24-27; Dess and Robinson, 1984).

Summary of The Definition of Terms Used In The Study.

Industry.

An industry is defined as a classification of economic activity that encompasses groups of firms producing similar products or services that is primary or dominant to the production activity of the of firms.

Declining industries.

An industry is in decline when the it has been experiencing an absolute reduction in demand of its products for a long period of time. The decline is not cyclical in nature because the timing of any general recovery of demand in the near future is unknown.

UK industry.

A UK industry is defined as an industry that has its production activities and facilities operate within the geographical boundaries of United Kingdom or managed from within UK for the cases of service industries. They could have their served market within UK or abroad. Their operations contribute to the Gross Domestic Product of the UK

The firms or SBUs of the UK industries will have one or more of the following characteristics:

1. Registered under the UK companies act.

2. They are autonomous units or divisions of multibusiness corporation registered under the UK companies act, even though their parent multibusiness corporation does not register under the UK companies act.

Strategic business unit.

The SBUs are autonomous units or divisions within a multibusiness corporation with the following characteristics:

1. The SBU has a distinct business concept and mission, sensibly independent of any others.
2. The SBU has its own competitors.
3. The SBU is a competitor in its market, and not dominantly an internal corporate supplier.
4. It is able to manage its strategy in a manner that is sensibly independent of other businesses within the corporation, or even of major customers.
5. It contains all the components that are essentials to the conduct of its business mission, e.g., technology, marketing and finance so that its strategies may be implemented independently of others.

Strategic groups.

The term strategic group is defined as a group of firms or SBUs that have a similar strategic posture.

Mobility barrier.

A mobility barrier is actually the combination of entry and exits barrier that provides a persistent advantage to firms in one strategic group over firms in other strategic groups.

Strategy.

Strategy is defined as a pattern of important decisions that guides an organization in maintaining alignment with its external environment, especially in response to threat from competitors.

Business strategy.

A business strategy is concerned with how to compete effectively against others in the same industry or market place. In order to be competitive the strategy should encompass:

1. The scope commitments; those decisions that involved the range of markets that are targeted, the type of products/services offered in the selected market segment and geographic outreach programmes or decisions pertaining to the distribution of the products/services.

2. Resource commitments; those decisions that involved deployment of resources at the business level, such as financial allocations, human resource development, research and development and materials to those functional areas that are key to obtaining and maintaining a competitive advantage in the targeted market segment.

Business performance.

Business performance is defined as the ability of a firm to fulfill its organizational business goal as reflected in its business level strategy.

Measurement of business performance.

The relative attainment of the business level strategy may be measured by the financial and operational performance of the individual business. Financial indicators such as profitability ratios and value for the stake holders are used to measure the relative performance of the firms implementing the articulated strategies.

Measurement of successful performance

The study adopted a 'comparative' approach to judge the level of performance achieve by a strategic group. The relative attainment of a strategic group's performance under similar environmental setting is acquired by inter strategic groups comparisons.

Chapter 3

THE RESEARCH DESIGN AND PROCESS

Introduction

The current research problem seeks to identify appropriate business strategies for manufacturing SBUs operating in declining industries. The business strategy is the appropriate level of strategy to address the current research problem because it is concerned with how the firms compete effectively in a chosen environment (Hofer and Schendel,1978: pp. 27-29; Venkatraman, 1989). Thus, the strategic business unit (SBU) is the appropriate unit of analysis. From here on, the current study will refer the term SBU as a 'firm'.

This research uses the Dess and Davis (1984) and Parker and Helms (1992) criterion for sample selection where the 4-digit SIC code was used as the boundary of an industry and the output of firms had to be concentrated in one line of business to avoid confusion in the competitive methods used between different type of business engaged in by the multiple business firms. This criterion required that the total sales of the firm to be within the chosen industrial classification (SIC).

Methods adopted by previous research in declining industries.

A review of several researches on declining industries (see Table 3.1) revealed that most of the earlier researchers polarized between studying firms' behaviour in exiting a declining industry and strategies to survive in an environment of declining demand.

Table 3.1 A review of researches conducted on strategies in declining industries.

Research	Research objective	Method of assessing strategy	Strategy construct	Method of data analysis	Performance indicator	Sampling
1. Harrigan (1980a)	To study strategies in declining industries.	-Inference from published data -Interview top executives -Interview suppliers & customers	Firms competitive position: - market share, relative quality, prices and cost relative to competitors.	Strategic grouping by similar strategic posture and strategic space mapping.	Return on sale, profitability ratio & ROI.	Firms drawn from several declining industries based upon degree of concentration and mobility barriers.
2. Baden Fuller & Stopford (1989)	Explore the efficiency of exiting process and conflict between owners, managers and the creditors in diversified and undiversified declining industries.	Inference from the from the Llazard's scheme report. Inference from the firms audited annual report. Interview: Top management Key figure in trade association Civil servants Merchant Bankers	Exit strategy: Diversification level. Firm size. Market share.	Regression analysis.	Profitability ratio Sales Diversification ratio.	UK Steel casting Industry.

Table 3.1 (continued)

Research	Research objective	Method of assessing strategy	Strategy construct	Method of data analysis	Performance indicator	Sampling
3. Baden Fuller & Stopford (1991).	The impact of changing economic condition the global strategy of white goods industry.	Interview on manager perceptions Inference from secondary data, Govt. stat. & annual Financial report.	Typology based on: - Global player. - Exporter. - National player.	Regression analysis.	ROCE. ROS.	European Home appl. industries.
4. Miles et al., (1993)	To provide a theoretical foundation from the study of mutual gain associated with industry competition	Inference from 1983 to 1987 'Compustat database'.	Khandawalla (1981) typology.	Cluster analysis	Four years Ave. of firms ROI.	4 digit SIC: Growth, mature & decline Ind.
5. Miles (1968)	The effect of technical change on the rate of industrial progress.	Researcher own inference by case study method.	Strategic factors that inhibit or promote industrial change.	Simple statistical analysis.	Output efficiency, ROCI.	UK textile industry.

Table 3.1 (Continued)

Research	Research objective	Method of assessing strategy	Strategy construct	Method of data analysis	Performance indicator	Sampling
6. Stopford & Baden Fuller (1990)	Examining the dilemmas faced by UK knitwear industry in competition against low cost import of knitwear.	Interview the senior managers in UK knitwear industry & Expert rating/opinion: Italian expert in the Italian knitwear industry. Inference from official document.	Typology based on: Contract knitter, High Quality Knitter, and Independent knitter.	n.a	No performance indicator required.	UK knitwear industry.
7. Parker & Helms (1992)	Examining the relationships between singular generic strategy and mix strategy with performance.	Expert rating and CEOs self rating.	The dimensions of Porter's (1980) generic strategy; the cost leadership differentiation and focus strategy.	Multivariate statistical analysis.	Relative net profit. Operating performance. ROA and Sales revenue growth.	Random sampling on UK and US textile mill products.
8. Grant (1989)	Examining competition against low cost import in UK cutlery industry.	Interview firms and retailers. Published sources of company's account, products & price list and overseas statistics.	Cost efficiency and differentiation.	Multiple regression analysis.	ROCE Sales margin Ave. Annual growth rate of real sales.	33 large cutlery manufacturing firms.

Table 3.1 (Continued)

Research	Research objective	Method of assessing strategy	Strategy construct	Method of data analysis	Performance indicator	Sampling
9. Lieberman (1990)	Examining the sequence of divestment between large and small firms in declining industries.	Inference from secondary sources such as: List of chemical producers compiled by SRI international, Govt. and Industry sources. Annual issue of directory of chemical producers.	Firms cost structure and firms size.	General statistical analysis.	No performance indicators are required.	30 chemical products that have been declining for 5 to 25 years.
10. Shaw & Shaw (1983)		Researchers own inference from Case study, supplemented by government publication and companies report.	Capacity reduction strategy.	n.a	Relative position of firms share of capacity in the industry.	West European producer of synthetic fibre.

Most of the researchers made inferences from published documents and using the self typing and expert rating approach to assess the strategy pursued by the sample firms. Annual reports, official documents published by government such as the Llazard's Schemes, Government statistics and data from the Compustat service are typical example of the published data used.

The strategy constructs operationalized by the researchers vary according to the research question addressed. The most common approach was observed to have used the firms' competitive positions by eliciting the dimension of strategy such as the market share, relative quality, prices and costs relative to competition, diversification level and firms size as the construct that would capture the variability of strategy operationalized by the firms (e.g. Harrigan (1980a), Baden Fuller and Stopford (1989 and 1991) and Lieberman (1990).

In an effort to discover the relationship between strategy and performance, the most popular indicators used to measure the impacts of business strategy are the profitability ratios such as the return on sales (ROS), return on investment (ROI), return on assets (ROA) and return on capital employed or investment (ROCE or ROCI).

Research method adopted by this study

The study recognizes that there are several approaches to acquire information related to a firm's strategy. Some information regarding a firm's strategy could be searched by an in depth face-to-face interview. The interview technique is commonly used in a case study and ethnographic approach which relies heavily on in depth interview, observation, qualitative description and interpretation of the phenomenon that are being studied (Dillman 1978, pp. 368- 422).

The in-depth face to face interview approach has the following advantages:

1. The researcher could actualy observe what actually happened in the daily activity of firms that are being studied. Thus it allows the researcher to understand and share the experience of problems and issue faced by the subjects. The whole process helps the researecher to undrstand the rationale behind certain course of actions taken by firms that are being studied (Bell 1993, pp.6-13).

2. The researcher could acquire information regarding the competitive methods or the strategic dimensions pursued by the firms from the word of the top management team themselves, whereas in a mail survey, the reasearcher has to risk the questionnaire being filled up by those assigned by the top management but not necessarily involved in the strategy making and implementation process.

3. The process of in-depth interview allows the researchers to concentrate on a specific situation and attempt to identify the various interactive process at work which could not be done in a mail survey approach (Bell 1993, pp. 6-13).

Eventhough the in depth face-toface interview allows the researcher to concentrate on a specific issue, it has several limitation. Among its limitations are:

1. The approach often requires a very long time span to elicit the appropriate information for the study. Thus within a limited time scale the researcher could focus only on limited aspect of the problems or issues that need to be studied in some depth (Bell 1993, pp. 6-13).

2. The information acquired through the in depth face to face interview varies from one case to onother. Thus the technique might lead to the problem generalizability of the data or the outcome of the study (Bell 1993, pp. 6-13).

3. The approach requires the researcher to concerntrate on one group of small sample over a period of time for an in-depth study. Thus it is economical to if the sample is located in the same geographical area. It is too expansive to cover a UK wide sample. Thus the study may focus only few firms within the vicinity of the researcher and as the consequence, the outcome would lead to the problem of representativeness of the sample and generalizability of findings (Bell, 1993; pp. 6-13).

The main aim of the current study is to determine the appropriate strategies that contribute to successful performance of businesses operating in declining industries caused by low cost import competition. The study implicitly aims at measuring

incidental relationships between the different business strategies pursued by the different groups of firms with performance.

While recognizing the importance of in depth face-to-face interview the current study is also concerns about the generalizability of data. The researcher recognizes one of the precondition for a successful in depth face-to-face interview is the willingness of the respondent (interviewee) to accept the presence of the reseacher in the organization and to relay the relavant information (Bell 1993, pp. 6-13). The main worry is the risk of not being accepted by the important individuals (i.e., the CEOs) or the groups (i.e., the top management team) that are being studied, especially when the firm is sensitive with the issue of declining industry.

The most appropriate approach is to adopt a cross-sectional survey that involved data collection at one point of time rather than over a period of time as in the longitudinal type of survey (Wiersma, 1991; pp. 168-170).

A mail survey approach offers several advantages as compared to face to face interview (Dillman, 1978: pp. 72-76) and the current study adopts the mail survey approach due to the following perceived advantages:

1. The rate of response for the face to face interview is in decline due to the expensive time taken by the face to face interview. Researchers found that it is increasingly difficult to get cooperation from the respondents to participate especially when it involves the CEOs of the firms (see Dillman, 1978: pp. 2-5).

2. In order to be representative, the sample of the current study is dispersed all over the UK. It is therefore more economical and efficient to adopt the mail survey approach in the data collection.

3. The researcher could disguise his personality behind a well designed questionnaire in order to avoid non-acceptance and rejection from the part of respondents.

The independent variables

The study recognizes two categories of independent variables based upon the hypotheses that have been developed. The first category of independent variable involves the strategies pursued by the firms and the second category those factors that contribute to the success of the implemented business strategy. This latter form of variable is termed a 'success factor'.

The strategy construct adopted by the research design

The current study follows Miles and Snow (1978, pp. 20-21), Porter (1980: pp. 127) and Dess and Davis (1984) in believing that different firms may address the same environment differently and that variations among firms' strategies can be classified by the underlying traits or dimensions of the strategy (Venkatraman, 1989 and Porter, 1980).

In order to capture the complexity in the strategy conceptualized by the firms, the study adopts the approach taken by Dess and Davis (1984) and Parker and Helms (1992) in the design of the strategy constructs. Following Dess and Davis (1984) the underlying dimension of strategy pursued by the firms could best be observed from the firm's competitive methods which reflects the implemented pattern of the organization's decisions and actions that define strategy.

The competitive methods operationalized for the strategy construct

The above approach entailed the development of a possible list of competitive methods that could be structured into the questionnaire. The list of the competitive methods was derived from the underlying dimension of the hypothesized strategic orientations identified by inference from published documents or literature. The strategic orientations and associated competitive methods are listed in table 3.2. Some of the competitive methods are pertinent to more than one strategic orientation. Competitive methods that are important to more than one strategic orientation are listed only once as strategic variables in the expert rating questionnaire (see appendix 5.1).

From table 3.2, it was observed that 5 competitive methods are important to more than one strategic orientation. Two of the competitive methods; the product standardization

and product simplification are important to the cost efficiency strategy and the specialized manufacturing strategy. The other three; emphasis on makes to order, use of IT and emphasis on shorter machine running time were observed to be pertinent in the product variety strategy and the flexible manufacturing strategy.

Additionally, the current study interprets the competitive method that emphasizes broad range of product features that is pertinent to the product variety strategy as similar to developing product features and technology pursued in the differentiation strategy.

This study dropped the competitive method that emphasizes control on the incoming raw material that have been inferred as a method pursued in the competitive standard of quality strategy. The competitive method was dropped because it was scored as important in the overall low cost strategy in the study conducted by Dess and Davis (1984).

This study also decided to drop the competitive method that emphasizes capability to manufacture a variety of products because the method seems to be typical of the investment in numeric control machine and CAD/CAM facilities.

After reducing the competitive methods that are important to more than one strategy into a single count and dropping the competitive methods that seem to be repetitive, only 19 competitive methods were associated with the hypothesized strategies.

The study added in 'business alliance' as a new competitive method to the above list to make 20 competitive methods altogether. The 'business alliance' is not associated with any of the strategic orientation listed above. The inclusion of 'business alliance' is to test the practicality of operationalizing the method in this study. Collaborative activities have been reported as a method often used by firms to overcome individual disadvantages and weaknesses in a hostile environment (Dollinger, 1990). The list of the 20 competitive methods that will be used as the strategic variables in the expert rating questionnaire is listed in table 5.1 of chapter 5.

Table 3.2 Strategic orientations and Competitive methods that are associated with the strategic orientation of SBUs operating in the declining industries.

The strategic orientations	The indicator or competitive methods used associated with the strategic orientation
Cost efficiency strategy	1. Cost control - Porter (1980) 2. Competitive pricing -Porter (1980) and Dess & Davis (1984) 3. Product standardization & simplification - Porter (1980) 4. Skilful human resources - Dess & Davis (1984) Parker & Helms (1992) 5. Operating efficiency - Parker & Helms (1992)
Differentiation strategy	1. Developing brand image 2. Customer services 3. Developing product features and technology 4. Control channel of distribution 5. Advertising - Porter (1980), Dess & Davis (1984) and Parker & Helms (1992)
Competitive standard of quality strategy	1. Product quality control - Dess and Davis (1984) 2. Resources - control on in coming material, quality circle - Porter (1980)
Product variety strategy	1. Broad range of product features 2. Make to order 3. Make use of information technology 4. Multiple market segment or niches 5. Shorter machine running times- - Baden Fuller and Stopford (1992)
Flexible manufacturing strategy	1. Investment in numeric control or computer aided machinery - Parish (1990) 2. Capable to manufacture variety of products - Parish (1990) 3. Makes to order - Parish (1990) and Baden Fuller & Stopford (1992) 4. Use of information technology - Parish (1990) and Baden Fuller & Stopford (1992) 5. Shorter machine running time - Parish (1990) and Baden Fuller & Stopford (1992)
Specialized manufacturing strategy	1. Focus on narrow range of products - Baden Fuller & Stopford (1992) 2. Product standardization - Lockeyer (1983) 3. Product simplification - Lockeyer (1983) 4. Mass marketing- Baden Fuller & Stopford (1992)

Pretesting of the competitive methods as the strategy constructs.

The practicality and reliability of operationalising the set of competitive methods as the strategic variables in the research design have to be tested before they could be used in a research instrument. Four trade associations that represent the industries affected by the low cost import competition were selected to provide feedback on the practicality and reliability of the list of competitive methods. The British Menswear Guild was chosen to represent both the men's and boy's tailored outer wear and the women's and girl's tailored outer industries. The associations that represent the spinning and doubling the cotton system industry and the weaving of cotton, silk and man-made fibre industry were not included because they are represented by a multitude of associations.

The four trade associations that were contacted were:

1. The British Footwear Manufacturers Federation
2. The British Leathergoods Manufacturers Association
3. British Leather Confederation
4. British Menswear Guild

The study used a debriefing interview technique to pretest the practicality and reliability of the competitive methods. The executive in charge of the trade association was requested to complete the questionnaire as instructed and debriefed as to their opinion on the questionnaire in an interview session with the researcher. The date for the interview was fixed three weeks after the pilot questionnaire had been mailed to them.

The pilot questionnaire for the strategy construct was structured to contain the same list of competitive methods repeated for each of the strategic orientations of the hypothesized strategy (see appendix 5.1).

The participating executive officers of the trade associations were requested to rate on a 5-points Likert-type scale the importance of each of the competitive methods listed as the possible dimensions of the hypothesized strategies. They were also requested to suggest any known competitive methods pursued by the industry that they found missing from the list.

The outcome of the pretest conducted on the competitive methods inferred as the dimension of the hypothesized strategy will be discussed in detail in chapter 5.

The strategy success factors.

The second category of the independent variable engaged in the research design are those variables that would contribute to the successful implementation of the strategies adopted by the firms. The strategy success factors have been hypothesized in hypotheses 5, 6 and 7 of the study. These factors are:

1. The firms' strategic capability
2. The organizational entrepreneurship
3. The use information technology in the strategy formulation and implementation process.

The variables that contribute to each of the success factors have been identified in the process of questionnaire design for the mail survey and are discussed in chapter 5.

The dependent variables.

The present study agrees with Venkatraman and Ramanujam (1986) that business performance reflects the fulfillment of business goal of the implemented business strategy.

The most prevalent symptom of industrial decline caused by the low cost import competition is the general decline in sales that directly affect the profitability of the firms operating in the declining industry (Harrigan, 1980a; Porter, 1980: pp. 256; Porter and Harrigan, 1980). Thus, the most appropriate indicator to measure the impact of the hypothesized business strategies has been taken to be the profitability in relation to the sales.

The present study uses the return on sales (ROS) and the return on assets (ROA) to measure the firm's profitability. ROS measures the net profit relative to the sales of the firms (most commonly termed profit margin) and ROS measures the effectiveness in employing its total resources (Van Horne, 1986; Weston and Copeland, 1988). The ROS and ROA are the most common profitability ratios used by researchers to

measure the ability of a firm to relate itself to the environment within which it operates (Dess and Robinson, 1984).

Besides these profitability ratios, the study also examines the firms' ability to relate to the environment by examining the firms' growth in sales and profit after tax. The present study also examines how well the hypothesized business strategies reward the shareholders by measuring the earning power on the shareholders' investment through the return on share holder equity (ROSHE) achieved by the firms.

Sampling frame of the study

In order to achieve the purpose of the research, the sample of the study has been derived from firms that are operating in the declining industries caused by the low cost import competition from overseas low cost manufacturers. The intensity of the import competition is measured by the import penetration ratio explained in chapter 4 where the sampling design of the study is discussed.

To fulfill the above requirement, the present study has identified 7 industries classified under the UK SIC codes. The seven industries encompass the UK clothing industry, certain spinning and weaving industries, footwear, leather and leather goods industries.

The design of the research instrument

The research instrument that would suit the mail survey approach is a questionnaire. In designing the questionnaire the present study gives meticulous attention to the construction of items that are relevant to the research questions. Particular attention has been paid to getting a good return from the respondents.

To fulfill the above objectives, the study follows the guidelines for the effective construction of questionnaire suggested by Dillman (1978, pp. 96), Youngman (1978), Wiersma (1991, pp. 173-177) and Bell (1993).

In the construction of the questionnaire, variables relating to the question of appropriate business strategies have been based upon the competitive methods or the set of dimensions for the strategic orientations that have been discussed earlier in this chapter. Items that explain the variables for the strategy success factors have been developed based on the theoretical background of the variables that are related to

research hypotheses. Detail discussion of the questionnaire design and justification for the construction of items in the questionnaire are discussed in chapter 5.

The data analytic scheme

The scheme for data analysis in the current study could be divided into three stages. The stages are:

Stage 1. Identification of the strategic orientation pursued by firms operating in declining industries.

Stage 2. Classification of the firms into strategic groups on the basis of the strategic orientation.

Stage 3. Analysis of the relationship between the strategy pursued by the group of firms and performance, using multivariate analysis to determine the relationship between the strategic variables, organizational entrepreneurship, the firms' use of IT and the firms' strategic capability and performance.

In stage 1 of the data analytic process, factor analysis was conducted to investigate the underlying pattern of relationship among the set of competitive methods perceived as important by the firms.

In stage 2, the study develops strategic groupings by clustering firms that pursue similar strategic orientations. This allows the level of performance achieved by the different strategic groups to be investigated. This approach is consistent with theory; viz, that different group will achieve different level of performance (Porter 1979, McGee and Thomas, 1986).

To correspond with the theoretical definition of a strategic group, the study uses the K-mean cluster analysis to form a posteriori strategic grouping. The K-mean cluster analysis determines cluster membership by assigning cases to the cluster with the smallest distance between the case and the cluster centre (Norusis, 1993b, pp. 111-116). The factor that determined the distance between the cases and the cluster centres is the strength of each of the strategic orientations exhibited by the firms developed from the factor analysis. The cluster centres are iteratively estimated from the data provided by the K-mean cluster analysis of the SPSS for Windows programme (Norusis, 1993b, 116-119).

In stage 3, the study uses one-way ANOVA and correlation analysis to substantiate the research hypotheses:

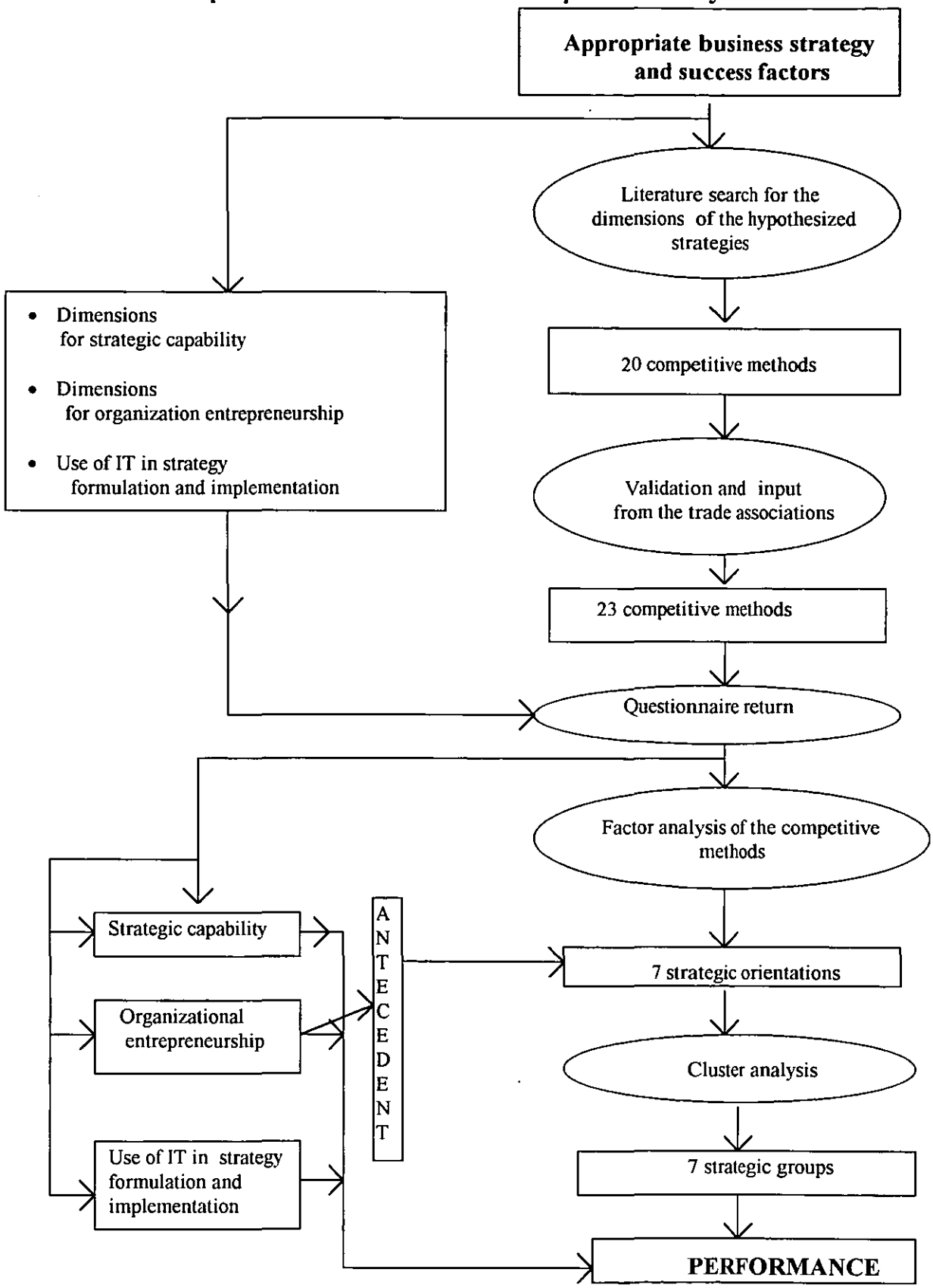
1. The study adopts one-way ANOVA to measure the relationship between the different strategic groups and performance, testing whether there are any differences in average business performance achieved by the different strategic groups. The one-way ANOVA is appropriate because it allows the variability of the mean value observed within each group as well as the variability between the group means to be examined (Norusis, 1993a, pp.269).

2. A correlation analysis has also been conducted to test the relationship between the variables that describe the business strategy, organizational entrepreneurship, organizational strategic capability, the use of IT in designing and implementing strategy and business performance. The hypotheses about the relationship between variables mentioned are tested by the correlation coefficient between the variables and the significance level of the correlation coefficients.

Conclusion

This chapter has explained the research methods and research activities that will be adopted by this study. A summary of the sequential activities for the research process and layout of this thesis is exhibited in exhibit 3.1.

Exhibit 3.1. Sequential activities for the research process and layout of the thesis



Chapter 4

THE SAMPLE DESIGN FOR THE STUDY

Introduction

Due to the lack of consistency in the empirical finding on organizational grouping (see Hatten and Hatten 1987 and Finlay, 1993), many researchers have implicitly accepted the Standard Industrial Classification (SIC) as a prespecified boundary for an industry (Thomas and Venkatraman 1988).

The current study uses the UK Standard Industrial Classification (1980) Codes to determines the boundaries between industries. The rationale for adopting the UK SIC is that this classification has taken into account the relevant factors such as the end product produced or the service rendered, the materials used and the nature of the production process.

The focus of the current study is limited to UK manufacturing industries. Thus, the sample drawn based on the SIC codes will not be affected by the variations that are caused by the national or regional boundaries.

The operational definition of declining industry.

The Production Monitors (the Annual Production Monitors PAS and the Quarterly Production Monitors PQ series of the Business Monitors) were used as the main source of data on UK business and market trends. The Production Monitors report data on the annual total manufacturers' sales, import and export values of the principal products of UK industries.

Due to the unavailability of data on the demand of the principal product of a particular industry in the Business Monitor Publications, it was decided to adopt the total manufacturers' sales of the principal product as the demand indicator for the industry. The demand trend and intensity of import competition in a particular industry were established by examining the past 5 years' data on the manufacturers' sales, import

penetration ratios, total home demand and import and export values of the industry's dominant product. The data were obtained from the PQ and the PAS series of the Business Production Monitors (The PAS, 1990 and PQ, 1990).

The steps taken to identify the declining industries caused by the low cost import competition were as follows:

1. Scanning through the manufacturers' sales pattern for past five years (that is between 1987 to 1992) published in the PAS and PQ series of the Business Monitor to identify the general sales pattern of manufacturers listed in the 4 digit SIC code.

2. Industries that have been identified as experiencing absolute decline in the total Manufacturers' sales of its principal product for the past five years were further investigated for the intensity of import penetration.

3. Firms that were experiencing absolute decline in the total manufacturers' sales and concurrently experiencing import penetration of more than 50% for the five years' periods (i.e., from 1986 to 1991 or from 1987 to 1992 depending on the availability of data) are taken as the sample of the study.

The study defined import penetration as the intensity of competition posed by the imported products in an industry's home market. The current study calculates the import penetration ratio based on the formula expressed by The Import Penetration and Export Sales Ratios For Manufacturing Industries 1989 (the MQ12 series of the Business Monitor publication). The intensity of import penetration experienced by the affected industry is expressed by the following formula:

Import penetration ratio = Import value ÷ The value of the Total Home Demand of the product.

where...

The Total Home Demand = Manufacturers' total sales + Import value - Export value.

The study decided to adopt a penetration ratio of more than 50% as a demarcation line to qualify a particular industry to be considered as experiencing a severe import penetration problem. This ratio is greater than the average of import penetration ratio

(35%) suffered by firms that have exited the cutlery industry from 1974 to 1984 (Grant, 1989).

In the absence of theoretical definition that could quantitatively determine the stage of an industry's life-cycle, the current study borrow the approach that was taken by Buzzel and Gale (1987, pp. 201) and Hofer and Schendel (1978, pp. 108) to designate the decline stage of market and product evolution. Buzzel and Gale (1987) and Hofer and Schendel (1978) describ the declining stage of the product or market evolution as a negative market growth rate.

In parallel to Hofer and Schendel (1978) and Buzzel and Gale (1987), the current study assigned industries with average growth rate of their total manufacturers' sales of less than 1% per annum as declining industries. This study also uses visual inspection on the graphical presentation of the manufacturers' sales growth rate pattern. For example an industry exhibits a down-turn in the last 3 years manufacturers sales pattern with growth rate of less than 1% will be considered as a declining industry.

The sample frame of the study

Tables 4.3 to 4.12 exhibits the performance of each of the industries that might be considered as the sample of the study. Industry performance was measured in term of the total manufacturers' sales, the import and export value of the industry's dominant product, the total home demand for the product and the import penetration ratio.

Each of the tables is supplemented with two charts showing graphically the manufacturers' sales pattern and the intensity of the import penetration (charts 4.3a and 4.3b to 4.12a and 4.12b).

Whilst the above mentioned charts facilitate visual examination of the growth pattern of the total manufacturers sales and the severity of the import penetration ratio, table 4.1 summarizes the average growth rate of the total manufacturers' sales and the average import penetration ratio.

Table 4.1 The average growth in the manufacturers' sales and import penetration ratios.

The SIC codes	The industries	Average growth in manufacturers' sale %	Average Import penetration ratio %
4321	Spinning and doubling of the cotton system	-9.0	55
4322	Weaving of cotton, silk and man-made fiber	1.0	89
4510	Footwear manufacturing	0.0	52
4410	Leather (tanning and dressing) and fellmongery	-1.0	54
4420	Leather goods manufacturing	-3.0	62
4532	Men's and Boy's tailored outerwear	-1.0	53
4533	Women's and Girl's tailored outerwear	-0.0	60
3454	Electronics consumer goods and misc. equipment	5.0	77
3460	Domestic electrical appliances	0.0	45
3162	Cutlery, spoon, fork and similar tableware	8.2	60

From table 4.1, this study has identified 7 industries classified under the 4-digits SIC code that fit the operational definition of declining industry used in this study. The 7 industries are:

1. The spinning and doubling the cotton system (SIC 4321)
2. The weaving of cotton, silk, and man made fibre (SIC 4322)
3. The footwear manufacturing industry (SIC 4510)
4. Leather and fellmongery industry (SIC 4410)
5. Leather goods manufacturing industry (SIC 4420)
6. The men and boys tailored outer wear industry (SIC 4532)
7. The women and girls tailored outer wear industry (SIC 4533).

From table 4.1, the industries that have been identified by this study as declining exhibit the average growth rate in their total manufacturers' sales between 1% to -9% and experiencing import penetration ratio at the rate of more than 50% per annum.

Incidentally, 5 of the industries that have been identified by the current study are the same as the industries identified by Grant (1989) as declining due to low cost import competition. These 5 industries are the footwear manufacturing industry (SIC 4510), the spinning and doubling of cotton system (SIC 4321) and the weaving of cotton, silk and man made fibre (SIC 4322) of the textile industry and the men and boys tailored

outer wear (SIC 4532) and women and girls tailored outer wear (SIC 4533) of the clothing industry.

Even though Grant (1989) has identified the consumer electronics (SIC 3454) and the cutlery industry (SIC 3162) as declining industries caused by the low cost import competition, the current study decided to exclude the two industries from the current sample frame. They were excluded even though both of the industries are experiencing import penetration ratio of more than 70% (see table 4.10 and 4.12). This is simply because the total manufacturers' sales of the two industries were observed to be growing steadily for the period between 1987 to 1992. Therefore the two industries did not fit the operational definition of the declining industries explained earlier in this chapter (See chart 4.10a ,4.10b , chart 4.12a and 4.12b).

This study also decided to exclude the domestic electrical appliances (SIC 3460) from the sample frame because from 1987 to 1992 the industry was experiencing an average import penetration ratio of less than 50% (see table 4.11, chart 4.11a and chart 4.11b).

The sources of low cost imports in UK

Among the three trade associations interviewed in the early phase of the study (see page 49), only the British Footwear Manufacturers Federation furnished the study with a comprehensive statistic of UK imports of footwear by country of origin. The British Leathergoods Manufacturers Association informed the researcher orally that most of the low cost imports of the leather goods were originated from China.

Table 4.2 summarizes the statistics of UK import on footwear based on the country of origin. The table revealed that from 1987 to 1991 countries in the Far East have been the major source of low cost import of the footwear products. The table revealed during the same period 49.6 % to 54.8 % of the total import value were originated

Table 4.2 Percentage of UK's Footwear Imports and the value of imported footwear per pair by region of the world .

Country/region	1987		1988		1989		1990		1991	
	% of UK imports	Value / pair in £	% of UK imports	Value / pair in £	% of UK imports	Value / pair in £	% of UK imports	Value / pair in £	% of UK imports	Value / pair in £
EEC	40.2	6.8	38.4	6.8	41.8	7.1	39.2	7.3	34.8	7.6
EFTA	0.005	11.04	0.004	11.5	0.003	14.5	0.002	16.0	0.003	9.7
East Europe	4.6	5.2	3.9	5.9	3.7	6.6	3.2	6.0	3.13	6.1
Other Europe and Med.	0.007	7.6	0.008	7.4	1.06	7.2	0.009	9.1	0.009	7.1
North America	0.003	8.0	0.004	9.9	0.004	12.6	0.07	9.6	0.08	9.2
Other America	3.8	5.9	4.9	5.9	6.1	6.1	4.8	5.5	4.9	6.6
Africa	0.001	6.6	0.002	4.8	0.002	4.6	0.001	4.5	0.002	3.9
Far East	49.6	2.2	50.9	2.5	46.0	3.2	50.7	3.5	54.8	3.8

Source: adapted from British Footwear Manufacturers Federation (1992), " Footwear industry Statistical Review 1992 Edition".

from the Far East region. The average import value was £2.2/pair in 1987 to £3.8/ pair in 1991. During similar period of time UK import from the EEC counterparts was declining from 40.2% in 1987 to only 34.8% in 1991. The average import value per pair from the EEC counterparts were £6.8 per pair in 1987 to £7.6 per pair in 1991. Table 4.2 also revealed that overseas manufacturers located in the Far East offered the cheapest value per pair of shoes compared to other sources of imports. The British Footwear Manufacturers Federation (1992) defines the Far Eastern region as comprises of China, Hong Kong, India, Indonesia, Japan, South Korea, Macao, Malaysia, Pakistan, Taiwan and Thailand. Amongst the Far Eastern countries Japan is an Advanced Industrialized Country (AIC) with high productivity export oriented industries. Japan comparative advantage in high productivity enable the country to manufacture goods at higher cost efficiency and compete in the overseas market.

Besides Japan, the UK shoes manufacturers were also facing a low cost import competition from the Newly Industrialized Countries (NICs) and the Less Developed countries (LDCs). The NICs are comprised of Hong Kong, South Korea, Singapore, Taiwan and Macao while the Less Developed Countries (LDCs) in the Far East are comprised of China, Pakistan, India, Indonesia, Malaysia and Thailand.

The effort to acquire information regarding the sources of low cost import for other industries in the sample was extended by investigating the UK overseas trade statistics published in the Business Monitor MM 20 series. Similar statistics published under Eurostat was also investigated.

The study found that the overseas trade statistics published in the MM20 series of the business monitor and the overseas trade statistics of the Eurostat are not comparable with the import penetration data reported in the PQ series of the business monitors. The data is not comparable because the imports data published in the above mentioned publications reports on the import of the components consumed by the industry rather than the finished product listed under similar standard industrial classification. The problem of data comparability has caused the study to resort to secondary data published by earlier researcher (that is, Grant, 1985 and 1989).

Grant (1989) classified the declining industries into 4 categories. The classification was on the basis of the degree of industry concentration (that is, the concentrated and the segmented industry) and the sources of decline affecting the industry. Factors that act as the source of decline in Grant (1989) classification was the absolute decline in demand due to change in consumer life-style and obsolescence of product technology and low-cost foreign competition.

Exhibit 4.1 List of Declining Industries Caused by Low-cost Import Competition

Concentrated Industries	Fragmented Industries
Domestic Appliances	Textiles
Construction Equiptment	Clothing
Consumer Electronics	Footwear
Shipbuilding	Fasteners
	Hand Tools
	Cutlery

Source: Grant, R.M. (1969), 'Competing against low cost cutlery imports', Long Range Planning, Vol. 22 : 5, pp. 59 - 68.

Grant's (1989) classification scheme identified 4 concentrated industries and 6 fragmented industries were declining as the consequence of low-cost import competition. The industries were shown in exhibit 4.1 . Almost all fragmented industries classified by Grant (1989) as declining due to low-cost import competition were identified by the current study in its sample design.

Grant's (1986) and (1989) lower cost locations are similar to what has been identified by the current study as the source of low-cost import in the UK footwear industry. Grant (1986) and (1989) identified the lower cost locations are principally the newly industrialized countries (NICs) and the Less Developed Countries (LDCs),

particularly those of the Far East. The NICs and LDCs have their strong competitive advantage in labour-intensive and standardized products that contribute to their lower prices (Grant 1989). According to Grant (1986) the lower-cost locations are not exclusive to countries with low labour cost but also emanate from countries with high productivity export oriented industries like Japan.

The sample size

The sample frame that has been identified above suggests that the population to be sampled consists of several sub-populations. This is simply because the samples are drawn from 7 different industries classified under the 4-digit SIC codes. The most appropriate approach to allocate the sample size is to use stratified sampling.

The study adopts the 'purposeful' stratified sampling technique rather than a random selection of unit (firm) in the sample. In the purposeful stratified sampling technique, the selection of units is based on the characteristics of the units that are relevant to the research problem (Wiersma, 1991, pp. 265).

Each of the industries selected as the sample frame for the study is a sub-population to the entire sample frame of declining industries. The study used a 10% proportional allocation to allot the samples from each sub-population of the entire sample frame.

The sample sizes allotted to each industry is shown in Table 4.3. The number of sample allotted to each industry will act as a guideline for a minimum number of firms that need to be identified from each industry to be administered as the respondents of the study.

Table 4.3 List of manufacturing industries identified as the sample of the study and the sample allocation.

The SIC codes	The industries	Total sample listed in the Directory*	10% from the total sample.
4321	Spinning and doubling of the cotton system	71	7
4322	Weaving of cotton, silk and man-made fiber	99	10
4510	Footwear manufacturing	295	30
4410	Leather (tanning and dressing) and fellmongery	63	6
4420	Leather goods manufacturing	90	9
4532	Men's and Boy's tailored outerwear	168	17
4533	Women's and Girl's tailored outerwear	128	13
	Total	914	92

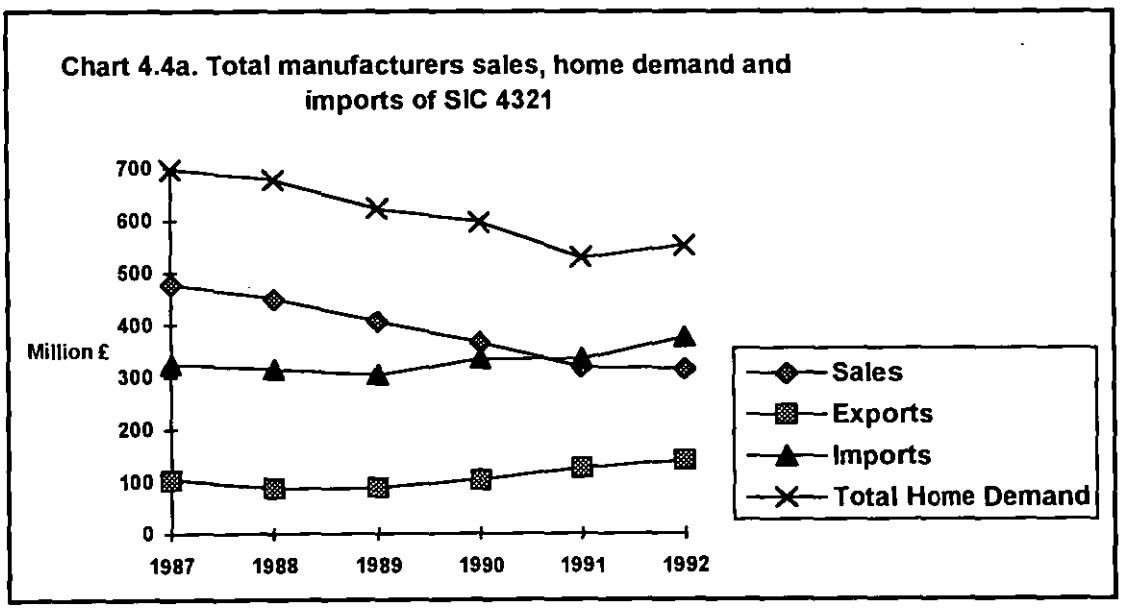
Source: Central Stat. Office (1991), "UK Directory of Manufacturing Business 1989 & 1990 supplement. HMSO, Business Monitor, London.

* Note: In calculating the total number of firms in the sample frame, firms that have been classified under similar industry and report to the same parent company are counted only once.

Table 4.4: Manufacturers sales, total home demand and Import penetration data for Spinning and doubling cotton, etc. (SIC 4321)

Years	1987	1988	1989	1990	1991	1992
Sales	477	450	406	366	319	316
Exports	104	87	88	104	126	140
Imports	325	315	304	335	335	376
Total Home Demand	698	678	622	597	528	552
Import penetration ratio	0.466	0.465	0.489	0.561	0.634	0.681
Export/sales	0.218	0.193	0.217	0.284	0.395	0.443

Source: Central Stat. Office (1993a), "PAS 4321 Spinning and doubling cotton, etc.", HMSO, London.



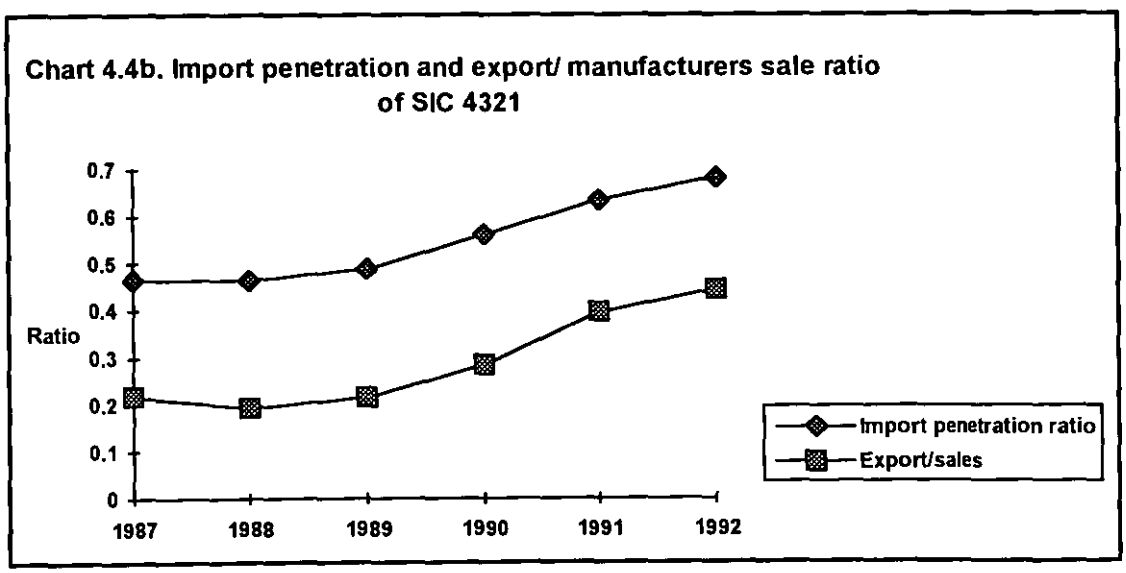


Table 4.5: Manufacturers sales, total home demand and import penetration data of Weaving of wool, cotton, silk and man-made fibre (SIC 4322)

Years	1987	1988	1989	1990	1991	1992
Manufacturers sales	633	645	697	695	666	654
Export vale	377	382	477	554	520	562
Import value	1147	1495	1532	1622	1484	1490
Total home demand	1403	1758	1752	1763	1630	1582
Import penetration ratio	0.817	0.850	0.874	0.920	0.910	0.941
Exports/ manuf. sales	0.595	0.592	0.684	0.797	0.781	0.859

Source: CSO, (1993b) ," PAS 4322 Weaving of wool, cotton, silk and man-made fibre", HMSO, London.

Chart 4.5a. Total manufacturers sale, home demand, import and export of SIC 4322

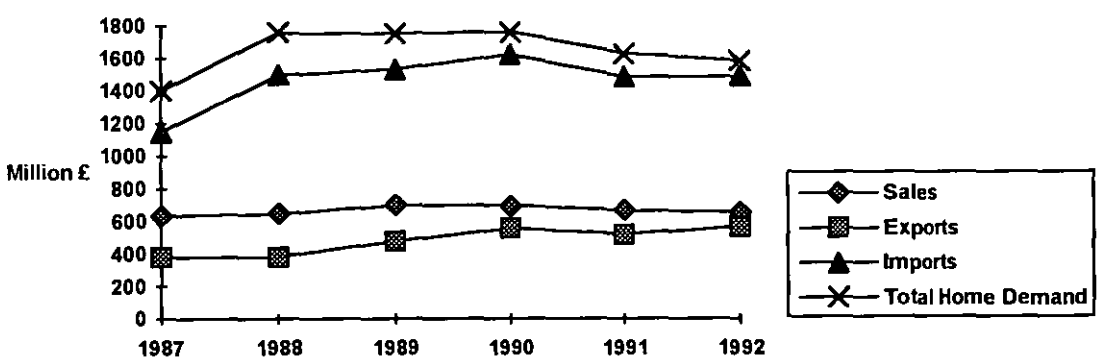


Chart 4.5b. Import penetration and export/manufacturers sale ratio of SIC 4322

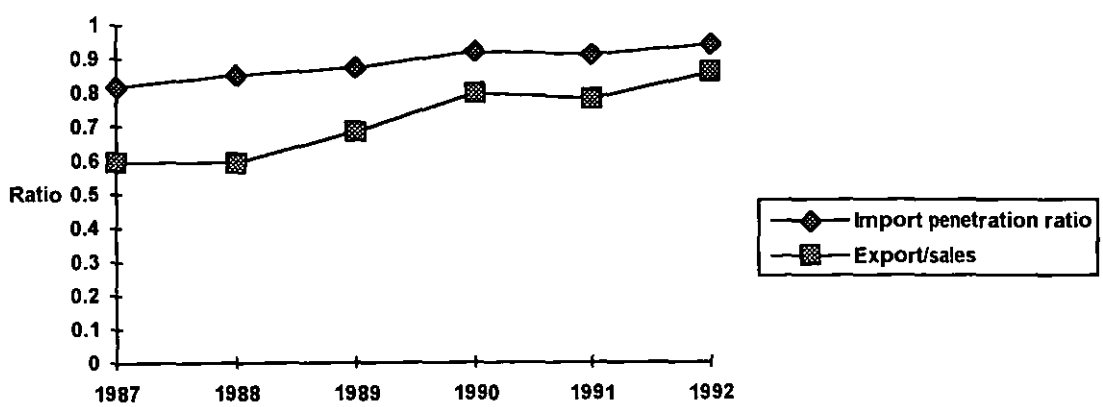
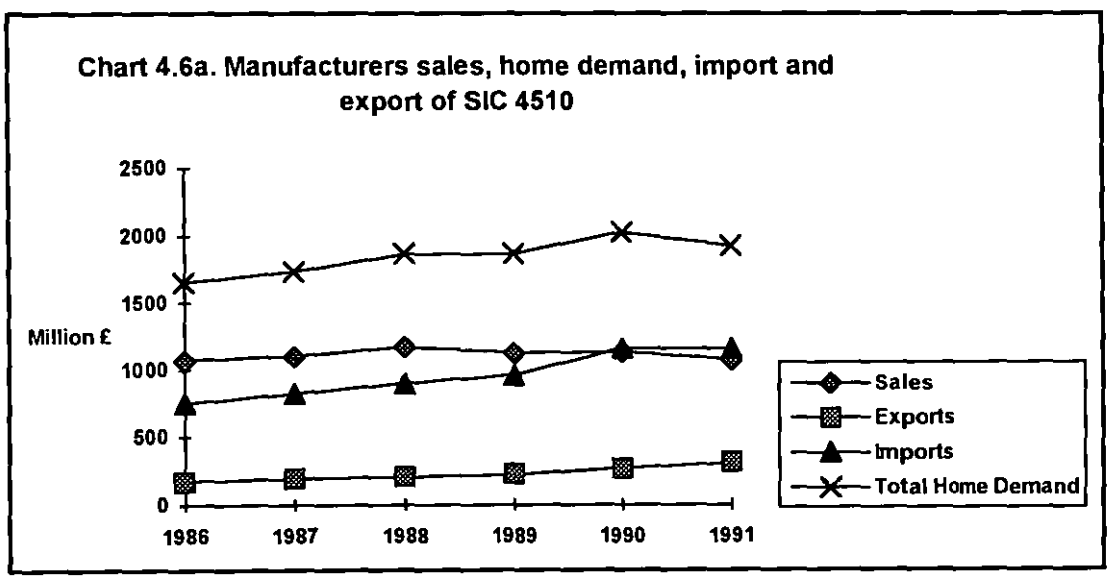


Table 4.6: Manufacturers sales, total home demand and import penetration data for Footwear manufacturing industry (SIC 4510)

Years	1986	1987	1988	1989	1990	1991
Sales	1072	1103	1171	1126	1133	1072
Exports	172	191	205	222	267	307
Imports	752	823	898	961	1156	1159
Total Home Demand	1652	1735	1864	1865	2022	1924
Import penetration ratio	0.455	0.474	0.481	0.515	0.571	0.602
Export/sales	0.160	0.173	0.175	0.197	0.236	0.286

Source: 1. CSO (1992), " PQ 4510 Footwear" , HMSO, London.
2. British Footwear Manufacturers Federation, (1992), "Footwear industry Stat. Review 1992 Edition", BFMF, London.



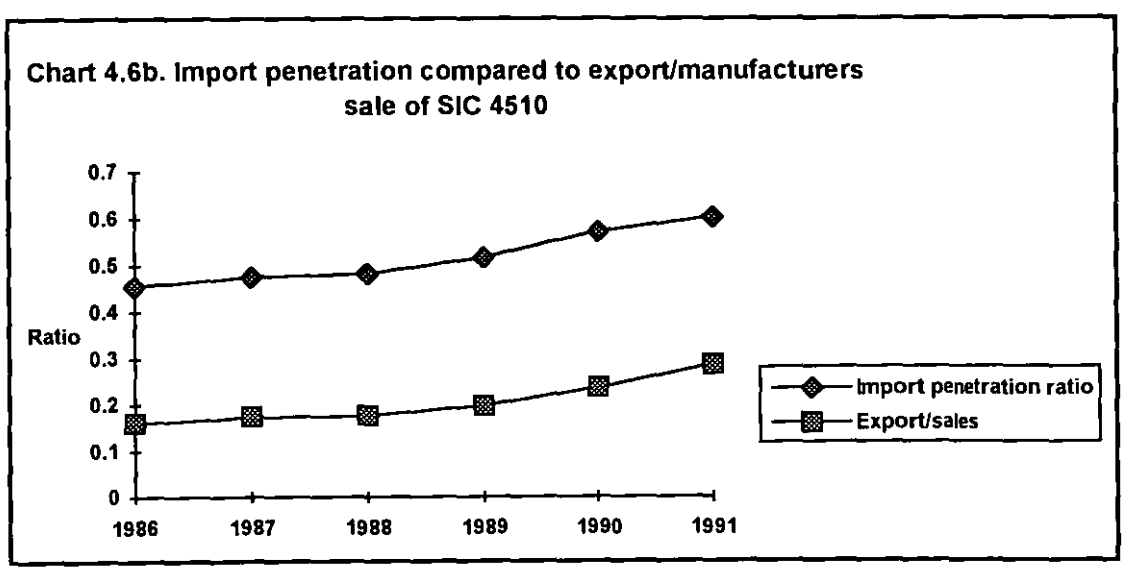
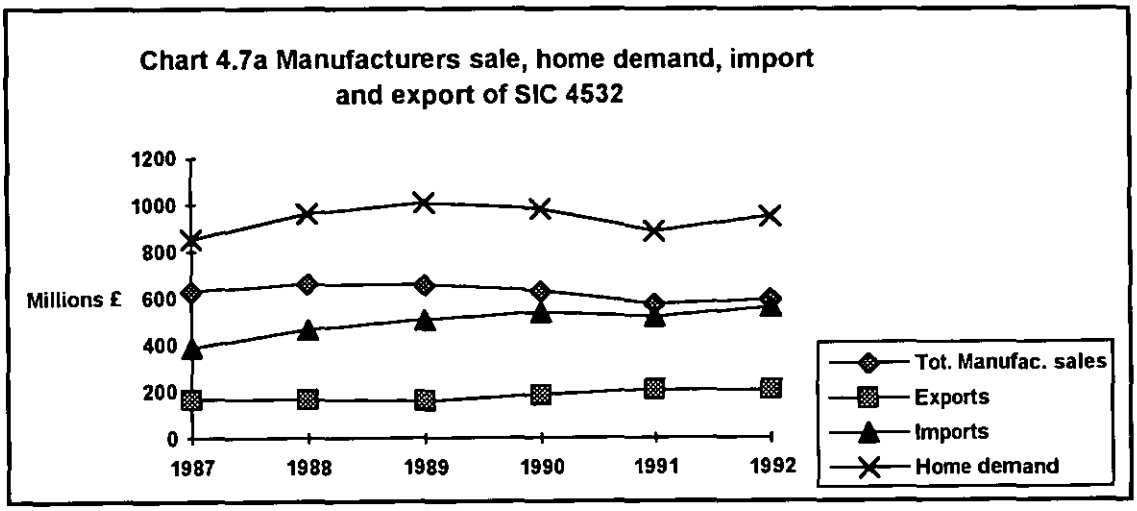


Table 4.7 The manufacturers' sale, home demand and import penetration data for the Men and boys tailored outer wear industry (SIC 4532).

Year	1987	1988	1989	1990	1991	1992
Tot. Manufac. sales	632	661	658	630	573	594
Exports	165	167	158	185	208	204
Imports	387	468	508	538	520	561
Home demand	854	962	1008	983	885	951
Import penetration	0.453	0.486	0.504	0.547	0.588	0.590
Export/sales.	0.261	0.253	0.240	0.294	0.363	0.343

Source: CSO (1993c), " Business monitor, PQ 4532 Men and boys tailored outer wear", HMSO, London.



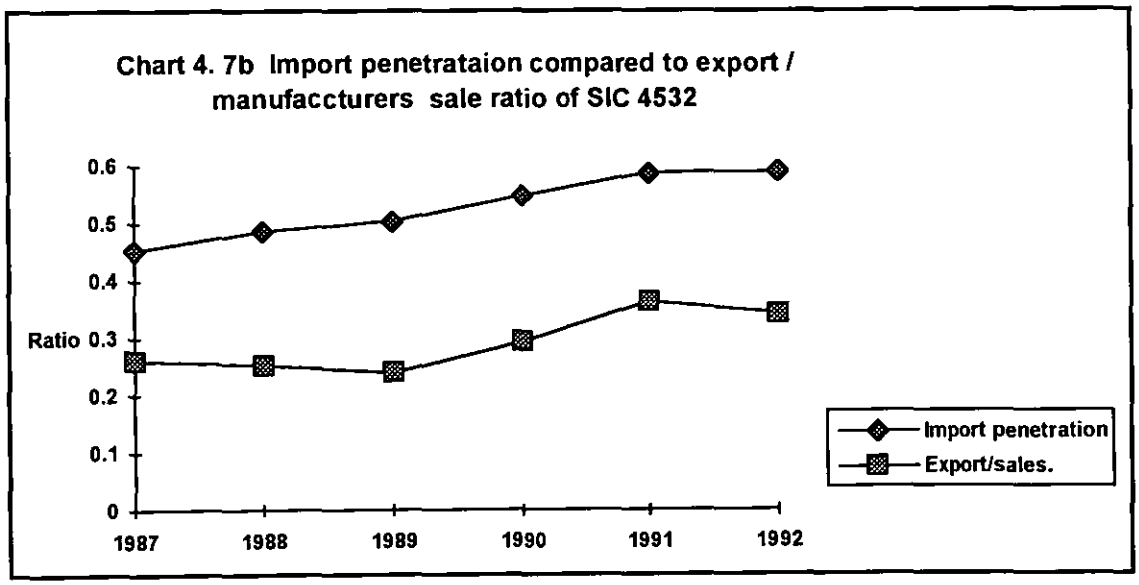
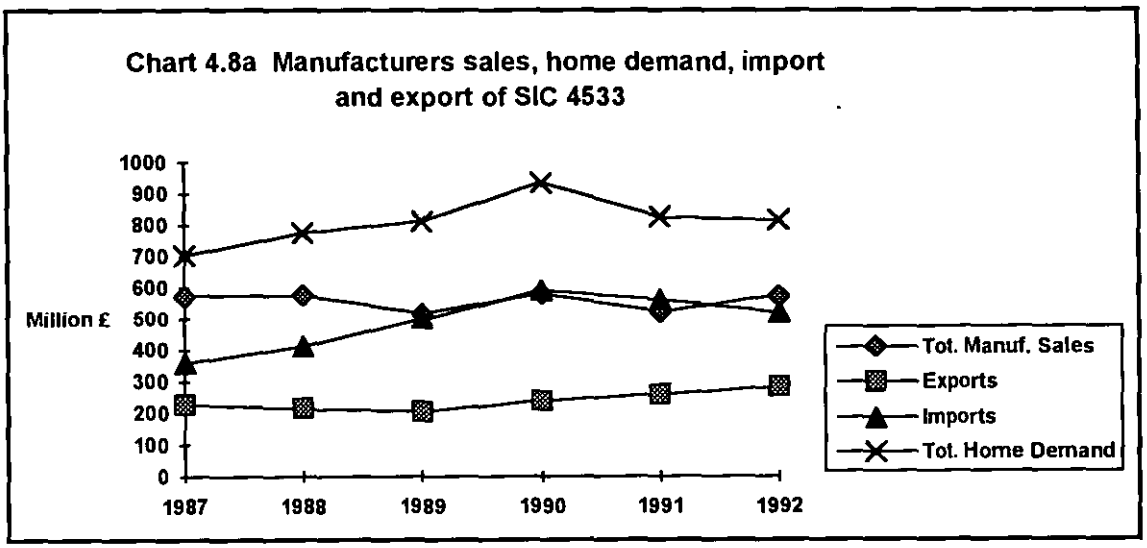


Table 4.8 Manufacturer's sale, home demand, import penetration data for the Women and girls tailored outer wear (SIC 4533).

Year	1987	1988	1989	1990	1991	1992
Tot. Manuf. Sales	576	579	519	583	523	577
Exports	230	215	207	239	260	283
Imports	359	412	500	592	562	521
Tot. Home Demand	705	776	812	936	825	815
Import Penetr. Ratio	0.509	0.530	0.616	0.632	0.681	0.639
Export/Manf. sales	0.399	0.371	0.398	0.409	0.497	0.490

Source: CSO (1993d), " Busimess monitor, PQ 4533 Women's and Girl's tailored outer wear", HMSO, London.



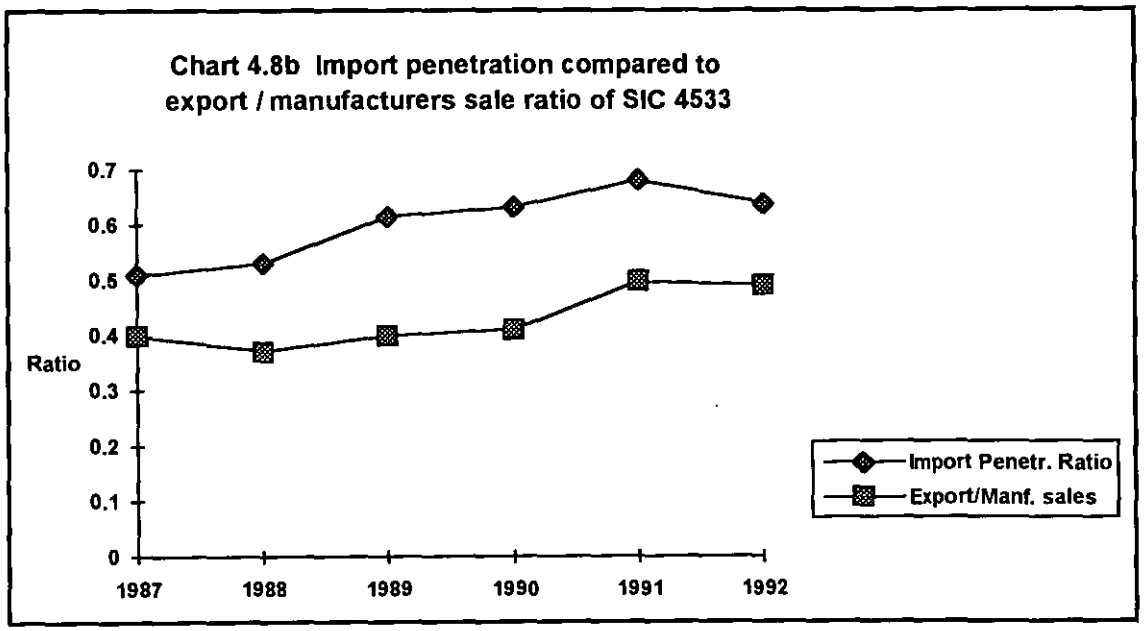


Table 4.9 The manufacturers' sales, home demand and import penetration data for the Leather tanning and fellmongery industry (SIC 4410).

Year	1987	1988	1989	1990	1991	1992
Tot. Manufac. sales	660	625	556	506	423	436
Exports	273	244	281	283	225	241
Imports	245	224	225	227	169	168
Home demand	632	605	500	450	367	363
Import penetration	0.388	0.370	0.450	0.504	0.460	0.463
Export/sales.	0.414	0.390	0.505	0.559	0.532	0.553

Source: CSO (1993e), " Business Monitor, PAS 4410 Leather tanning and fellmongery", HMSO, London.

Chart 4.9a Total manufacturers sales, home demand and imports of SIC 4410

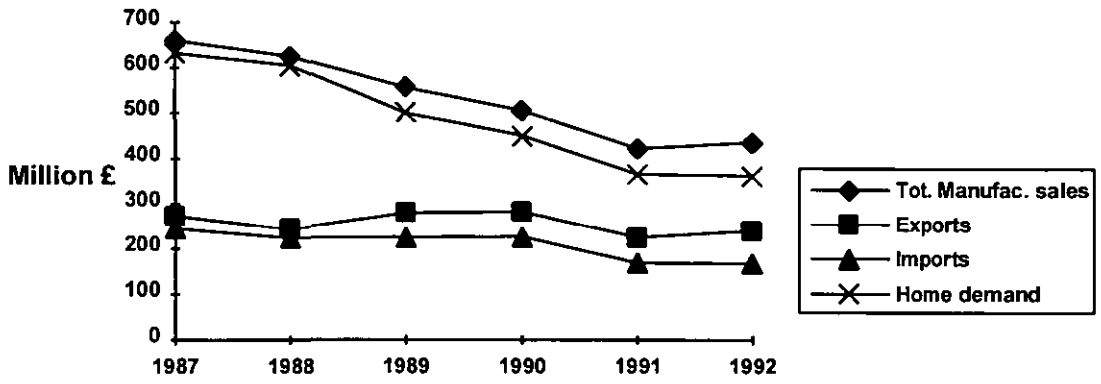


Chart 4.9b Import penetration compared to export / manufacturers sale ratio of SIC 4410

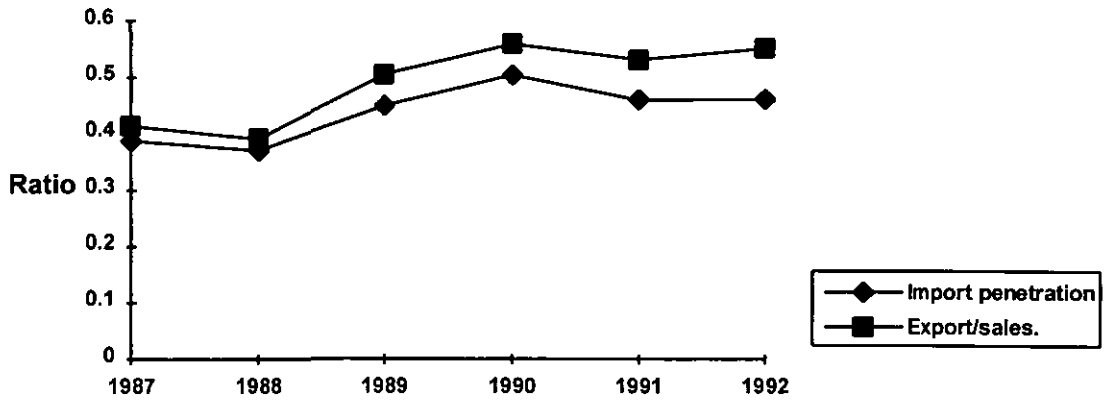
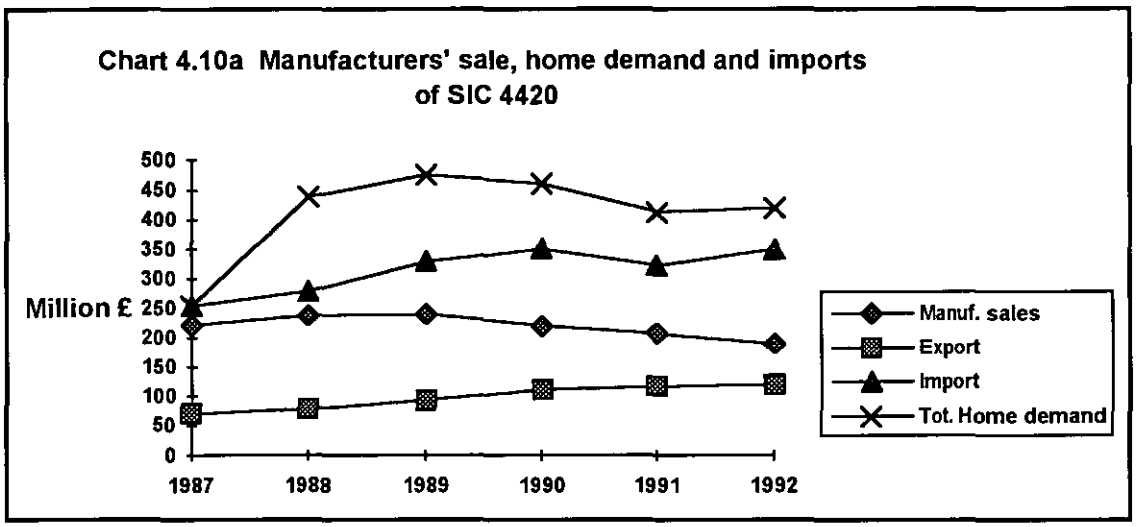


Table 4.10 Manufacturers' sales, home demand and import penetration data for the Leather goods industry (SIC 4420).

Year	1987	1988	1989	1990	1991	1992
Manuf. sales	222	238	240	221	207	190
Export	71	78	93	111	116	119
Import	254	279	329	351	322	349
Tot. Home demand	254	439	476	461	413	420
Import penetration	1	0.636	0.691	0.761	0.780	0.831
Export/sales	0.320	0.328	0.388	0.502	0.560	0.626

Source: CSO (1993f), " Business Monitor, PAS 4420 Leather goods", HMSO, London



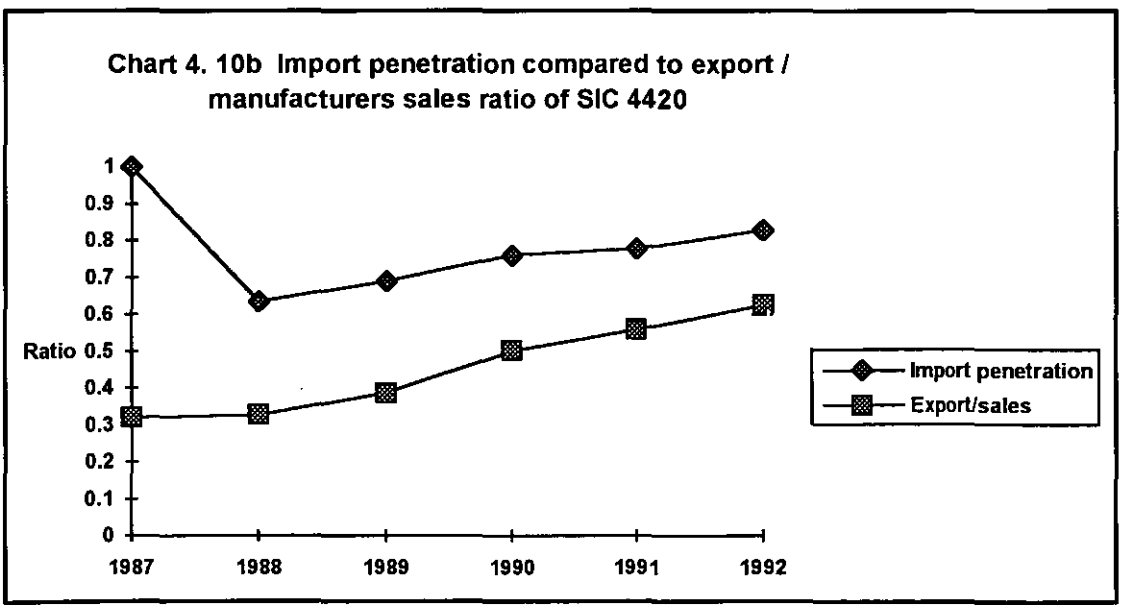


Table 4.11 Manufacturers' sales, home demand and Import penetration data for electronics consumer and misc. equiptment (SIC 3454).

Years	1987	1988	1989	1990	1991	1992
Sales	1089	1193	1199	1587	1789	1384
Exports	546	645	806	1094	1260	1098
Imports	1392	1447	1595	1585	1502	1790
Total Home Demand	1935	1995	1988	2078	2031	2076
Import penetration ratio	0.719	0.725	0.802	0.763	0.740	0.862
Export/sales	0.501	0.541	0.672	0.689	0.704	0.793

Source: CSO (1993g), " Business Monitor, PAS 3454 Electronic consumer goods & Miscl. equiptment", MSO, London.

Chart 4.11a The manufacturers sale, exports, imports and total home demand of SIC 3454

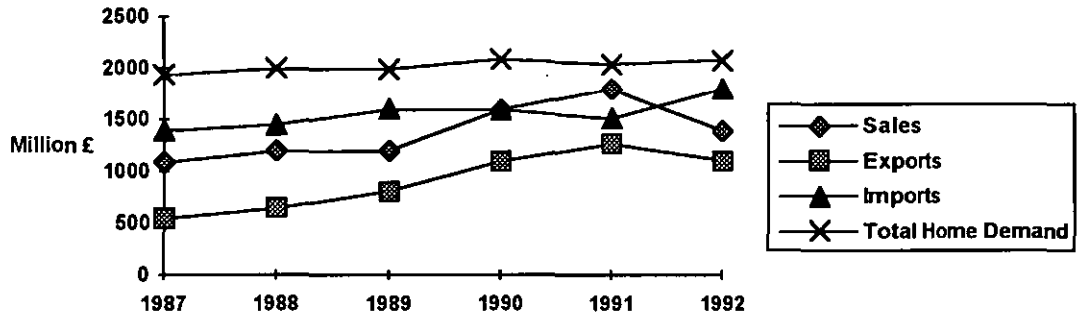


Chart 4.11b. Import penetration compared to the export/manufacturers sales ratio of SIC 3454

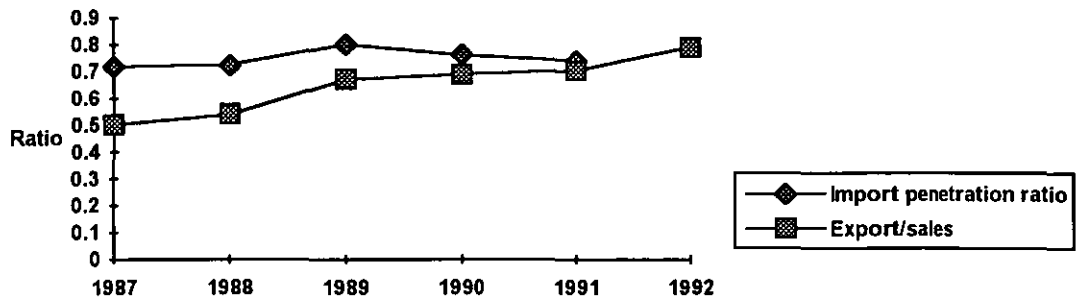


Table 4.12 Manufacturers' sales, home demand and import penetration data for the Domestic electrical appliances (SIC 3460).

Years	1987	1988	1989	1990	1991	1992
Sales	1540	1816	1553	1704	1727	1589
Exports	282	367	410	456	474	509
Imports	941	1061	1019	942	984	991
Total Home Demand	2199	2510	2162	2190	2237	2071
Import penetration ratio	0.428	0.423	0.471	0.430	0.440	0.480
Export/sales	0.183	0.202	0.264	0.268	0.274	0.320

Source : CSO (1993h), " Business monitor, PAS 3460 Domestic electrictal goods", HMSO, London.

Chart 4.12a The manufacturers sales, export, imports and total home demand of SIC 3460

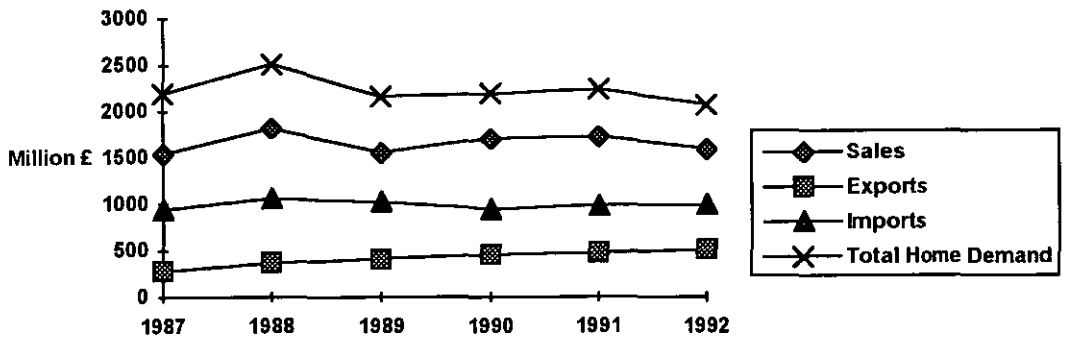


Chart 4.12b The import penetration ratio compared to the export/ manufacturers sale ratio of SIC 3460

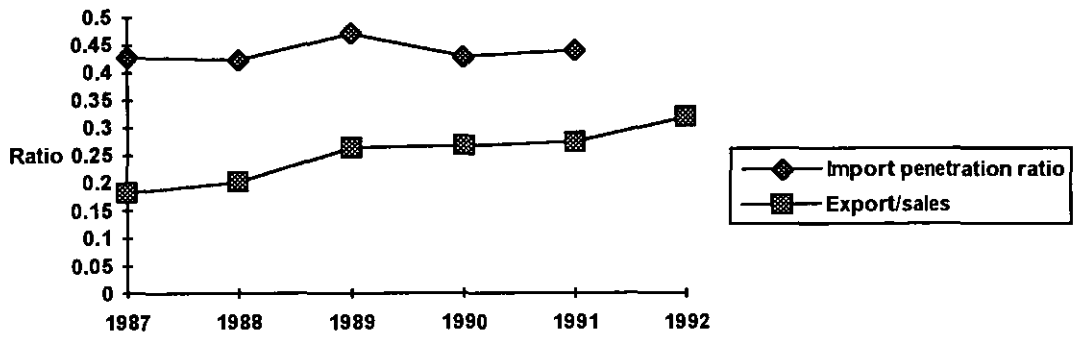


Table 4.13. Manufacturers' sales, home demand and import penetration data for the cutlery, spoon, fork, and similar table ware SIC 3162.

Year	1987	1988	1989	1990	1991	1992
Manufacturers sale	109	105	104	116	127	162
Import	54	55	70	75	80	96
Export	68.67	59.85	62.4	65.26	82.55	95.58
Tot. home demand	94	100	112	125	124	163
Import penetration ratio	0.57	0.55	0.625	0.6	0.64	0.59
Export/manufacter sale ratio	0.633	0.571	0.596	0.569	0.653	0.586

Source: CSO (1993i), " Business Monitor, PAS 3162 Cuttlery, spoons, forks, similar tableware", HMSO, London.

Chart 4.13a The manufacturers sales, export, imports and total home demand of SIC 3162

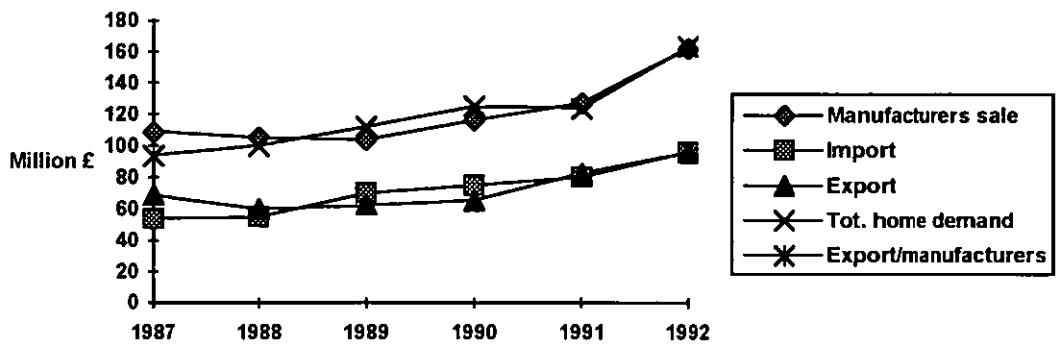
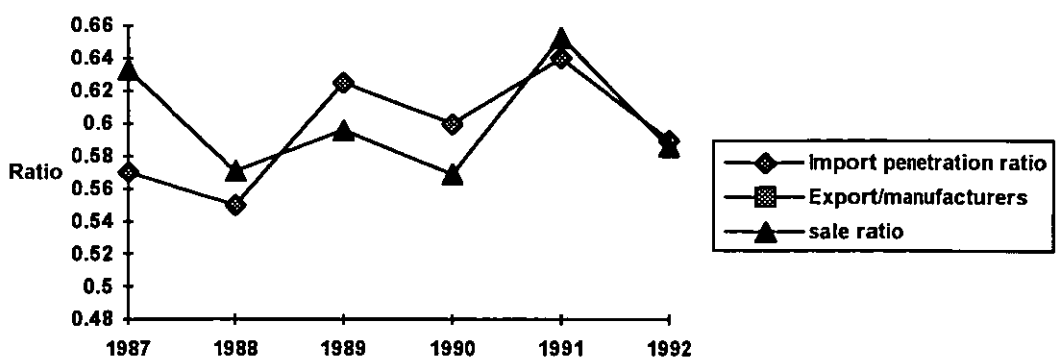


Chart 4.13b The import penetration ratio compared to the export/manufacturers sale ratio of SIC 3162



Chapter 5

THE QUESTIONNAIRE DESIGN

Introduction

A popular method of data collection for a cross sectional survey is by mail questionnaire. The use of questionnaires is considered a better way of collecting information than the face to face interview especially when the study is focusing on the possible relationship and effects of the strategic variables restropectively (Wiersma, 1991, pp. 173).

The mail survey approach is considered as more suitable than engaging the face to face interview because by the mail survey approach (Dillman, 1978, pp. 2-5; Bell, 1993, pp. 75-76; Wiersma, 1991, pp. 171-175):

1. Large number of respondents can be reached economically,
2. It helps to collect standardized and precise information.
3. It saves a lot of time and contributes to simplicity in data analysis.

The respondents of the field survey.

The current study agrees with Miles and Snow (1980, pp. 20-21), Dess and Davis (1984), Parker and Helms (1992) and Rajagopalan and Finkelstein (1992) that the CEOs and the top management team are knowledgeable about the overall strategy of their respective firms and their perceptions on the firm's conduct and performance reflect the general opinion and view of the firm as a whole. They are well suited to the use of a mail survey technique because they are literate and should have no difficulty to understand and filling in the questionnaire (Bell, 1989, pp. 58).

Considerations for the design of the questionnaire

The questionnaire was designed to elicit information on the 5 main areas of concern: the competitive methods that is perceived by the firms as important to their competitive position, the firm's strategic capability, the level of organizational entrepreneurship, the use of information technology in strategy formulation and implementation and the measurement of business performance.

The law of parsimony applies in designing the items in the questionnaire in order to keep the questionnaire as simple as possible to obtain the necessary data (Weirs, 1991, pp. 176). In designing the questionnaire meticulous attention was given to constructing items that are precise and concise.

To enhance the rate of response, the current study follows Dillman (1978, pp. 80-83) that the questionnaire design should reward the respondents by:

1. Showing a positive regard to them and make them feel important to the study.

2. Using simple questions and avoiding formidable questions to reduce the mental effort required to complete the questionnaire.

3. Establishing trust by providing a token of appreciation in advance. In this research a leather book mark that carries the emblem of the Loughborough University of Technology was enclosed with each questionnaire.

Designing the variables for business strategy

The main purpose of designing the variables for the business strategy is to relate the item in the questionnaire with the following hypotheses that have been discussed in chapter 1:

Hypothesis 1: Firms that adopt the cost efficiency strategy and maintained a competitive standard of quality are more successful than those pursue purely the cost efficiency strategy.

Hypothesis 2: Firms that adopt a combination of cost efficiency and product variety strategy perform better than those which follow solely one or the other.

Hypothesis 3: Firms that adopt a flexible manufacturing strategy are more successful than those which are highly specialized in their production .

Hypothesis 4: Firms that have been pursuing the differentiation strategy will be more successful than the new entrants.

The current study recognizes that similar organizations operating in the same environment may choose to address the environment differently (Dess and Davis 1984). The study follows the approach taken by Dess and Davis (1984) and Parker and Helms (1992) to capture the variability in the pattern of the strategy conceptualized by the sample firms. In their studies, Dess and Davis (1984) and Parker and Helms (1992) operationalized the competitive methods as the variables for the strategy construct in their questionnaire design. The above mentioned approach fits well to Porter 1980's (pp. 127-129) explanation that it is possible to capture the differences among a company strategy by analyzing the set of competitive methods that would provide the overall picture of the organizational strategy.

The development of a list of the competitive methods that would be used as the strategic variable in the questionnaire design has been explained in detail in chapter 3. The list of the 20 competitive methods that have been selected to be structured into the questionnaire design is listed in table 5.1

Pretesting of the variables for the strategy construct

In the beginning the study planned to undertake an expert rating approach to pretest the practicality and potential effectiveness of the strategic variables. The approach was intended for two reasons: first, to seek expert opinion on the practicality and effectiveness of using the competitive methods that have been identified in table 5.1 as the strategic variables and second, to seek expert opinion on the relationship between the competitive methods that have been identified as the strategic variables and the hypothesized strategies.

Table 5.1 The competitive methods selected for the questionnaire.

The competitive methods
1. Cost control
2. Competitive pricing
3. Broad range of product features
4. Product quality control
5. Product standardization
6. Product simplification
7. Narrow product lines
8. Customer services
9. Brand identification
10. Multiple market segments or niches
11. Mass market
12. Control of channel of distribution
13. Skillful human resources
14. Operating efficiency
15. Numeric control machines
16. CAD/CAM facilities
17. Make to order
18. Shorter machine running time
19. Information technology
20. Business alliances

The design of the instrument for the expert rating

In the effort to solicit expert opinion on the relationship between the strategic variables and the hypothesized business strategies, the study opted to use a set of questionnaires and follow this with a debriefing interview.

The expert rating questionnaire contains 6 subsections; one for each of the strategic orientations hypothesized in the study. Each subsection consisted of the same 20 competitive methods with a five point Likert's type of rating scale attached. The scale ranges from 1, rated as the least important, to 5, rated as the most important competitive method to the hypothesized strategy. The experts were to rate the

importance of each of the competitive methods as a dimension of the hypothesized strategy. A sample of the expert rating questionnaire is attached in appendix 5.1.

Piloting the expert rating instrument

Four trade associations representing 4 of the 7 industries that had been identified as affected by low cost import penetration were selected to validate the questionnaire. The 4 trade associations contacted were:

1. The British Footwear Manufacturer Federation
2. British Leather Goods Manufacturers Association.
3. British Leather Confederation
4. British Menswear Guild

The objective of piloting the expert rating instrument was to determine the potential effectiveness of the questionnaire (Reynolds et al., 1993). This provides the opportunity to identify any errors and omissions, especially the presence of ambiguous and/or double questions, whether there exist leading phrases and to test the level of difficulty of each of the questions. Besides problem finding, the pretesting of the instrument would check on the practicality and comprehensives of the competitive methods that had been identified as the strategic variables.

In the debriefing session of the pilot survey, the executives in charge of the trade associations were to be asked to go through the questionnaire and reveal their opinions on it to the researcher.

The trade associations were contacted to fix a date for the debriefing interview three weeks after the questionnaires had been mailed to them. Responses were not encouraging: most of the executives contacted were reluctant to spent a little of their time for the interview due to their work demands.

Only 3 out of the 4 trade associations responded to telephone calls. Two of the trade associations were unwilling to be interviewed on a face to face basis, however they agreed to be interviewed over the phone. The only trade association that volunteered to be interviewed on face to face basis was the British Footwear Manufacturers Federation. The interview took place at the federation headquarters in London on the 25 January 1994.

The points discussed in the interview were as follows:

1. The legibility of the questionnaire especially with regard to the lettering size, spacing, structure and the general design of the questionnaire.

2. The clarity of the instructions given in the cover page and in each section of the questionnaire.

3. Whether or not any questions were so sensitive that respondents might object to answer them. This includes vague, unfamiliar phrases and difficult questions.

4. The pattern of import penetration in the industry represented by the trade association.

5. Any competitive methods being missed from the list of competitive methods derived from the literature survey.

6. The identification of at least 3 top level managers or executives in their respective industries to be appointed as the panel of the expert rating.

The interview with the British Footwear Manufacturers Federation.

The interview with the British Footwear Manufacturers Federation gathered the following information:

a. Even though the overall design and presentation of the questionnaire did not have many problems, the tasks required of the respondent is difficult. It was considered that the level of difficulty made it almost impossible for the respondent to fill out the questionnaire. The questionnaire requires the respondents to have prior theoretical knowledge of the relationship between competitive methods and their associated strategic orientations. The level of difficulty associated with the task required of the panel of experts contributed to the unwillingness of respondents to fill out the questionnaires.

b. The outcome of the pilot survey indicated that the assumption that top managers are knowledgeable and possess the appropriate expertise in strategic planning is not always true.

c. However, they might be the experts in adopting the right strategic choice in order to remain competitive in their business environment, but by no means would they necessarily be aware of the relationship of competitive methods to strategic orientation.

Feed-back from the telephone interviews

On the whole, both respondents that were interviewed over the telephone felt that there were few problems in term of the legibility and layout of the questionnaire and they could understand the instructions clearly.

On the presentational aspect of the questionnaire, the respondents suggested that it would be helpful if the type of answers required (e.g., circling the most important value) be described in the introductory page of the questionnaire and there was also a suggestion to that the wording should be simplified as much as possible.

The most critical comment from the telephone interview was that they would prefer the generic terms used to title the strategic orientations to be replaced with their definitions only. The generic terms used for the strategic orientations were unfamiliar to them. They also indicated that they just do not understand the relationship between competitive methods and the strategic orientations.

Dess and Davis (1984) succeeded in their expert rating technique because in their methodology the panel of experts was supplemented with Porter's (1980) chapter on generic strategy. This study has the view that the methodology pursued by Dess and Davis (1984) was loaded, in that the respondents were led to the desired response by the supplementary article.

The piloting respondents also pointed out that some of the strategic orientations and the competitive methods listed in the questionnaire are not applicable to certain industries. For example, the product variety, broad range of product features and information technology are not popular competitive methods in the leather tanning industry. Besides the above comments, the interviews also revealed that some competitive methods that are important to the industry were not in the initial list: right first time, advertising, control of raw materials, product variety, bespoken technology and new product development.

None of the trade associations that were interviewed was willing to identify and recommend people to join a panel of experts. The main reasons for this reluctance were individual privacy and the protection of interest of the member of the trade association.

The action taken based on the feed-back from the pilot survey.

The main aim of the pilot survey was to determine the acceptability of the questionnaire to the targeted respondents and its reliability. The outcome of both surveys; the telephone interviews with two of the trade associations and personal interview with the British Footwear Manufacturers Federations indicated the existence of critical difficulties in the task that is required from the respondents. The researcher felt that these difficulties would affect the capability and reliability of the questionnaire and thus it was decided to drop the expert rating phase from the research design.

Cancelling the expert rating phase would not fundamentally affect the outcome of the study because the objective of the expert rating was only to help in explaining the relationships between competitive methods and the strategic orientations derived from the hypothesized strategies besides testing the applicability of the competitive methods operationalized as the strategic variables. The relationship between the competitive methods and the strategic orientations could be analyzed by factor analysis as had been planned in the analytic scheme of the research design explained in chapter 3.

From the feedback of the pilot survey, it was decided to drop two competitive methods and add 5 new competitive methods to the initial list of competitive methods. The competitive methods that have been dropped are 'investment in numeric control machines' and 'investment in CAD/CAM facilities'. These two strategic variables were replaced by the new competitive method; 'investment in computer aided machines'. The 4 additional competitive methods that have been added to the list are advertising, control of procurement of raw materials, capability to manufacture a variety of products and new product development. With these additions the total number of competitive methods operationalized as the strategic variables was 23. Table 5.3 exhibits the list of the 23 competitive methods used in the mail survey questionnaire.

Table 5.2 The strategic orientations and the set of competitive methods associated with the strategic orientation.

The strategic orientation and competitive methods inferred to be associated with the strategic orientation.	The competitive methods operationalized in the questionnaire as indicators for the strategic orientations
Cost efficiency strategy	
1. Cost control - Porter (1980)	1. Cost control
2. Competitive pricing - Porter (1980) & Dess & Davis, (1984)	2. competitive pricing
3. Skilful human resources - Dess & Davis (1984) and Parker & Helms (1992)	3. Skilful human resources
4. Operating efficiency - Parker & Helms (1992)	4. operating efficiency
Product variety strategy	
1. Broad range of product features	1. Broad range of product features
2. Multiple market segments or niches	2. Multiple market niches
3. Make to order	3. Make to order production
4. Information technology	4. Information technology
5. Shorter machine running time - Baden Fuller & Stopford (1992)	5. Shorter machine running time
competitive standard of quality strategy	
1. Product quality control - Dess and Davis (1984)	1. Product quality control
2. Control of incoming material - Porter, 1980	2. Procurement of raw material
3. Right first time - Pilot survey	3. Skilful human resources
Flexible manufacturing strategy	
1. Investment in numeric control or computer aided machines - Parish, (1990), Luggen (1991)	1. Computer aided machines
2. Capable to manufacture variety of products with high flexibility - Parish, (1990)	2. Capable to manufacture variety of products
3. Makes to order - Parish, (1990), Baden Fuller (1990)	3. Makes to order production
4. Use of information technology- Parish (1990), Baden Fuller (1990)	4. Information technology
5. Shorter machine running time - Parish (1990), Luggen (1991), Baden Fuller (1990)	5. Shorter machine running time

Table 5.2 (continued)

The strategic orientation and competitive methods inferred to be associated with the strategic orientation.	**The competitive methods operationalized in the questionnaire as indicators for the strategic orientations**
Differentiation strategy	
1. Developing brand images	1. Brand identification
2. Customer services	2. Customer services
3. Developing product features & technology	3. New product development
4. Control channel of distribution.	4. Control of distribution channel
5. Advertising	5. advertising
- Porter (1980), Dess & Davis (1989) & Parker & Helms (1990)	
Specialized manufacturing strategy	
1. Narrow product line - Baden Fuller & Stopford,1992	Narrow product lines
Product standardization - Lockyer, 1983	Product standardization
Product simplification - Lockeyer, 1983	Product simplification
Mass market - Baden Fuller & Stopford, 1992	Mass marketing
Feed back from the pre-testing of the competitive methods.	
1. Business alliances	1. Business alliance
2. Bespoken technology	2. Computer aided machines
3. Right first time	3. Skilful human resources
4. Advertizing	4. Increase in advertizing
5. Control on raw material	5. Control in procurement of raw material
6. manufacture variety of products	6. Emphasis capability to manufacture variety of products
7. Develop new products	7. Emphasis on development of new products

Table 5.3 The list of 23 competitive methods used in the mail survey questionnaire.

THE COMPETITIVE METHODS
1. Emphasis on cost control
2. Adoption of competitive pricing
3. Increase in product quality control
4. Emphasis on product standardization
5. Emphasis on product simplification
6. Adoption of narrow product lines
7. Emphasis on customer services
9. Emphasis on brand identification
10. Use of Multiple market segments or niches
11. Use of Mass market
12. Control of distribution channels
13. Emphasis on skillful human resources
14. Improvement of operating efficiency
15. Investment in computer aided machines
16. Emphasis on makes to order production.
17. Emphasis on shorter machine running time
18. Use of information technology
19. business alliances
20. Increase in Advertising
21. Emphasis on new product development
22. Emphasis on capability to manufacture a variety of products
23. Control of procurement of raw material

The format of the question for competitive methods

The questions for the competitive methods were formatted in the form of opinion rating where the respondents have to rate the importance of each of the competitive methods as the dimensions of business strategy. Each of the 23 competitive methods was linked to a 5-point Likert scale. The section ends with an open ended question to facilitate responses for choices that were not given in the list of the competitive methods. The final format of the questions on strategic variables is given in Appendix 5.2.

Formulating questions for organization's strategic capability

The objective of formulating the items that could elicit information on organizational strategic capability is to substantiate the following hypothesis:

Hypothesis 5: The success of a business strategy is a function of the firm's strategic capability.

The variables operationalized by the present study on the organization's strategic capability were parallel to the theoretical views expounded by Hofer and Schendel (1978), Chamberlain (1968) and Lenz (1980). Lenz (1989) synthesized the views of earlier authors and argues that strategic capability extends beyond the stock of resources the organisation owns and controls: it includes support from the environment.

Lenz (1980) proposed 3 dimensions of strategic capability:

i. Knowledge-technique base for value creation
ii. Capacity to acquire and generate resources.
iii. General management technology.

Lenz (1980) expounded that the proximate source of value creation in a firm resides between its knowledge about creation of value and technical facilities and process. The firm's capability for value creation could best be identified from the firm's ability to create customer satisfaction in term of the benefits in its product features.

The second dimension of strategic capability is the firm's ability to acquire resources from the external environment within which the firm operates. This capability could best be identified from those factors such as belief, attitude and commitments of suppliers, customers and members of the financial community towards the firm (Lenz, 1980).

Even though the study recognizes the importance of Lenz (1980) management technology as a dimension of the company's strategic capability, the researcher has the opinion that it is redundant to measure this dimension because the attitudes of customers, suppliers and financial institutions towards the company are themselves indicators of a management capability. As a result, the current study decided to explore a firm's capability for strategic action based on the first two dimensions.

To encourage questionnaire completion, the items relating to the two dimensions of firm's strategic capability were designed with simplicity. The study explored the firm's ability to create customer satisfaction and the firm's ability to generate and acquire the external resources by constructing close-ended self rating type of questions.

In probing into the value creation dimension of the firm's strategic capability, a question was included based on the firm's perception of its ability to create customer satisfaction in term of the benefit it could offer in its product features. A choice of answers ranging from 'not capable at all' to 'extremely capable' was offered.

For the firm's ability to generate and acquire resources from the environment, the study formulated 3 questions probing into the attitude of the firm's major customers, suppliers and the financial institutions.

It was decided to appraise the customer attitude toward the company by exploring their loyalty in supporting business activities of the firm. A customer that is not committed to placing future orders can be rated as 'cannot be depended on' while customers that are committed to regular purchases or have secured a long term contract can be rated as 'extremely loyal'.

In assessing the attitude of the suppliers toward a firm, the study probes into the level of commitment offered by the major supplier(s) to the firms. A supplier that is inconsistent in providing its services could be considered as 'not committed' and a supplier that is regular in fulfilling their obligation and in the quality of service rendered is considered as 'highly committed'.

The study assesses the general attitude of financial institutions to a firm's business by probing into the conduct of the financial institutions in extending credit facilities. The respondents were ask to rate their perception of the attitude of the financial institutions in supporting their credit requirements. A firm that experienced difficulty in securing credit assistance could rate the financial institutions as 'not supportive' and on the other extreme, a firm may rate the financial institutions as 'very supportive' if they have benefited from the credit facilities.

Exhibit 5.1 shows the questions that have been constructed based on the above discussions.

Exhibit 5.1 The questions constructed to explore a firm's strategic capability

1. How do you rate your company's ability to create customers satisfaction in term of benefits in its product features?
   - ☐ Not capable at all
   - ☐ Capable
   - ☐ Less capable
   - ☐ Extremely capable

2. What is the general attitude of your major customer(s) toward your business?
   - ☐ Not committed
   - ☐ Committed
   - ☐ occasionally committed
   - ☐ Highly committed

3. What is the general attitude of your major supplier(s) toward your business?
   - ☐ Not committed
   - ☐ Committed
   - ☐ Occasionally committed
   - ☐ Highly committed

4. What is the general attitude of the financial institutions towards your business?
   - ☐ Not supportive
   - ☐ Supportive
   - ☐ Occasionally supportive
   - ☐ Very supportive

Formulating the questions covering the variables for organizational entrepreneurship.

The purpose of formulating the item that covers the variables for organizational entrepreneurship is to relate the variables with the following hypothesis:

> Hypothesis 6: Entrepreneurial firms are more successful than those which are not entrepreneurial.

Covin and Slevin (1991) explained that the entrepreneurial firm is generally distinguished from the non-entrepreneurial counterpart by its ability to innovate, initiate change and react to changes rapidly, flexibly and adroitly. In agreement with Miller (1983), Covin and Slevin (1991) and Naman and Slevin (1993), the current study subscribes to the view that organizational entrepreneurship equates to innovative and technological leadership, the organizational propensity to take business-related risk and willingness to be proactive in the market place. Each of the organizational characteristics described above is a dimension of organizational entrepreneurship

(Naman and Slevin, 1993). The three dimensions for organizational entrepreneurship used in this study are the innovative, risk taking and proactive dimensions.

The scheme used to measure organizational entrepreneurship was adopted from the entrepreneurship component of the questionnaire that has been developed by Naman and Slevin (1993). The Naman and Slevin's (1993) scheme of measuring organizational entreprenuership adopted by the current study is composed of 9 questions. The questions were designed to elicit respondent perceptions toward the entrepreneurial conduct of their respective companies. In each question two opposite situations that are related to the entrepreneurial behaviour of a company were given and the respondents were asked to indicate the position of their company on the 7-point scale between the two situations. The current study has reassigned and grouped the questions in the scheme into three groups in which each group of questions measures one dimension of organizational entrepreneurship. Exhibit 10.1 of chapter 10 shows the questions that contribute to the measurement of each dimension of the organizational entrepreneurship.

Formulating the questions on the use of IT in strategy formulation and implementation.

Information technology (IT) was defined as any data-base system or management information system (MIS) used by the management team as a source of information for managerial decision making. Questions relating to IT were associated with hypothesis 7, viz:

Hypothesis 7: The success of a strategy is directly related to the use of IT in the strategy formulation and implementation process.

To avoid double questions, the items on awareness and use of IT were separated into 3 sub-items in the questionnaire. The items were designed with closed ended type of questions and were constructed as shown in exhibit 5.2.

Exhibit 5.2 The questions designed for the firms use of IT in formulating and implementation of strategy.

1. Is your company aware of the role of information technology in designing or implementing a strategy? ☐Aware ☐Not aware

2. Does your company use any form of information technology in:
   a. Formulating company strategy? ☐Yes ☐No
   b. Implementation of company strategy? ☐Yes ☐No

Formulating the questions to measure organizational performance

Following Dess and Davis (1984), Dess and Robinson (1984) and Parker and Helms (1992), the study uses sales growth, return on sales (ROS), return on asset (ROA) and return on share holder equity (ROSHE) as the financial indicators that reflect the effectiveness of strategy.

Direct questions about financial facts and figures might represent a potential threat to the firms because some of them might regard this information as confidential and this could result in a non-response (Dillman, 1978, pp. 105). In order to stimulate and encourage questionnaire returns, it was decided to use subjective indicators rather than the objective financial data (Dess and Robinson, 1984).

In designing the questions associated with this subjective approach, the respondents were requested to indicate their perception to the financial performance of their respective firms measured by the following indicators:

a. Return on sales (ROS)
b. Return on assets (ROA)
c. Sales growth in the past five years (SALEGROW)
d. Net profit after tax from the operation (PROFIT)
e. Return on share holder equity (ROSHE)

Each of the indicators listed above had attached a 5-scaled rating scheme. The scale ranges from 'not at all satisfied' to 'extremely satisfied'. Indicators of 'extremely satisfied' will indicate a perception of excellent financial performance and feeling of 'not at all satisfied' reflects the perception of poor company performance.

To help validate the responses, the respondents were requested to help the study on a voluntary basis by furnishing the figures on the company's actual sales, net income after tax and the total assets from the latest year's financial statement. The purpose of this figure is to calculate the company's ratio for return on sales (ROSRATIO) and return on assets (ROARATIO) to counter-check the correlation of respondents' perception of their company's financial performance with actual performance. The format of the questions that have been constructed to measure the organizational performance was reproduced in exhibit 5.3.

Exhibit 5.3 The questions constructed to measure the organizational performance

Please ***tick*** **(✓)** the appropriate boxes to indicate your reactions toward each of the following financial indicators.

Financial performance/reaction	**Not at all satisfied**	**Dissatisfied**	**Neither dissatisfied nor satisfied**	**Satisfied**	**Extremely satisfied**
Sales growth in the past five years	☐1	☐2	☐3	☐4	☐5
Return on share holder equity	☐1	☐2	☐3	☐4	☐5
Net profit after tax from the operation	☐1	☐2	☐3	☐4	☐5
Return on sales	☐1	☐2	☐3	☐4	☐5
Return on total assets	☐1	☐2	☐3	☐4	☐5

The structure of the questionnaire.

In sequencing the order of the questions in the questionnaire, the study subscribes to the 4 basic principles of ordering suggested by Dillman (1978, pp. 123-125). The 4 principles were derived on the basis of increasing respondents' motivation and building of their confidence in completing the questionnaire. The 4 basic principles are:

1. Sequencing the questions in descending order of importance and usefulness.
2. Group the questions that are similar in content or question type together.
3. Take advantage of the cognitive ties that respondents are likely to make among the groups of questions in deciding the order of the questions involved.
4. Position the questions that are most likely to be difficult after questions that are likely to be easier to answer.

Conforming to Dillman's (1978) 4 principles, the questionnaire was structured with 4 main sections, each encompassing a different theme:

1. Section A of the questionnaire consists of three groups of closed-ended, ordered-choice questions. Each was constructed to elicit a different perspective of information. The first perspective focuses on the firm's and respondent's background. This group of questions elicits information regarding the firms' dependency on their parent organization in strategy formulation, the time over which the strategy had been adopted by the firm, whether or not the respondent had been involved in the strategy formulation and the duration of the respondent's involvement in the firms strategic planning.

   The second perspective focuses on the firm's awareness and use of IT in strategy formulation and implementation. The third perspective focuses on the dimensions that contribute to the firm's capability for strategic action.

   Even though the questions probing different perspectives were grouped into one section, the questions under the three different perspectives were sequenced in their increasing order of difficulty with considerations given to the flow and continuity of the question to take advantage of their cognitive ties (see Dillman, 1978, pp. 123-125).

2. Section B of the questionnaire was designed to investigate the strategies pursued by the firms. The section comprises the 23 competitive methods arranged in random order. It was placed second due to the importance of the issue to the study.

3. Section C of the questionnaire is composed of questions designed to solicit information on the perception of the companies' top management, on the position taken by the firms when they engaged in the product-market competition. The objective of the questions was to measure organizational entrepreneurship.

   The section was sequenced immediately after section B because the section seems to more objectionable than the questions on organization strategy and the questions designed for this section have closer cognitive ties to section B as compared to the questions in section A.

4. Section D of the questionnaire was designed to measure organizational performance. This section is composed of two parts. In the first part, the respondents were requested to indicate their perception of the business performance of their firm. In the second part the respondents were asked on a voluntary basis to furnish the study with figures on the firm's actual sales, net income after tax and the total assets from the firm's most recent financial statement.

   In view of the level of difficulty and sensitivity inherent in the questions in this section, it was decided to position this section at the end of the questionnaire.

Pilot survey for the questionnaire.

A pilot survey on the questionnaire was administered to a group of 15 middle level executives and managers enrolled in the Executive MBA programme at Loughborough University. Feed-back received from this pilot survey was very constructive and useful in improving the effectiveness of the questionnaire.
Table 5.4 summarizes the feed-back received from the pilot survey and the subsequent action taken. An improved version of the questionnaire was formed and used as the research instrument for the study. The final version of the questionnaire is attached in Appendix 5.2.

Table 5.4. Feed-back and actions that have been taken based on the pilot survey.

The Questions	Comments on the questions	Action taken
Q.1	One respondent commented on the purpose of asking the names of respondents if it is optional.	The researcher intended to encourage response from those who want to be unanimous. However the respondent's name is also needed to administer the returns. Asking for names shows that the researcher recognizes and values the effort given by the respondents in completing the questionnaire. The researcher decided to drop the question and replace it with a serial number that carries information about the respondent and their industry. The serial number was positioned at the bottom left hand corner immediately beneath the return address to avoid the serial number from becoming too glaring to the respondents.
Q.3	Two of the respondents indicate their confusion in question 3(a). The confusion lies in whether the question intent to elicit information on experience with the present job or the present company.	The intention of the question is to elicit respondent's experience with the job not with the company. To overcome the confusion the question was simplified to only one question (i.e. question 3 only) and worded as the following: "Have you been practically involved in the formulation of your company business strategy?" ☐Yes ☐No

Table 5. 4 (continued)

The Questions	Comments on the questions	Action taken
Q.4	One of the respondents asked for the definition of the word 'substantially involved' in this question.	The word 'substantially' involved was changed to 'practically' involved. Question 3b and 4 were combined to form question 3 in the new questionnaire. Question 4 in the new questionnaire was replaced by question no. 7 of the pilot questionnaire.
Q.5		Question 5 was reposition to take the place of question no. 1 of the new questionnaire.
Q.6	One of the respondents asked for the definition of autonomous and 2 out of fifteen suggested the word autonomous to be changed to a word that is more familiar to them.	The word 'autonomous' was changed to 'independent'. The question was reposition to question no. 2 in the new questionnaire
Q.7 & Q.8	Two of the respondents suggested adding 'I don't know' as a choice of answer to question 7, and 3 of the respondents suggested to adding 'I don't know' as a choice of answer to question 8.	The researcher feels that the suggestions would have no empirical purpose. Therefore the suggestion was ignored. Question 8 was repositioned to question no. 5 in the new questionnaire.
Q.9	More than 50% of the respondents have suggested a need to explain the meaning of 'information technology' and to specify the type of information technology that the questionnaire is asking.	The question does not intend to acquire information on any specific aspect IT. The question was rephrased by adding the words 'MIS or any database system' within a bracket to indicate the intention of the question. Question no. 9 was repositioned to question no. 6 in the new questionnaire.

Table 5.4. (continued)

The Questions	Comments on the questions	Action taken
Q. 10, Q. 11, Q. 12, Q. 13.		These questions were repositioned to question no. 7 to question no. 10 sequentially in the new questionnaire.
Q.12	More than 50% of the respondents felt that the phrase 'member of the financial community' in question 12 is ambiguous. Especially on the issue of what comprised the community.	The term financial community was rephrased to 'financial institutions' which is more specific than the previous one. (Repositioned to question no. 9 in the new questionnaire)
Q.13	More than 50% of the respondents asked for clarification on the word 'value' in this question and were confused in the distinctions between question 13 (a) and 13 (b). To them the word 'value' is not specific enough and laden with ambiguity. In their view, question 13 (a) intends to elicit the overall actual capability of the company in creating value while question 13 (b) is aimed at eliciting information on the potential capability of the company.	The word 'value' was changed to 'customer satisfaction' The whole question was restructured by eliminating question 13 (b) because the aim of this question is only to identify the actual capability of the company. (Repositioned to question no. 10 in the new questionnaire)

Table 5.4 (Continued)

The Questions	Comments on the questions	Action taken
Section B	Most of the respondents pointed out the inconsistency between the instructions in the first and second paragraph of the question. It was clear that the first paragraph aimed to elicit information on the competitive actions that have been taken by the respondents. However, the second paragraph shifted the emphasis to intended methods or methods that are potentially important to the company. The respondents also pointed out that the phrase 'neither important nor unimportant' is synonymous to the phrase 'of no consequences' in the rating scheme.	The aim of the question is to acquire information on the competitive actions that have been taken by the companies. The second paragraph was rephrased to emphasized the aim of the question. Since the phrase 'neither important nor unimportant' would mean the same as 'no consequences' in the rating scheme, the statement was rephrased to 'less important' to suit with the order of importance in the rating scheme.
Section C Q.5	Three of the respondents indicated their difficulty in understand the meaning of 'it is best to explore gradually via cautious, incremental behaviour.'	This phrase was changed to 'it is best to explore gradually and cautiously the necessary acts to achieve the company's objectives'.

Table 5. 4 (Continued)

The Questions	Comments on the questions	Action taken
Section C Q.6	Three of the respondents pointed out that they do not understand whether the phrase 'costly decision' means decisions that would incur heavy expenses or costly in terms of disaster or money loosing decisions.	The statement 'costly decision' in the question meant the potential lost in term of capital, materials, times or human resources as the consequence of a wrong decision. The question was rephrased to 'the probability of making costly wrong decision'.
Section D	Most of the respondents suggested that the researcher should ask a copy of the company annual report instead asking the respondents to fill in the financial information requested.	The purpose of this section is to compare the actual financial performance of the company with the perception of the company CEOs. Asking them to send a copy of their companies' annual reports might affect the rate of return of the questionnaire. The researcher decided to maintain the content of the question.

Chapter 6

IMPLEMENTING THE MAIL SURVEY

Introduction

A successful mail survey is very dependent on the administration of the survey. Meticulous attention should be given to avoid the factors that could lead to a poor response. Common factors that would caused poor response are on incomplete or wrong address, a questionnaire package that resembles junk mail and poor instruction on who should complete and why it is important that they complete the questionnaire (Dillman, 1978, pp. 160).

The steps taken toward implementing the mail survey

As the first step towards implementation of the mail survey, the current study has developed a respondent's mailing list that has been meticulously selected and identified from the UK Directories of Manufacturing Business (the 1989, 1990 and 1991 supplements). The directory listed the individual business units with manufacturing activities. Head offices and non-manufacturing units are not included in the list.

This list was then cross referenced with the Company Information volume of the Kompass Directories to identify the name, designation, address and telephone number of the person to whom the questionnaire would be addressed. At the same time the companies' product groups and activities were checked. Firms with more than one product were dropped from the list.

Several criteria were used in the selection of firms within the sample of the current study. First, the study focused on companies' addresses categorized within the 7 industries that have been identified by their 4-digit SIC codes in the sampling design discussed in chapter 4. Second, only firms that concentrate on the manufacturing of

single product were included in the sample. The reason for concentrating on the single product firms is to avoid confusion between the various product strategies pursued by multi-product firms.

Particular attention was taken to identify the individual names of the company's CEOs or the name of one of its senior executive so that there is a clear "direction" on who should open and completes the questionnaire on behalf of the company. 130 names and addresses of company's CEOs was obtained in this way. The list of respondents was computerized into a mail-data base of names, position and addresses of the targeted respondents.

The mail data base was used to merge the company's address with the mail label for the envelopes and addresses in the cover letters accompanying the questionnaires. This merging personalized the individual cover letter and helped the preparation of the individual cover letter and the envelopes.

The approach taken to encourage the rate of response.

According to Dillman (1978, pp. 160-165), no matter how good the design of a questionnaire this does not in itself ensure the success of a mail survey. A good response rate partly lies in the strategy adopted. Influenced by Dillman's (1978) suggestion, the current study has taken the following strategy:

1. Ensuring that the addresses were correct because a wrong address is a common cause of non response.

2. Sending the questionnaire package as first class mail to ensure the questionnaire reach respondents on the next day and reducing the chances of the questionnaire being lost in the mail.

3. Enclosing a postage paid self-return envelope with sufficient postage rate to facilitate respondents in returning the questionnaire without incurring any cost on their part.

4. Avoiding using envelopes that resemble a junk mail. An impression of junk mail may invite the addressee to discard the mailed questionnaire without opening it.

5. Accompanying the questionnaire with a cover letter explaining the importance of the study to the British industry affected by the low cost import competition and asking their cooperation to share their experiences in the industry by completing the questionnaire (see Exhibit 6.1).

6. Follow up letters to thanks those who have return the questionnaire and reminding those who are not return the completed questionnaire as soon as they could (see Exhibit 6.2).

Besides the above mentioned strategies, a LUT bookmark was enclosed in the questionnaire package as a token of gratitude and mutual trust between the researcher and respondents. The small memento was also intend to stimulate the feeling of sympathetic, being rewarded and being valued on the part of the respondents. In return, it is hoped that the respondents, especially those with high sense of responsibility and commitment would voluntarily respond to the questionnaire.

Implementing the mail survey

The questionnaire was mailed in three batches. Table 6.1 exhibits the mailing schedule of the questionnaires and their rate of return. Each of the mailout packages contained a cover letter, the questionnaire and the LUT leather bookmark.

The cover letter (see Exhibit 6.1) serves to introduce the issue that is being studied, the researcher and his association with an academic institution and the important of the study to British industry. The cover letter also explains why they were chosen as respondents and asks for their cooperation in completing and returning the questionnaire within the specified dateline.

Besides the cover letter, the questionnaire was also designed with simplicity and carries a cover page (see Exhibit 6.2) which conveys concise information on the aim of the study, what they can expect from the questionnaire, ensuring them that their responses will be kept confidential and thanking them in advance for their cooperation and participation.

To ensure that the respondents will not miss the dead-line for returning the completed questionnaire a follow-up in the form of reminders was sent to the respondents. The

reminders (see Exhibit 6.3) were sent to all respondents 2 weeks after the first, second, and third batch of questionnaires being dispatched. The reminder served as a thank you letter for those who has responded to the questionnaire.

As the result of the reminders, a marginal further number of completed questionnaire was returned. Some of the more responsible respondents requested fresh questionnaire to be forwarded to them. Majority of the non replying respondents preferred to remain silence and did not respond to the reminders.

The result of the mail survey

Table 6.1 reveals that on average 36% to 38% of the questionnaires were returned in every batch of the questionnaire that have been dispatched to the respondents. In total, 130 questionnaires have been mailed out to the respondents and out of the 130 questionnaires 49 questionnaires were returned.

Table 6.1 Questionnaire mailing schedule and the rate of return.

Date	Number of question-naires dispatched	Deadline for returning the questionnaire	Number returned	% returns.	Running percentile.
19/Apr./94	45	31/May/94	17	38.0%	13%
04/May/94	63	31/May/94	24	38.0%	32%
01/June/94	22	01/Jul./94	8	36.0%	38%
Total	130		49		38%

Only 45 questionnaires are usable for the study: 4 questionnaires were returned either partially completed or uncompleted. Among the reasons given for not completing the questionnaires were; it is the company's policy not to release confidential information; cannot spare any time or staff to help in filling up the questionnaire; and company's information is inaccessible.

The constraint in selecting the respondents for the study

The criterion for selecting the sample that has been set earlier, selects only manufacturing firms that produce a single group of products. This measure was taken to ensure that respondents would not confuse their multiple product strategy and the business strategy for the dominant product affected by the low cost import competition. This criterion prevented firms operating in multiple industry and the multi-product firms from being selected as a respondent.

Another factor that contributes to the constraint was the approach adopted by the survey in emphasizing a personalized mailing list where names and position of the targeted respondent need to be identified in order to stimulate a higher rate of return. The approach limits the list of the potential respondents to those published in the Kompass Directory: list from other directory (such as the telephone directory) may not be suitable due to insufficient company information, such as the dominant product and the SIC codes assigned to the firms.

Exhibit 6.1 The covering letter accompanying the questionnaire

Name
Position
Company's name
Road , City
Post code

Date

Dear Sir,

Appropriate business strategies for UK industries affected by low cost import competition.

We at Loughborough University are carrying out a research study with the overall aim of determining the most appropriate strategies to be adopted by businesses in the UK that are experiencing severe low cost import competition.

Were we to achieve this identification of successful strategies, it would be of tremendous value to much of British industry.

Your industry has been identified as having been affected by low cost import competition . As a company in an industry experiencing this problem, we would like to seek your cooperation in filling up the questionnaires attached to this letter.

We hope you will be kind enough to complete this questionnaire and may we assure you that all responses will remain confidential to the research team. We are very grateful if you could return the questionnaire by using the postage paid self return envelope by the date stated in the cover page of the questionnaire.

As a very small token of our gratitude for your assistance, please find enclosed a university bookmark.

Many thank in anticipation.

Yours sincerely,

N. M. Jan
Loughborough University Business School
Import Penetration Research Team
Loughborough,
Leicestershire LE11 3TU

Exhibit 6.2 The questionnaire cover page

LOUGHBOROUGH UNIVERSITY BUSINESS SCHOOL
IMPORT PENETRATION STUDY

This questionnaire forms part of a study whose overall aim is to determine the most appropriate strategies for UK companies facing severe low cost import competition.

Most parts of the questionnaire require you to either ***tick*** (✓) the appropriate boxes or ***circle*** a number that best represents your views.

Please be assured that all responses will remain **CONFIDENTIAL** to the Loughborough University research team.

The members of the research team would like to thank you in advance for your cooperation and willingness to participate in this study.

We would be most grateful if you could return this questionnaire by **1 JULY, 1994**

Return to:

N.M. Jan
Loughborough University Business School
Import Penetration Research Team
Loughborough
Leicestershire LE11 3TU.

4510/001

Exhibit 6.3 The sample of a reminding letter send to respondents

Name
Position
Company's name
Road, City Date
Post code

Dear Sir,

About two weeks ago I wrote to you seeking your co-operation to fill up a questionnaire for a study on appropriate strategies for UK Industries affected by low cost import competition.

The study was undertaken in view of the importance of an appropriate strategy to address the volatile business environment due to the low cost import competition. We beliefs that the appropriate strategies could be learned from your experiences and therefore your response to the questionnaire are very important.

I am writing to you because of the significance of each questionnaire has to the usefulness of this study. In order for the result of this study to be representative of the responses of those firms operating in industries affected by low cost import competitions it is essential that you return the completed questionnaire.

If you have already completed and returned it to us please accept our sincere thanks. If not please do so today, or if by some chance that you did not receive the questionnaire, or it got misplaced, please call me at 0509-223146 or send a fax (facsimile no: 0509 269332/210232) and I will get another one for you in the mail today.

Thank you.

Sincerely,

Mr. N. M. Jan
Loughborough University Business School
Loughborough University of Technology
Loughborough
Leicestershire LE11 3TU

Chapter 7

STRATEGIC ORIENTATION OF FIRMS OPERATING IN DECLINING INDUSTRIES CAUSED BY LOW COST IMPORT COMPETITION

Introduction

Strategy is the alignment of an organization and its environmental opportunities and threats. As the consequence of this organization-environment coalignment, different strategies are observed to be associated with high performance in different environments (Hambrick 1983).

In this study the environment was controlled somewhat by considering only the declining stage of an industry as the consequence of severe low cost import competition. This study is designed to capture the implemented business strategies of firms that are operating in such industries by eliciting top management views on the competitive methods that they perceive as important.

The competitive methods pursued by the firms represent the strategic choice adopted by the top management team in order to remain competitive and the competitive methods also reflect the actions adopted by the firms to achieve the desired ends (e.g. see Dess and Davis 1984).

Theoretical background

Many studies have used the strategic orientation approach to conceptualize strategy in their research design (e.g. Dess and Davis, 1984; Tan and Litschert, 1994; Doyle and Hooley, 1992; Ramaswamy, et al., 1994; Kotha and Vadlamani, 1995). Indeed, Miles

and Snow (1978, pp. 9) postulated that it is possible to classify organizations according to their strategic orientation and to predict with some reliability the structure and process characteristics associated with the chosen strategy.

The underlying factor that influenced researchers to adopt the strategic orientation approach in a research design is that firms' competitive methods could differ in a wide variety of ways. Porter (1980) explained that the differences among companies' strategies could be captured in a strategic dimension providing an overall picture of the firm's position. The strategic dimension for a particular firm usually consists of an internally consistent set of activities.

Porter's notion of strategic dimension is described as 'strategic orientation' by Venkatraman (1989) who defined strategic orientation as the key features of a strategy construct. In advancing his proposition for the strategic orientation approach, he explained that its attractiveness lies in its ability to decompose the variation that is observed across different strategies pursued by different firms.

The concept of strategic orientation has its roots in the strategic choice approach discussed by Child (1972) and Miles and Snow (1978, pp. 20-21). They argued that the effectiveness of an organization's adaptation to its environment lies in the top management perception of the environmental conditions within which the organization operates. As the environment becomes hostile, firms are generally subjected to an increasing degree of uncertainty (Miller, 1989). Top management's perception of uncertainty affects their propensity for risk taking, vision and proactiveness that shapes their strategic decisions (Miller and Friesen , 1982a).

Dess and Davis (1984) explained that the idea of strategic choice recognizes that similar organizations operating within the same environment may choose to address the environment differently based on the strategic orientation of their top management.

The approach taken by this study

The variables used to assess organizational strategy are important building blocks towards the identification and analysis of the strategies pursued by firms. A critical issue in operationalizing the strategic variables is the capability of a particular construct to capture the complexity of strategies (Venkatraman, 1989).

Focusing the strategy construct on a single dimension or operationalizing strategy in a narrow way will be unlikely to capture the complexity of the strategy (Thomas and Venkatraman, 1988). A narrow conception of strategy would also limit the usefulness of the strategy for analysis. The suggested way of operationalizing strategy is by using strategic variables that reflect the interrelationships among them and capture the complex array of scope and resource deployment decisions (Thomas and Venkatraman, 1988).

Following Venkatraman (1989), this study emphasizes measuring differences among a set of key strategic variables that collectively describe a strategic orientation. The strategic variables operationalized by this study focus on the competitive methods adopted. This study focuses on the competitive methods pursued in the implemented strategy of the firms rather than the intended strategy.

The competitive methods used in this study

An underlying set of competitive methods pursued by a firm collectively describe a strategic orientation. The set of competitive methods that describes a strategic orientation is also referred to as the dimensions of the strategic orientation in this study.

The competitive methods associated with the strategic orientation delineated from the hypothesized strategies was developed by 'literature inference'. This technique is parallel to Snow and Hambrick's (1980) 'objective indicator' approach of measuring organizational strategies. This approach does not rely on the 'words' (Venkatraman, 1989) of individuals from the organization nor experts who are external to the organization. The competitive methods were inferred from published data.

The advantage of this approach is that it leaves only the objective aspect of the strategy to be measured and they were theoretically predetermined. To a certain extent the dimensions of the strategic orientation were empirically proven by the sources from which the competitive methods or the dimension for the strategic orientations was being inferred. The approach also provides the opportunity to test whether or not what being theorized was actually practiced in the industries.

The result of the literature search and feedback from the executive officers of the trades associations described in chapter 5, is the final list of 23 competitive methods that were included into the main questionnaire design and are given in table 5.3.

The field survey

In designing the research instrument, the study recognized that the CEOs and the top management team of the firms had the knowledge of the overall strategy of their respective companies (Snow and Hrebeniak, 1980; Veliyath and Shortell, 1993). Being the helmsman of the dominant coalition (Miles and Snow, 1978, pp. 20; Venkatraman and Grant 1986) and the arbitrator of the firm's performance (Tan and Lischert, 1994) they are therefore able to rate the importance of each of the competitive methods listed in the questionnaire with reference to overall strategy.

The profile of firms responded to the survey

Table 7.1 exhibits the profile of the firms that have responded to the mail survey. Two-third of the firms are independent business units that are not part of a larger organization. Even though one-third of the firms are part of a larger organization, almost all of them are independent of their parent organization in planning and formulating their business strategies and all but one of the CEOs are practically involved in the planning and formulation of the firm's business strategy. This validates the underlying assumptions made in the approach taken by the study that the CEOs of the firms are involved in the formulation of their companies' business strategies and therefore they should be knowledgeable with regard to the strategies formulated or implemented by their respective firms. The data also provide confirmatory evidence that the questionnaire is being completed by the CEOs or the member of the top management team who is closely involved in strategy formulation and implementation.

Table 7.1 The profile of firms responded to the questionnaire

Characteristics of the firms	**Percentage %**
Independent business unit	67
Part of large organization	33
Firm is independent in the planning of strategy	91
CEOs practically involved in the formulation of business strategy.	98

The statistical method used for data analysis

The data on the competitive methods acquired from the field survey were processed using the factor analysis programme of SPSS for Windows (release 6). The objective of conducting factor analysis in this study is to investigate whether or not the 23 competitive methods could be classified into the theoretically meaningful patterns of strategic orientations inferred from the literature survey. The competitive methods that have significant factor loading are interpreted as the dimensions of the strategic orientations.

In the effort to acquire a theoretically meaningful pattern of the competitive methods, the factors were orthogonally rotated with the most widely used technique called the varimax rotation. The varimax rotation criterion centres on simplifying the columns of the factor matrix and helps to make the pattern of the competitive methods associated with a given factor more distinct (Kim, 1975).

By principal factor solution, 7 significant factors with the eigenvalue greater than 1 were identified: factors with eigenvalue less than or equal to 1 were discarded. The factor score for each firm derived from the factor analysis can be estimated as a linear combination of the competitive methods that describe a particular strategic orientation and could be obtained from the linear combination of the competitive methods:

$$F_{jk} = C_{j1}X_1 + C_{j2}X_2 + \ldots\ldots + C_{jn}X_n$$

Where F_{jk} is the score for the jth factor.
C is the factor score coefficient.
X is the standardized value rated or scored by the firm to a particular competitive method.

The mathematical expression indicates that for the firm k, its score for the jth factor is the sum of the products of the standardized value of the firms score on a particular competitive method and the corresponding factor score coefficient.

Factors that match with the strategic orientations delineated from the hypothesized strategies could be set as new variables in the data file of the SPSS for Windows and thus providing the opportunity to regress the hypothesized strategies against performance or any other dependent variables (Norusis, 1993, pp. 73; Crawford and Lomas, 1980).

The result of the factor analysis

The result of the factor analysis revealed that the KMO (Keiser-Meyer-Olkin) measure of sampling adequacy was approximately 0.5. According to Nourusis (1993 b) a sample with KMO index of sampling adequacy was approximately 0.5. According to Nourusis (1993 b) a sample with KMO index equal to or more than 0.5 is adequate for factor analysis.

The factor loadings of each competitive method, their factor structures and communalities are exhibited in table 7.2. In the factor loading analysis, the study found that at cutoff point ±0.4 there exist theoretically meaningful patterns of competitive methods to explain the strategic orientation derived from the hypothesized strategies. The content of 5 out of seven factors identified in the principal factor solution were observed to match with the dimensions inferred for the strategic orientations of the hypothesized strategies. As the result, the study decided to exclude competitive methods with factor loading of less than ±0.4 from each factor.

This criterion is intermediate between the approach taken by Dess & Davis (1984) and Kim and Mueller (1978). Kim and Mueller (1978) suggested that factor loading of ±0.3 as the cutoff points because variances smaller than 10% are statistically not meaningful.

Dess & Davis (1984) were more conservative in deciding the cutoff point of the loading factor. In their study variables with loading factor of less than ±ed.

The result of the factor analysis in table 7.2 shows that all of the 23 competitive methods exhibit factor loading of greater than ±0.4 on at least one factor. Three competitive methods, cost control, mass market and information technology are loading more than +0.4 or -0.4 in more than one factor. This indicates that they are pertinent to more than one strategic orientation.

The competitive methods that exhibit loading factors of more than ±0.4 were tabulated into Table 7.3 and compared with the competitive methods inferred to be the dimensions associated with the strategic orientation of the hypothesized strategies.

Table 7.2 Factor structure and communalities of competitive methods used by firms operating in declining industries caused by severe low cost import penetration.

Competitive methods		*Factor 1* Factor loading (a_{ji})	Squared factor loading (a_{ji}^2)	*Factor 2* Factor loading (a_{ji})	Squared factor loading (a_{ji}^2)	*Factor 3* Factor loading (a_{ji})	Squared factor loading (a_{ji}^2)	*Factor 4* Factor loading (a_{ji})	Squared factor loading (a_{ji}^2)
001	Cost control	0.53684	0.28820	-0.07299	0.00533	0.13559	0.01838	0.57246	0.32771
002	Competitive pricing	0.73630	0.54214	-0.13036	0.01700	-0.00203	0.000004	0.23996	0.05758
003	Broad range of product features	0.26151	0.06839	0.59330	0.35200	0.35635	0.12698	-0.26048	0.06785
004	Product quality control	0.01599	0.00026	0.00705	0.00050	0.64757	0.41935	-0.14301	0.02045
005	Product standardization	0.80176	0.64282	-0.05184	0.00269	0.28926	0.08367	0.00497	0.00002
006	Product simplification	0.87346	0.76293	0.16337	0.02669	0.21550	0.04644	-0.06220	0.00387
007	Narrow product lines	0.72341	0.52332	0.20582	0.04236	-0.01352	0.00018	-0.10161	0.01032
008	Customer services	0.02036	0.00041	0.79969	0.63950	-0.22177	0.04918	0.09959	0.00992
009	Brand identification	-0.12103	0.01465	-0.07964	0.00634	0.36979	0.13674	0.12363	0.01528
010	Multiple market niches	-0.41557	0.17270	-0.23914	0.05719	0.30969	0.95908	0.09595	0.00921
011	Mass market	0.44629	0.19917	0.20842	0.04344	0.06767	0.00458	-0.06551	0.00429
012	Control of distribution channels	0.20121	0.04048	0.12747	0.01625	-0.20871	0.04356	0.21976	0.04829
013	Skilful human resources	-0.03026	0.00092	0.73277	0.53695	0.06795	0.00462	-0.03218	0.00104
014	Operating efficiency	0.33278	0.11074	0.09344	0.00873	0.73449	0.53947	0.35703	0.12747
015	Computer aided machines	-0.04766	0.00227	0.55950	0.31304	0.02069	0.00043	0.56787	0.32247
016	Make to order production	0.07103	0.00504	0.18432	0.03397	0.12875	0.01658	0.09433	0.00890
017	Shorter machine running time	0.01144	0.00013	-0.15361	0.02360	0.19513	0.03807	0.79893	0.63829
018	Information technology	-0.00541	0.00003	0.40186	0.16149	-0.24528	0.06016	0.60541	0.36652
019	Business alliances	0.05314	0.00282	-0.03586	0.00129	0.06598	0.00435	0.16397	0.02689
020	Advertising	0.00834	0.00007	-0.07581	0.00574	-0.11661	0.01348	-0.26803	0.07184
021	New product development	0.06704	0.00449	0.59440	0.35331	0.35867	0.12864	0.06817	0.00465
022	Capable to manufacture variety of products	0.06376	0.00406	0.72730	0.52896	0.25382	0.06442	-0.00337	0.00001
023	Procurement of raw materials	0.28196	0.07950	0.23224	0.05393	0.72893	0.53134	0.12641	0.01598
	Eigenvalue	**4.91651**		**2.73727**		**2.24752**		**1.95186**	
	Percent of common variance	30.4		16.9		13.9		12.1	
	Percent of total value	21.4		11.9		9.8		8.5	

Continued ....

Table 7.2 Factor structure and communalities of competitive methods used by firms operating in declining industries caused by severe low cost import penetration.

	Competitive methods	*Factor 5* Factor loading (a_{ji})	Squared factor loading (a_{ji}^2)	*Factor 6* Factor loading (a_{ji})	Squared factor loading (a_{ji}^2)	*Factor 7* Factor loading (a_{ji})	Squared factor loading (a_{ji}^2)	*Communalities*
001	Cost control	0.06973	0.00486	-0.19629	0.03853	-0.03283	0.00148	0.68449
002	Competitive pricing	0.11085	0.01229	0.03599	0.00129	0.16545	0.02737	0.65767
003	Broad range of product features	0.13282	0.01764	-0.10935	0.01195	-0.06488	0.00421	0.64902
004	Product quality control	0.18080	0.03269	0.10667	0.01138	0.36650	0.13432	0.61895
005	Product standardization	-0.12137	0.01473	0.06705	0.00449	-0.02156	0.00046	0.74888
006	Product simplification	0.06654	0.00443	-0.02417	0.00058	0.11973	0.01433	0.85927
007	Narrow product lines	0.29458	0.08678	0.03694	0.00136	-0.29171	0.08509	0.74941
008	Customer services	-0.06435	0.00414	0.10644	0.11329	0.17817	0.03174	0.84818
009	Brand identification	-0.11999	0.01440	0.74393	0.55343	-0.06510	0.00424	0.74508
010	Multiple market niches	0.49184	0.24191	0.35403	0.13534	0.05562	0.00309	0.71535
011	Mass market	0.64817	0.42012	-0.06835	0.00467	-0.04538	0.00206	0.69687
012	Control of distribution channels	0.31774	0.10096	0.66889	0.44741	-0.04961	0.00246	0.69941
013	Skilful human resources	0.13072	0.01709	-0.12164	0.01480	0.17638	0.03111	0.60653
014	Operating efficiency	0.05296	0.00280	-0.02356	0.00055	0.01737	0.00030	0.79006
015	Computer aided machines	-0.03911	0.00153	0.08792	0.00773	0.09356	0.00875	0.65622
016	Make to order production	0.04722	0.00223	-0.14212	0.02020	0.78725	0.61976	0.70668
017	Shorter machine running time	0.05243	0.00275	0.07883	0.00621	0.03875	0.00150	0.71055
018	Information technology	0.35260	0.12433	-0.13692	0.10043	-0.00838	0.00007	0.81303
019	Business alliances	0.85328	0.72807	0.00961	0.00009	0.04656	0.00217	0.76570
020	Advertising	-0.05722	0.00327	0.59185	0.35029	-0.05261	0.00228	0.44697
021	New product development	0.14882	0.02215	-0.00104	0.00000	-0.57896	0.33519	0.84843
022	Capable to manufacture variety of products	-0.10103	0.01021	-0.05317	0.00283	-0.23442	0.05495	0.66544
023	Procurement of raw materials	0.00884	0.00008	-0.09069	0.00822	-0.15216	0.02315	0.71220
	Eigenvalue	**1.70050**		**1.42364**		**1.20481**		**16.18211**
	Percent of common variance	**10.5**		**8.8**		**7.4**		**100 %**
	Percent of total value	**7.4**		**6.2**		**5.2**		**70.4 %**

Table 7.3: Summary of findings: A comparison between competitive methods derived from literature survey and factor analysis.

Factor 1: Cost efficiency strategy and specialized manufacturing strategy	
Literature survey	**Factor analysis**
Dimension for the cost efficiency strategy:	
1. Cost control - Porter (1980) 2. Competitive pricing - Porter (1980) & (Dess & Davis 1984)] 3. Skilful human resources - Dess & Davis (1984) and Parker & Helms (1992) 4. Operating efficiency - Parker & Helms (1992)	Var 001 Cost control Var 002 Competitive pricing Var 005 Product standardization Var 006 Product simplification Var 007 Narrow product lines Var 010 Multiple market niche Var 011 Mass market
Dimensions for the specialized manufacturing strategy	
1. Product standardization and implication - Lockeyer, 1983 2. Narrow product line - Baden Fuller and stopford, 1992 3. Mass market - Baden Fuller and Stopford, 1992.	

Factor 2 : Product variety strategy	
Literature survey	**Factor analysis**
1. Broad range of product features 2. Multiple market segment or niches 3. Make to order 4. Information technology 5. Shorter running time - Baden Fuller and Stopford, 1990	Var 003 Broad range of product features Var 008 Customer services Var 013 Skilful human resources Var 015 Computer aided machinery Var 021 New product development Var 022 Capability to manufacture variety of products Var 018 Information technology

Factor 3: Competitive standard of quality	
Literature survey	**Factor analysis**
1. Product quality control - Dess and Davis, 1984 2. Control of in coming material - Porter,1980 3. Right first time - Pilot survey	Var 004 Product quality control Var 014 Operating efficiency Var 023 Procurement of raw material

Table 7.3 (Continued)

Table 7.3: Summary of findings: A comparison between competitive methods derived from literature survey and factor analysis.

Factor 4 : Flexible manufacturing strategy	
1. Investment in numeric control or computer aided machines - Parish, D. (1990; pp. 16 & 51)	Var 001 Cost control
2. Capable to manufacture variety of products (high flexibility) - Parish, D. (1990; pp. 16 & 51)	Var 015 Computer aided machinery
3. Makes to order - Parish, D. (1990; pp. 16 & 51) & Baden Fuller (1990;)	Var 017 Shorter machines running time
4. Use of information technology - Parish, D. (1990; pp 16 & 51) & Baden Fuller (1990)	Var 018 Information technology
5. Shorter machine running time - Parish, D. (1990; pp 16 & 51) & Baden Fuller (1990)	
Factor 5: Business alliance strategy	
Literature survey	**Factor analysis**
1. Business alliance - Astley and Fombrum, 1983	Var 011 Mass market
2. Commensal or symbiotic activities - Astley and Fombrum, 1983	Var 019 Business alliance
	Var 010 Multiple market niche
Factor 6: Differentiation strategy	
Literature survey	**Factor analysis**
1. Developing brand images	Var 009 Brand identification
2. Customer services	Var 012 Control of distribution channels
3. Developing product features & technology	Var 020 Advertising
4. Control channel of distribution.	
5. Advertising - Porter (1980), Dess & Davis (1989) & Parker & Helms (1990)	
Factor 7: Focus strategy	
Literature survey	**Factor analysis**
1. Special group of buyer - Porter 1980	Var 016 Makes to order production
2. High added value - Grant, 1986	Var 021 New product development
3. By differentiation or cost leadership - Porter, 1980	

The strategic orientation of firms in the low cost import competition setting

Confirmatory of the matches between the observed factor structure and the dimensions of the strategic orientations listed in table 7.3 are explained in the followings:

1. Cost efficiency strategy and specialized manufacturing strategy

Table 7.4 reveals that structure for factor 1 is composed of 7 competitive methods that exhibit factor loadings of more than ±0.4. The competitive methods are: the cost control, competitive pricing, multiple market niche, mass market, product simplification, product standardization, and narrow product lines. Table 7.2 revealed that the operating efficiency scored a factor loading of 0.333 and the skilful human resources scored only -0.003 on factor 1. Following Dess and Davis (1984) and by considering the cut off point recommended by Kim and Mueller (1978), this study categorized the operating efficiency as a less important competitive methods but qualitatively, it contributes to the conception of strategic orientation that is described by factor 1.

Table 7.4 A comparison between competitive methods derived from literature survey and factor analysis for the cost efficiency strategy and specialized manufacturing strategy.

Factor 1: Cost efficiency strategy and specialized manufacturing strategy		
Literature survey	**Factor analysis**	
Dimension for the cost efficiency strategy:		
1. Cost control - Porter (1980)	Var 001	Cost control
2. Competitive pricing - Porter (1980) & (Dess & Davis 1984)]	Var 002	Competitive pricing
3. Skillful human resources - Dess & Davis (1984) and Parker & Helms (1992)	Var 005	Product standardization
4. Operating efficiency - Parker & Helms (1992)	Var 006	Product simplification
	Var 007	Narrow product lines
Dimensions for the specialized manufacturing strategy	Var 010	Multiple market niche
1. Product standardization and implication - Lockeyer, 1983	Var 011	Mass market
2. Narrow product line - Baden Fuller and stopford, 1992		
3. Mass market - Baden Fuller and Stopford, 1992.		**Less important competitive mehods**
	Var 014	Operating efficiency

Most of the competitive methods that have scored more than ±0.4 described in factor1 comprise some of the combination of dimensions that were inferred to be associated with the strategic orientations for cost efficiency and the specialized manufacturing strategy (as set out in table 7.3).

The overlapping of the strategic orientation for specialized manufacturing strategy and the cost efficiency strategy is an explainable phenomenon. Manufacturing firms that emphasize specialized manufacturing are often exercising large scale production to economize their cost of production to achieve a low cost position in the industry (Baden Fuller and Stopford, 1992, pp. 70). Typically the specialized manufacturing activities entail production control methods that includes narrowing down of product lines (Baden Fuller and Stopford 1992, pp. 70) and with an emphasis on product simplification and standardization (Lockeyer, 1983) to achieve efficiency and economies of scale.

The overlapping of the cost efficiency and the specialized manufacturing strategy may be due to the fact that the sample frame is composed of manufacturing firms. Innate to the specialized manufacturing strategy is cost efficiency in the production system.

As the result, the study labeled the competitive methods that are associated with factor 1 as the underlying dimension that explains both the strategic orientations for the cost efficiency and the specialized manufacturing strategy.

2. Product variety strategy

Table 7.5 A comparison between competitive methods derived from literature survey and factor analysis for the product variety strategy.

Factor 2 : Product variety strategy	
Literature survey	**Factor analysis**
1. Broad range of product features	Var 003 Broad range of product features
2. Multiple market segment or niches	Var 008 Customer services
3. Make to order	Var 013 Skillful human resources
4. Information technology	Var 015 Computer aided machinery
5. Shorter running time	Var 021 New product development
- Baden Fuller and Stopford, 1990	Var 022 Capability to manufacture variety of products
	Var 018 Information technology

In tables 7.3 and 7.5 the structure of factor 2 was observed to have matched with the dimension of the product variety strategy. Even though only 2 out of 7 of the competitive methods that have scored more than ±0.4 in the factor loading matched with the dimensions that explain the product variety strategy (the broad range of product features and the use of information technology), it was decided to label the underlying pattern of the competitive methods in factor 2 as the product variety strategic orientation.

The existence of customer services, computer aided machinery, capability to manufacture variety of products, new product development and skilful human resources in the factor structure, explains the high flexibility and ability to accommodate the demand for variation of product features. Indeed, the existence of the five other variables or competitive methods as part and parcel of factor 2 are seen as complementary and to strengthen the evidence that factor 2 represents the product variety strategy.

Baden Fuller and Stopford (1992, pp. 45), the advocates of 'strategic innovation', explained that firms that have successfully pursued the product variety strategy are capable of producing on a make-to-order basis, accommodating lots of variation by offering a broad range of product features, competing in multiple market niches as the market becomes fragmented, use shorter machine time in order to be highly flexible in accommodating variety in demand and make use of information technology in order to have an efficient information system between the retailers or market and the production system.

3. Competitive standard of quality strategy

Table 7.2 reveals that the set of competitive methods that described factor 3 is composed of product quality control, operating efficiency and procurement of raw materials. Two of the competitive methods associated with factor 3 matched with the variables that have been used to describe the dimensions of the competitive standard of quality strategy. The two variables are the product quality control and procurement of raw material (see table 7.6). The skilful human resources that has been used to represent the right first time dimension of the competitive standard of quality strategy (explained in chapter 5 and table 5.2) scored only 0.068 on the factor loading.

The existence of operating efficiency as one of the competitive methods that described the structure of factor 3, does not affect the overall theme of the competitive standard of quality strategic orientation. According to Dess and Miller (1993, pp. 5) efficiency is sometimes explained as 'doing things right'. In the context of the competitive standard of quality strategy, it refers to 'right first time' dimension of the strategic orientation.

Table 7.6 A comparison between competitive methods derived from literature survey and factor analysis for the competitive standard of quality strategy.

Factor 3: Competitive standard of quality	
Literature survey	**Factor analysis**
1. Product quality control - Dess and Davis, 1984	Var 004 Product quality control
2. Control of in coming material - Porter, 1980	Var 014 Operating efficiency
3. Right first time - Pilot survey	Var 023 Procurement of raw material

The presence of the competitive methods that match with the dimensions inferred to represent the competitive standard of quality strategy provides a confirmatory evidence for the study to label factor 3 as representing the competitive standard of quality strategy.

The study supports the view that a strategy for competitive standard of quality should be divorced from the traditional view of quality strategy that operates on a defect driven basis. A competitive standard of quality should be focusing on the factors that are pertinent to the requirement and the expectation of the customers (Luggen, 1991).

The quality drive that is linked to customer expectations emphasizes product reliability, adherence to tolerance and product features and raw materials (Porter, 1980, pp. 128) that fulfilled the requirements and expectation of customers.

On the basis of the match between the factor structure and the inferred dimensions of the strategic orientation for competitive standard of quality, it was decided to label the competitive methods in factor 3 as the competitive standard of quality strategic orientation.

4. Flexible manufacturing strategy

From table 7.2, the structure that describes factor 4 is composed of 4 variables that have factor loadings of more than ±0.4. The variables that describe factor 4 are cost control, investment in computer aided machinery, shorter machine running time and use of information technology. The content of factor 4 matched 3 of the 5 the dimensions that have been inferred to describe the flexible manufacturing strategy.

Table 7.7 A comparison between competitive methods derived from literature survey and factor analysis for the flexible manufacturing strategy.

Factor 4 : Flexible manufacturing strategy		
Literature survey	**Factor analysis**	
1. Investment in numeric control or computer aided machines - Parish, D. (1990; pp. 16 & 51)	Var 001	Cost control
2. Capable to manufacture variety of products (high flexibility) - Parish, D. (1990; pp. 16 & 51)	Var 015	Computer aided machinery
3. Makes to order - Parish, D. (1990; pp. 16 & 51) & Baden Fuller & Stopford (1991)	Var 017	Shorter machines running time
4. Use of information technology - Parish, D. (1990; pp 16 & 51) & Baden Fuller & Stopford (1991)	Var 018	Information technology
5. Shorter machine running time - Parish, D. (1990; pp 16 & 51) & Baden Fuller & Stopford (1991)		

A flexible manufacturing system is defined as a production unit capable of producing a range of discrete products with a minimum of manual intervention. It consists of production equipment workstations linked by a material handling system to move parts from one work station to another, and it operates as an integrated system under full programmable control (Mansfield, 1993).

A flexible manufacturing system is characterized as capable of manufacturing a variety of products, able to operate on a make-to-order basis or a moderately customized order winning method and making use of numeric control or computer aided machinery (Parish, 1990 and Mansfield, 1993). Flexible manufacturing system is also characterized as making use of information technology (Baden Fuller and Stopford, 1992, pp. 37; Parish, 1990) and able to contribute many economic advantages that include its capability to operate on a shorter machine running time that increases the machine utilization to accommodate the varieties in demand (Mansfield, 1993).

Firms pursuing a flexible manufacturing strategy can achieve economies of scale at smaller volume, saving in the cost of inventories, machine lead time, labour and space (Mansfield, 1993) and able to compete in several segmented markets by satisfying market needs for product variety, quality and innovation in an efficient manner (Parthasarty and Sethi, 1992).

The dimensions outlined were observed to be superimposed and matched with the factor structure exhibited by factor 4. Thus factor 4 is described as representing the flexible manufacturing strategy.

5. Business alliance strategy

Factor 5 emerged in the factor analysis a posteriori. Table 7.2 revealed that the factor structure associated with factor 5 was observed to be composed of three variables that have their factor loading greater than ±0.4. These variables are the use of business alliances, use of mass market and use of multiple market segment (see table 7.8).

Table 7.8 A comparison between competitive methods derived from literature survey and factor analysis for the business alliance strategy.

Factor 5: Business alliance strategy	
Literature survey	**Factor analysis**
1. Business alliance - Astley and Fombrun, 1983	Var 011 Mass market
2. Commensal or symbiotic activities - Astley and Fombrun, 1983	Var 019 Business alliance
	Var 010 Multiple market niche

The strong existence of business alliance (factor loading = 0.8533) as one of the variables that is associated with factor 5 influenced the study to label factor 5 as the business alliance strategy. The existence of use of mass market and use of multiple market segments in the factor structure do not affect the general theme of factor 5 because firms that participate in the business alliance might pursue both of these strategies concurrently or pursued by two different alliances.

Astley and Fombrun (1983) and Golden and Dollinger (1993) argue that the business alliance strategy may take the form of either commensal or symbiotic inter-organizational cooperation. They further explained that the contract of the commensal

interdependence is based on economic ends while the contract of the symbiotic interdependency is based on the mutual needs of the firms involved. The commensal or symbiotic relationship may take place in the form of marketing or operational activities regardless of the firm's market focus.

The business alliance strategy is associated with a direct or indirect inter-organizational relationship in response to environmental forces (Dollinger, 1990; Bidault, Laurent and Segla, 1992). The main objective of firms involving in an inter-organizational relationship is to protect firms from the consequence of environmental uncertainties (Golden and Dollinger, 1993).

6. Differentiation strategy

Factor 6 contained three variables that have their loading factors more than ±0.4: brand identification, control of distribution channels and use of advertising. The structure that describes factor 6 matches with the dimensions that Porter (1980, pp. 37-38) and Dess and Davis (1984) described for the differentiation strategy (see table 7.9).

Table 7.9 A comparison between competitive methods derived from literature survey and factor analysis for the differentiation strategy.

Factor 6: Differentiation strategy	
Literature survey	**Factor analysis**
1. Developing brand images	Var 009 Brand identification
2. Customer services	Var 012 Control of distribution channels
3. Developing product features & technology	Var 020 Advertising
4. Control channel of distribution.	
5. Advertising	
- Porter (1980), Dess & Davis (1989) & Parker & Helms (1990)	

Porter (1980, pp. 37-38) explains that firms pursuing the differentiation strategy create something that is perceived as unique. According to Porter (1980), the approach taken to differentiating could be in the form of building up brand image, product technology and features, customer services and dealer networks. In view of the above inference, the study labeled factor 6 as representing a differentiation strategy.

Firms operating in the industries affected by the low cost import competition may incline to adopt the differentiation strategy to avoid the direct cost competition with the imports. Grant (1986) posited that direct cost competition with the low cost overseas producers could be avoided by shifting emphasis towards non-price factors such as customer service, control of the distribution networks, development of product technology and features that would create customers' loyalty, leading to a lower sensitivity to price competition or increase in customer switching cost. Firms pursuing the differentiation strategy enjoy the entry barrier associated with customer loyalty to the business or product that result in lower customer sensitivity to pricing (Porter, 1980, pp. 37-38).

7. Focus strategy

Factor 7 consists of two variables that have a factor loading of more than ±0.4: make-to-order production and new product development. This factor structure emerged a posteriori in the factor analysis solution. This indicates that the orientation of factor 7 is toward achieving product advantage within a narrow target that can be served well. Table 7.10 helps to compare the competitive methods derived from factor analysis with those inferred from the literature.

Table 7.10 A comparison between competitive methods derived from literature survey and factor analysis for the focus strategy.

Factor 7: Focus strategy	
Literature survey	**Factor analysis**
1. Special group of buyer - Porter 1980 2. High added value - Grant, 1986 3. By differentiation or cost leadership - Porter, 1980	Var 016 Makes to order production Var 021 New product development

This factor structure is akin to Porter's (1980, pp. 38-39) focus strategy that has the objective to serve a narrow target more effectively than either differentiation or low cost. The strategy is focusing on a particular buyer group, a segment of product lines or a geographical market with the intention of achieving either cost advantage or product advantage or both of them within a narrow target market (Miller and Dess, 1993). By focusing on a particular buyer group in a niche that is not price sensitive, firms may avoid direct low cost import competition (Grant, 1986). On the basis of the above arguments, factor 7 represents a focus strategy.

Discussion and conclusion

The result of the factor analysis is of critical important to the rest of this study because the corner stone of the construct for the strategic variable in the research design lies in the pattern of organizational decisions reflected in the competitive methods.

The findings in the factor analysis support the notion that different firms may address the same environment differently (e.g. see Porter, 1980; Dess and Davis, 1984; Miles and Snow, 1978). In response to the environmental threat, the study has empirically identified that firms in the sample are inclined towards 7 different strategic orientations.

Two strategic orientations that were not associated with any of the hypothesized strategies emerged from the factor analysis. These strategic orientations are the business alliance and the focus strategy that are presented by factor 5 and factor 7 respectively. The emergence of these two strategic orientations indicates the advantage of operationalizing the competitive methods pursued by the firms as the variable for strategy in the research design. The approach was proven able to capture complexities between the strategy and environment within which it operates as posited by Venkatraman (1989).

Besides the emergence of the business alliance and focus strategic orientations, the study also revealed that the strategic orientation for cost efficiency and specialized manufacturing overlap and are represented by the same factor structure (factor 1). The overlapping of the dimensions describing the two strategic orientations under one factor suggests that they are synonymous in terms of the ends sought. This phenomena could only exist if all the sample firms are engage in manufacturing activities.

Chapter 8

THE APPROPRIATE STRATEGIES FOR FIRMS OPERATING IN DECLINING INDUSTRIES CAUSED BY LOW COST IMPORT COMPETITION.

Introduction

The main aim of this chapter is to discuss the appropriate business strategies for firms operating in declining industries where the decline is caused by low cost import competition. This chapter seeks to address the research question of how best to match the environmental threat and opportunities for firms operating in declining industries where the decline is caused by low cost import competition.

In achieving the above mentioned objective, firms within the sample frame have been clustered into strategic groupings on the basis of their strategic orientations.

Hypotheses on the appropriate strategies

The study recognizes that the vulnerability to low cost imports competition lies in the substantial cost advantage enjoyed by the overseas manufacturers. The most direct response to the threat of low cost import penetration is to exercise cost efficiency while maintaining the competitive standard of quality and taking advantage of the technological advancement which is the strength of most of the advanced countries like the UK.

Even though the low cost exporters have a substantial cost advantage the competitive position could be altered in favour of the technologically advantaged countries by offering a variety of product features that would suit the current trend and needs of

the markets in the UK. The approach requires manufacturing technology that could produce a broader range of products features and is flexible enough to respond to a market driven strategy.

On the basis of the foregoing arguments the study proposed the following hypotheses as the appropriate strategies for the businesses affected by the low cost import competition:

Hypothesis 1: Firms that adopt the cost efficiency strategy and maintain a competitive standard of quality are more successful than those pursuing purely the cost efficiency strategy.

Hypothesis 2: Firms that adopt a combination of cost efficiency and product variety strategy perform better than those which follow solely one or the other.

Hypothesis 3: Firms that adopt a flexible manufacturing strategy are more successful than those which are highly specialized in their production.

Hypothesis 4: Firms that have been pursuing a differentiation strategy will be more successful than new entrants.

Cluster Analysis: Formation Of strategic Groups And Their Characteristics

The study uses the cluster analysis technique as the tool to group the firms pursuing similar strategies. Cluster analysis is a technique that attempts to identify a homogeneous group of cases based on a variety of attributes from a random population (Everitt, 1974; Norusis,1993b, pp. 83-88; Saunders, 1980 and 1994). Clustering firms into a symmetrical group conveys a great deal of information about the relative characteristic of the group and contributes to a meaningful data reduction in the sense that it simplifies the information into a more meaningful form where every individual firm is grouped into a small number of strategic groups.

The variables that determine the strategic groupings in this study are the companies' strategic orientations identified from the pattern of competitive methods elicited from

the questionnaire and the use of factor analysis. The 7 strategic orientations found were:

Factor 1: Cost efficiency and specialized manufacturing strategy
Factor 2: Product variety strategy
Factor 3: Competitive standard of quality strategy
Factor 4: Flexible manufacturing strategy
Factor 5: Business alliance strategy
Factor 6: Differentiation strategy
Factor 7: Focus strategy

The cluster formation

Following Dess and Davis (1984) and Parker and Helms (1992) this study used the K-means cluster analysis to determine the strategic groups. The K-means cluster analysis requires a user-specified number of clusters in its command (Norusis, 1993, pp. 111). The Ward's method was used in the cluster analysis to determine the possible number of clusters to be specified in the K-means cluster analysis. The dendogram diagram obtained from the Ward's method suggests that there are 8 feasible cluster solutions (see Appendix 8.1).

The dendogram in appendix 8.1 revealed that when cluster 4, 33, 7, and 14 are combined with 15 the cluster distance jumped from just 10.0 to approximately 18. A similar increase in cluster distance were also observed when clusters 18, 40, 13, 20, 21, 36 and 12, 23, 26, 29, 9, 19, 39 were combined with cluster 16, 34 and 22. Similarly, a large increase in cluster distance (from about 4.0 to 18.0) was observed when cluster 5,10, 17, 35, 8 is combined with cluster 27, 32, 3, 2, 37, 6, 30.

The above observation suggests that the appropriate cut off point for further cluster formation is at the cluster distance 10.0 unit on the dendogram. The study identified 8 clusters by taking cluster distance 10.0 unit as the cut off point for a further cluster formation. Two of the 8 clusters are single member cluster (they are case 15 and case 41). Following Porter (1979), the study consider the single member cluster as a strategic group by itself because a strategic group might encompassed all firms in an industry or by only one firm.

In the effort to identify a cluster solution that is statistically valid, an analysis of variance for a 7 and 8 cluster solution was computed from the K-means cluster algorithm. This analysis provides statistical information regarding between-cluster

and within-cluster variability for each of the strategic orientations by calculating the mean square of the distance between clusters (*Cluster MS*) and mean square of the distance of the variables within the cluster (*Error MS*). The ratio of the *Cluster MS* to *Error MS* is the F ratio, where a large value of F and a small observed significant level (i.e. ≤ 0.05) indicates that the variables differ across the clusters and are similar within the cluster.

Table 8.1 Analysis of variance for a seven cluster solution of the strategic groupings.

Variables	Cluster MS	DF	Error MS	DF	F ratio	Observed signif.
Factor 1	3.7757	6	0.462	31.0	8.1589	0.0000
Factor 2	3.5089	6	0.514	31.0	6.8213	0.0000
Factor 3	3.1384	6	0.586	31.0	5.3546	0.0000
Factor 4	3.8481	6	0.448	31.0	8.5750	0.0000
Factor 5	4.0023	6	0.418	31.0	9.5538	0.0000
Factor 6	3.2204	6	0.570	31.0	5.6474	0.0000
Factor 7	1.4829	6	0.906	31.0	1.6375	0.1710

Table 8.2 Analysis of variance for an eight cluster solution of the strategic groupings.

Variables	Cluster MS	DF	Error MS	DF	F ratio	Observed signif. level
Factor1	2.8364	7	0.571	30	4.963	0.001
Factor2	3.1130	7	0.507	30	6.1405	0.000
Factor3	3.4639	7	0.425	30	8.1489	0.000
Factor4	3.6109	7	0.390	30	9.2399	0.000
Factor5	2.5656	7	0.634	30	4.0423	0.003
Factor6	3.5099	7	0.414	30	8.4710	0.000
Factor7	1.9791	7	0.771	30	2.5652	0.034

Table 8.1 and Table 8.2 exhibits the cluster mean squares for the seven and eight cluster solutions respectively. Analysis of variance on the mean squares of the 7 and 8 cluster solutions revealed that all variable in the 8 cluster solution exhibits large F ratios with the significant level of smaller than 0.05. Whereas, one variable (the focus strategic orientation) in the 7cluster solution have a significance level of greater than 0.05 and with small F ratios. The small F ratio statistics implies the variables is not well separated between the clusters.

Statistically, the 8 cluster solution proved to be well separated because none of the variables in the 8 cluster solutions exhibits F ratios with the significant level of graeter than 0.05. All variables in the 8 cluster solution exhibit large F ratios (i.e., ranging from 2.5652 to 9.2399). The large F ratios and small observed significant levels are associated with variables that differ between clusters.

Operational validity of the cluster solution

Although the F tests are normally used for descriptive purposes and not for hypothesis testing in cluster analysis, the study decided to use this statistical information together with a qualitative analysis of the cluster formation as a deciding factor in selecting the appropppriate number of clusters to be operationalized in the strategic group analysis.

The F test is used to determined cluster solutions that are well separated, so that those in the same cluster are similar in their characteristics and differ from those that are external to the cluster to suit with the definition and qualitative description of the strategic groups that would be used as a unit of analysis in this study.

Simultenously, the study also examines the operational validity of the strategic groups formed by the cluster solutions. This is done by examining the usefulness of the combination of the strategic variables that formed a particular strategic group to be used in future analysis.

Based upon the above mentioned frame-work, the study decided to drop the 8 cluster solution from furthur use. Table 8.4 revealed that cluster1 of the 8 cluster solution is characterized by too many combination of major strategic variables with centroid score of more than 0.5 (i.e., the combination of cost efficiency and specialized manufacturing, focus, product variety and differentiation strategy). The study has the

opinion that it is unrealistic to conceptualized such strategic group and impractical to operationalized the strategic group for a future analysis in this study.

Comparing table 8.4 with table 8.3, the study found that the 7 cluster solution exhibits a more practical and realistic cluster solution in term of its utility for future analysis (a detail descriptive analysis of the 7 cluster solution is discuss below). The 7 cluster solution also exhibit a clearer stuck in the middle strategic group as compared to the 8 cluster solution because the group that has been identified as the stuck-in-the middle in the 7 cluster solution exhibits negative score on all stragic orientations used as the variables for the strategic groupings.

Influenced by the rationale discussed above, the study decided to drop the 8 cluster solution from further use in the cluster analysis. From table 8.1 and table 8.3 the 7 cluster solution fulfilled both the statistical and operational validity of the strategic groups formed by the cluster solution.

The result of the K-mean cluster solution which represents the strategic groups discussed earlier was saved as a new variable in the SPSS for Windows program. The new variable stores information regarding the cluster membership of each of the strategic groups and is available for future analysis that requires the strategic groups as the independent variables.

Characterizing the strategies of the strategic groups: single vs. combination of strategies.

The advocates of generic strategy state that strategies that take opposite directions (e.g. combining cost efficiency and differentiation strategy) are not viable (Dess and Davis, 1984; Miller and Frisien, 1986a & 1986b). Combining strategies that are not coherent with one another means being stuck in the middle (Porter, 1980. pp. 41-42). In advocating his three generic strategies, Porter (1980) stated that firms that are stuck-in-the-middle should anticipate low profits.

Porter (1980) however, was not consistent in his advocacy. Miller and Dess (1993) for example, pointed out that the inconsistency could be observed when Porter (1980) suggests that a combination of low cost and differentiation strategy could be appropriate in a business that is tightly focused to a narrowly defined strategic target.

Contrary to the stuck in the middle theory, Hall (1980) reported observing a small number of firms thriving in low profit industries by pursuing simultaneously the low cost and differentiation strategies. Similar findings are also disclosed in the studies conducted by Murray (1988) and Hill (1988). Baden Fuller and Stopford (1992, pp. 29) argued that there are only a few stable generic strategies and most of the well performing firms are thriving by reconciling the opposing strategies innovatively.

Due to the above phenomenon, the current study subscribes to the idea of innovative strategy, where strategy should take the best combination to exploit the opportunities available. A strategy could be labeled as stuck in the middle only if there is lack of direction and emphasis on any of the strategies that are being undertaken. At the same time strategic planners should not ignore what modern technology can do to exploit and reconcile opposite strategies.

Characteristics of the strategic groups that emerged from the cluster analysis.

In the K-means cluster analysis of the SPSS sub-programme, a case is assigned to the cluster with the smallest distance between the case and the centre of the cluster (the centroid) (Norusis, 1993b, pp. 111). This process is referred to as 'nearest centroid sorting'. The actual centre for the resulting cluster is calculated by taking the average value of the variable for the cases in the cluster. This value is called the final cluster centre (Norusis, 1993b, pp. 115-118) - also referred to as the centroid score in Dess and Davis (1984). The cluster solution provides a table that describes the final cluster centres that gave the average value of the variables for each cluster.

Table 8.3 exhibits the profile of each of the clusters that emerged from the 7 cluster solution. Cluster 1 has its highest centroid score on the business alliance strategy followed by the cost efficiency strategy. The business alliance strategy was also observed to have scored the highest in cluster 4. Since the business alliance strategy seems to be pertinent to both cluster 1 and cluster 4, the strategy with the second highest centroid score was combined with it simultaneously to characterized the strategic groups. On this basis, the study labeled Cluster 1 as the strategic group pursuing the combination of business alliance and cost efficiency strategies. On similar grounds the study labeled cluster 4 as the strategic group pursuing the combination of business alliance and competitive standard of quality strategy.

The differentiation strategy has its highest centroid score (0.9709) on cluster 2. The same strategic orientation scored very low on clusters 1, 3, 5 and 7. From Table 8.3,

cluster 2 was also characterized by a product variety strategy and a flexible manufacturing strategy with centroid scores of 0.6239 and 0.6972 respectively. The presence of product variety and flexible manufacturing strategies makes it more appropriate to characterized cluster 2 as a strategic group pursuing a differentiation strategy (see for example, Grant 1989) .

In cluster 3, the strategic orientation with the highest centroid score is the product variety strategy. The business alliance and competitive standard of quality strategies scored insignificantly on this cluster. The rest of the strategic orientations have a negative score on cluster 3. With such characteristics, the study labeled cluster 3 as a strategic group pursuing the product variety strategy.

The flexible manufacturing strategy has a very high centroid score (1.4543) on cluster 5. The next highest score on this cluster is the cost efficiency strategy with a centroid score of 0.5014. The rest of the strategic orientations are either scored less than 0.6 or scored negatively on the cluster. The presence of the cost efficiency strategy is inherent to the flexible manufacturing strategy. Most firms adopt a flexible manufacturing strategy with the intention of economizing their manufacturing operation to complement a market driven strategy (Gerwin, 1993). The flexible manufacturing facilities make the manufacturing operation affordable and economical for shorter machine running times and capable of manufacturing a variety of products to accommodate the frequent changes in demand (Bennett, et al., 1992). Based upon the foregoing discussion, the study identifies cluster 5 as a strategic group pursuing the flexible manufacturing strategy.

In cluster 6, the cost efficiency and specialized manufacturing strategy has the highest centroid score. The rest of the strategic orientations scored either negatively or insignificantly on this cluster. The dominance of cost efficiency strategy in cluster 6 led to the identification of cluster 6 as the strategic group pursuing the cost efficiency strategy.

Table 8. 3 Strategic grouping of businesses affected by the low cost import competition based on seven cluster solutions.

	Strategy	Clust1	Clust2	Clust3	Clust4	Clust5	Clust6	Clust7
F1	Cost efficiency and specialized manufacturing strategy	0.8865	-0.4587	-1.0997	0.8358	0.5014	0.6725	-1.2450
F2	Product variety	-0.2538	0.6239	0.5546	-2.6309	-0.5363	0.0582	-1.9045
F3	Competitive standard of quality	-2.2526	-0.3904	0.3053	2.4213	0.2591	0.1825	-0.2990
F4	Flexible manufacturing	0.1846	0.6972	-0.5718	0.0637	1.4543	-0.6919	-0.1425
F5	Business alliance	1.2177	0.3324	0.3623	2.9206	-0.5504	-0.2902	-2.0132
F6	Differentiation	-1.6812	0.9709	-.5606	0.1806	-0.7831	0.2524	-0.0132
F7	Focus	0.1109	-0.6293	0.2464	-1.3597	0.4852	0.2773	-0.7918

Table 8.4 Strategic grouping of businesses affected by the low cost import competition based on eight cluster solution.

The factor	Strategic orientation	Clust1	Clust2	Clust3	Clust4	Clust5	Clust6	Clust7	Clust8
F1	Cost efficiency and Szpecialized manufacturing	1. 2805	-0.9714	0.8841	0.8358	0.8885	0.8510	-1.0420	-2.4216
F2	Product variety	0.5138	0.6396	-0.9498	-2.6309	0.4421	0.7423	-2.9619	0.2261
F3	Competitive standard of quality	0.0219	-0.1294	-3.8755	2.4213	-0.6296	0.8466	-0.9042	0.6715
F4	Flexible manufacturing	-1.6924	1.0889	0.1402	0.8637	0.2289	2.0907	-1.2372	-1.8239
F5	Business alliance	0.2983	-0.0907	1.1146	2.9206	1.3207	-1.8636	-2.1031	0.3662
F6	Differentition	0.6181	1.8700	-1.1990	0.1806	-2.1634	-1.8711	0.2669	-1.0332
F7	Focus	1.3871	-0.2191	1.2057	-1.3597	-0.9840	-0.9284	-0.6221	-0.1695

From table 8.3, cluster 7 was observed to have displayed negative scores for all seven strategic orientations used as the variable for the strategic groupings. This lack of positive score on any of the strategic orientations indicates that this group has failed to develop at least one dominant strategy from the strategic orientations observed in the strategic patterns adopted in the industries. In agreement with Dess and Davis (1984) this group was labeled as stuck in the middle.

The following list summarizes the above strategic groups:

Cluster 1 : Combination of business alliance and cost efficiency strategy
Cluster 2 : Differentiation strategy
Cluster 3 : Product variety strategy
Cluster 4 : Combination of business alliance and competitive standard of quality strategy
Cluster 5 : Flexible manufacturing strategy
Cluster 6 : Cost efficiency strategy
Cluster 7 : Stuck in the middle strategy

Firms' Strategic Responses To Low Cost Import Competition

Table 8.5, exhibits the summary of the strategic groups identified from the cluster solution and the count of their group membership. From the table, the cost efficiency strategy is the most popular strategy pursued by the firms in the sample. The adoption of the cost efficiency strategy is a logical reaction towards competing against cost-advantaged foreign manufacturers. Indeed, in addressing such a hostile environment it has been found that firms seems to seek the cost efficiency strategy as their immediate reaction (Murray, 1988; Parker and Helm, 1992).

The next most popular strategy adopted by the affected firms is the differentiation strategy with about one-fifth having adopted this strategy. Firms pursuing the differentiation strategy attempt to block the low cost import competition by emphasizing non-price factors. The differentiation strategy provides a high mobility barrier protecting the members of the strategic group from new entrants. The high mobility barrier in the differentiation strategy is inherent to the nature of the strategy which requires high investment in developing customer loyalty, product features, distribution channels and the cost required to train and develop the human resources prior to successful implementation of the strategy. However, the strategy might pose only a temporary disadvantage to the low cost foreign competition. Once they are

able to form their local trading arms or distribution channels, the foreign competitors might also compete in the price insensitive market niches.

Table 8.5 Number of cases in each cluster membership

Description of cluster:		Count	Frequency %
Group 1	Combination of business alliance and cost efficiency strategy	2	5
Group 2	Differentiation strategy	8	21
Group 3	Product variety strategy	7	19
Group 4	Combination of business alliance and competitive standard of quality strategy	1	3
Group 5	Flexible manufacturing strategy	5	13
Group 6	Cost efficiency strategy	13	34
Group 7	Stuck in the middle strategy	2	5
	Total number of cases	38	100%

The product variety strategy was also adopted by about one-fifth of the firms in the sample. This strategy helps to arrest the low cost import competition by harnessing the technological sophistication that is available to the UK manufacturers.

About 13% of the firms in the sample adopted the flexible manufacturing strategy. In an environment where there is a great uncertainty in demand, economy of scale from the mass production strategy is of little advantage. In the situation where demand is uncertain and shrinking, a market driven manufacturing strategy is of critical importance. To address the frequent changes in the product design and features of the market demand, a manufacturing strategy that could dovetail with the market strategy is desirable.

Only 3 out of the 38 firms are emphasizing the business alliance strategy. Two of them are pursuing a combination of the business alliances with the cost efficiency. One out of the three firms combined the business alliance strategy with competitive standard of quality. Only 2 out of the 38 firms were 'stuck in the middle'.

The distribution of the strategic groups across the industries

The data from the cluster analysis were cross tabulated against the type of industries selected as the sample of the current study. The result of the cross tabulation is shown in table 8.6.

Table 8.6 : The distribution of the strategic groups by industries

Industry SIC code	Grp1	Grp2	Grp3	Grp4	Grp5	Grp6	Grp.7	Row Total	Row %
4321 Spin. & Doubl. of Cotton	-	3	-	-	-	-	-	3	7.9
4322 Weaving cotton, silk & man made fibre	-	1	2	-	1	-	1	5	13.2
4410 Leather & Fellmo.	-	-	1	-	-	2	-	3	7.9
4420 Leather Goods	1	-	-	-	-	1	1	3	7.9
4510 Footwear	1	-	2	-	1	8	-	12	31.6
4532 Menswear	-	3	1	-	3	-	-	7	18.4
4533 Girls & women wear	-	1	1	1	-	2	-	5	13.2
Column total	2	8	7	1	5	13	2	38	
Column %	5.3	21.2	18.4	2.6	13.2	34.2	5.3		100.0

Table 8.6, revealed that all the 7 strategic groups co-exist in more than one industry. However, certain industry was observed to be more pertinent to certain strategic groups only. Firms in the spinning and doubling of the cotton system (SIC 4321) belong to only one strategic group, that is the differentiation strategy. At the same time 8 out of 12 firms in the footwear manufacturing industry (SIC 4510) are concentrating in the cost efficiency strategy. Firms in the men's and boy's tailored outerwear industry (SIC 4532) are dominantly divided into differentiation strategy and flexible manufacturing strategy (3 out of 7 firms to each strategy). In the girls

and ladies wear industry (SIC 4533); 2 of the 5 firms were pursuing the cost efficiency strategy while the rest were distributed into the differentiation strategy, product variety strategy and business alliance strategy. This indicates that even though the same strategic groups were observed to co-exist in more than one industry, the strategy pursued by a particular strategic group seems to be more pertinent in certain industries.

The finding implicitly supports Harrigan (1980a) and Anderson and Zeithaml (1984) that strategy depends on the characteristic of the industry and the nature of competition in the industry.

Comparing the Relationships between Strategy and Performance

The performance indicators

Most studies implicitly or explicitly imply that business performance is directly related to the implemented strategy (Venkatraman and Ramanujam, 1986). The effectiveness of a strategy may be measured objectively (relying on published data) or subjectively (relying on primary source of data). The financial indicators are used as the yard stick to measure the business performance (Lentz, 1981; Dess and Robinson, 1984). The use of financial indicators has been the dominant approach in the empirical research because they reflect the fulfillment of the economic or business goals of the firms (Venkatraman and Ramunajam, 1986). The most popular measures of business performance are sales growth, return on sales (ROS), and return on assets (ROA) (Dess and Robinson, 1984)

The difficulties and complexities entailed in conceptualizing the performance measure of business strategy have prompted several academic discourses (e.g. Dess and Robinson, 1984; Venkatraman and Grant, 1986; Venkatraman and Ramanujam, 1986). Venkatraman and Ramanujam (1986) call for a convergence approach, that is by operationalizing both the primary (the subjective indicator) and the secondary (the objective indicators) source of data concurrently when measuring organizational performance. In recognizing the difficulties and complexities of this convergence approach Dess and Robinson (1984) examined the validity of operationalizing 'subjective' measure of performance. Their study supported their hypotheses that there are strong correlations between subjective and objective indicators. This approach is

Table 8.7 The correlates between CEO's perception on performance and the corresponding objective indicators

	ROA	ROARATIO	ROS	ROSRATIO	SALEGROW	ROSHE	ASSETS	NETINCM	PROFIT	SALE
ROA	1.0000 (45) P= .									
ROARATIO	.0463 (23) P= .834	1.0000 (23) P= .								
ROS	.8387 (45) P= .000	.0758 (23) P= .731	1.0000 (45) P= .							
ROSRATIO	.6455 (25) P= .000	.3037 (23) P= .159	.6020 (25) P= .001	1.0000 (25) P= .						
SALEGROW	.4750 (45) P= .001	-.0324 (23) P= .883	.5860 (45) P= .000	.3241 (25) P= .114	1.0000 (45) P= .					
ROSHE	.8322 (44) P= .000	.0977 (22) P= .665	.9198 (44) P= .000	.7376 (24) P= .000	.5351 (44) P= .000	1.000 (44) P= .				
ASSETS	.0508 (25) P= .809	-.2673 (23) P= .217	-.2277 (25) P= .274	-.2038 (23) P= .351	-.3068 (25) P= .136	-.2522 (24) P= .234	1.0000 (25) P= .			
NETINCM	.1855 (25) P= .375	.2556 (23) P= .239	.3209 (25) P= .118	.4474 (25) P= .025	.3021 (25) P= .142	.3678 (24) P= .077	-.3985 (23) P= .060	1.0000 (25) P= .		

(Coefficient / (Cases) / 2-tailed Significance)
" . " is printed if a coefficient cannot be computed

Table 8.7 (continued)

	ROA	ROARATIO	ROS	ROSRATIO	SALEGROW	ROSHE	ASSETS	NETINCM	PROFIT	SALE
PROFIT	.8541	.0784	.9394	.6337	5080	.9474	-.1893	.3067	1.0000	
	(45)	(23)	(45)	(25)	(45)	(44)	(25)	(25)	(45)	
	P= .000	P= .722	P= .000	P= .001	P= .000	P= .000	P= .365	P= .136	P= .	
SALE	.0000	-.2398	-.0378	-.2231	-.0353	-.0269	.8770	.0680	-.0247	1.0000
	(29)	(23)	(29)	(25)	(29)	(28)	(25)	(25)	(29)	(29)
	P=1.000	P= .271	P= .846	P= .284	P= .856	P= .892	P= .000	P= .747	P= .899	P= .

(Coefficient / (Cases) / 2-tailed Significance)
" . " is printed if a coefficient cannot be computed

To validate the subjective performance indicators used by this study, a correlation analysis between the profitability ratios calculated based on objective data (ROSRATIO and ROARATIO) and performance indicators that are based on the subjective indicators (ROS, ROA, SALEGROW, PROFIT and ROSHE) was carried out.

The correlation coefficients between the subjective and objective indicators are exhibited in table 8.7 above. The coefficient table revealed that the CEOs perception on their firms' return on sale (ROS) was strongly correlated with ROSRATIO ($r = 0.6020$ and $p = 0.001$), the objective indicator for return on sales. However, the CEOs perception on their firms' return on assets (ROA) was uncorrelated with ROARATIO, the objective measure of return on asset ($r = 0.0758$, $p = 0.731$).

The strong correlation between the CEOs perception on ROS and the objectively measured ROSRATIO suggests the interchangability and generalizabity of the two sets of indictors.

Table 8.7 also reveals that the objectively measured return on asset (ROARATIO) was not significantly correlated with any of the performance indicators. The lack of significant correlation suggests that CEOs perception on ROA is not a reliable indicator for firms' performance.

The study uses the CEO's perception on ROS as the main yardstick to measure the firm's business performance while CEO's perception on ROA, ROSHE, and SALEGROW were used as supplementary indicators because they were observed to have exhibited a positive and significant correlation with ROS.

The one-way analysis of variance: measuring the strategic groups' financial performance

To examine the relationship between the firms' implemented strategies and performance, the financial performance of each of the strategic groups identified from the cluster analysis was assessed using one-way ANOVA.

The main aim of conducting the one-way ANOVA is to compare the relationship between strategic groups (as the independent variable) and financial performance (as the dependent variables). The one-way ANOVA sub-program of the SPSS for Windows package was used.

The first step taken in the one-way ANOVA is to test the homogeneity of the variance in the sample. The basic assumption of the analysis of variance procedure is that each group obtained from the cluster analysis is an independent random sample from the normal population and in the population the variance of the groups are equal (Norusis, 1993). The Levene test was to determine the homogeneity of the variance in the population. If the significant level is less than 0.05, the null hypothesis that the variance in the population are equal should be rejected.

Table 8.8 summarizes the mean values of the performance indicators for each strategic group and the statistical information of the one-way ANOVA to assist the researcher in deciding whether or not there is a significant difference between the performance of strategic groups. The statistical values are calculated based upon the mean values of the financial indicators measuring the strategic group performance.

The second step taken in the one-way ANOVA is to determine whether or not there exist a significant difference between the means of the performance indicators of the strategic groups. In the one-way ANOVA, the variability of the observation is divided into two parts; the within-group variability and variability among the group means. If the null hypothesis is true, the population means for all of the groups under observation are equal and if more than one of the observed sample means are significantly different, there is sufficient evidence to reject the null hypothesis that the means for all groups are equal.

The statistical test for the null hypothesis in the one-way ANOVA is based on the F values calculated from the ratio of the between group means square to the within group means square:

F ratio = Between group mean square / Within group mean square

In order for the null hypothesis to be true, the F ratio should be approximately equal to 1 and if the observed significant level is greater than 0.05 (i.e. 0.05) the null hypothesis cannot be rejected. On the contrary, if the F value is greater than 1 and the observed significant level is less than 0.05, the null hypothesis that the population means for all group are equal can be rejected.

According to Norusis (1993), a significant F value indicates only that the population means are probably not equal but does not tell which pair of the groups are unequal.

To further determine whether or not to reject the null hypothesis that all population means are equal, the study uses the Bonferroni multiple comparison procedure provides by the one-way ANOVA subprogramme of the SPSS for Window package.

From the one-way ANOVA statistics, the F value calculated based on the mean values of the ROS among the strategic groups is 3.0583 (i.e. greater than 1) and the observed significant level for the F value is 0.0181 (less than 0.05). These values indicate that there are significant differences between the mean values for the return on sales (ROS) among the strategic groups. Except for ROSHE, the Bonferroni multiple comparison test results exhibited in table 8.8, table 8.9 and table 8.10 indicate that there are more than two means value that are significantly different in the ROA, SALEGROW and Profit variables of the financial indicators. The one-way ANOVA statistics revealed that ROSHE is not a reliable measure of differences between the strategic groups' performance. Thus, ROSHE is not being further considered in the strategic groups' performance analysis.

The strategic groups performance

Table 8.8 indicates that the seven different strategic groups were different in their performance when measured by ROS, ROA, Sales growth and profit after tax. The relationship between the seven strategic groups and performance could be described as the following:

1. The combination of business alliance and cost efficiency strategy

Table 8.8 reveals that firms pursuing the combination of a business alliance and a cost efficiency strategy on the average are not satisfied at all with their business performance. The dissatisfaction is reflected in the mean score of their CEOs perception of the companies return on sales (ROS), Return on Assets (ROA), SALEGROW and profit after tax.

Table 8.8 One way ANOVA: The relationship between strategic groups and performance

A. Mean Scores of the performance variables		Mean of the performance variables				
Cluster	(N)	ROS	ROA	SALE-GROW	PROFIT	ROSHE
Grp.1 Business alliance and cost efficiency strategy	2	1.5000	2.0000	1.5000	2.0000	2.0000
Grp.2 Differentiation strategy	8	2.7500	2.7500	2.5000	2.6250	2.5714
Grp.3 Product variety strategy	7	3.1743	3.5714	3.1429	3.8571	3.5714
Grp.4 Business alliance and competitive standard of quality strategy	1	1.0000	1.0000	4.0000	1.0000	2.0000
Grp.5 Flexible manufacturing strategy	5	4.2000	4.0000	4.0000	4.2000	4.2000
Grp.6 Cost efficiency strategy	13	2.5385	2.6923	2.8462	2.6923	2.6154
Grp.7 Stuck in the middle strategy	2	4.0000	2.5000	4.500	2.5000	2.5000
Means squares:		ROS	ROA	SALE-GROW	PROFIT	ROSHE
Between groups		4.0901	2.5685	2.9040	3.5331	2.6811
Within groups		1.3374	1.5640	1.3403	1.6388	1.3935
d.f.		6 , 31	6 , 31	6 , 31	6 , 31	6 , 30
F-ratio		3.0583	1.6423	2.1667	2.1560	1.9240
P-value		0.0181	0.1689	0.0735	0.0748	0.1093
Levene test: 2-Tail signif.		0.0450	0.2690	0.0850	0.1660	0.1710

Table 8.9 Bonferroni multiple range tests for PROFIT

The Means of Groups for ROA	The strategic groups	Grp 4	Grp 1	Grp 7	Grp 6	Grp 2	Grp 3	Grp 5
1.0000	Grp.4:							
2.0000	Grp.1:							
2.5000	Grp.7:							
2.6923	Grp.6:							
2.7500	Grp.2:							
3.5714	Grp.3:							
4.0000	Grp.5:	*						

Table 8.10 Bonferroni multiple range tests for ROA.

The Means of Groups after tax profit	The strategic groups	Grp 4	Grp 1	Grp 7	Grp 2	Grp 6	Grp 3	Grp 5
1.0000	group4							
2.0000	group1							
2.5000	group7							
2.6250	group2							
2.6923	group6							
3.8571	group3	*						
4.2000	group5	*	*		*	*		

Table 8. 11 Bonferroni multiple range tests SALEGROW

The Means of Groups for Sales growth	**The strategic groupsr**	p 1	Grp 2	Grp 6	Grp 3	Grp 4	Grp 5	Grp 7
1.5000	Grp.1							
2.5000	Grp.2							
2.8462	Grp.6							
3.1429	Grp.3							
4.0000	Grp.4							
4.0000	Grp.5	*	*					
4.5000	Grp.7	*	*					

The combination of business alliance and cost efficiency strategy emerged from the cluster analysis. The finding therefore neither supports nor rejects the hypothesis put forward concerning appropriate strategies for firms operating in declining industries affected by the low cost import penetration.

The Business alliance strategy attempts to overcome a firm's disadvantages through inter-organizational collaboration (Astley and Fombrun, 1983; Dollinger, 1990). The paradox of adopting this strategy lies in the need to control critical resources and the cost of the collaborating agreement in term of complexity, loss of autonomy and information procurement (Dollinger, 1990).

2. The differentiation strategy

Firms pursuing the differentiation strategy were dissatisfied with their business performance. The mean score for the four indicators used to measure the level of business performance in relation to the differentiation strategy show that the CEOs perception ranges from 2.50 to 2.70 which indicates that they were dissatisfied with their business performance.

The study however anticipated this dissatisfaction. It hypothesized that firms that have been pursuing differentiation strategies for a long time will be more successful than new entrant. To investigate whether or not the research finding would support the hypothesis, the age of the differentiation strategy was cross tabulated against the indicators of the financial performance while controlling the cluster to that representing the strategic group pursuing the differentiation strategy. The results of the cross tabulation are shown in Tables 8.12, 8.13 and 8.14.

Table 8.12 Cross tabulation between Return On Sales (ROS) and the age of the differentiation strategy.

The age of the strategy	Less than 1 yr.	1 to 2 yrs	3 to 5 yrs.	More than 5 yrs.	Row Total	Row %
Performance						
Not satisfied at all	1	0	0	0	1	12.5
Dissatisfied	2	2	0	0	4	50.0
Neither dissatisfied nor satisfied	0	0	0	0	0	00.0
Satisfied	0	0	2	0	2	25.0
Extremely satisfied	0	0	0	1	1	12.5
Column total	3	2	2	1	8	
Column %	17.5	25.0	25.0	12.5		100.0

Table 8. 13 Cross tabulation between sales growth and the age of the differentiation strategy.

The age of the strategy	Less than 1 year	Bet. 1 yr to 2 yrs	Bet. 3 yrs to 5 yrs.	More than 5 yrs.	Row Total	Row %
Performance						
Not satisfied at all	1	1	0	0	2	25.0
Dissatisfied	2	0	0	0	2	25.0
Neither dissatisfied nor satisfied	0	1	1	0	2	25.0
Satisfied	0	0	1	1	2	25.0
Extremely satisfied	0	0	0	0	0	00.0
Column total	3	2	2	1	8	
Column %	37.5	25.0	25.0	12.5		100.0

Table 8.14 Cross tabulation between Profit after tax and the age of the differentiation strategy.

The age of the strategy	Less than 1 year	1 to 2 yrs	3 to 5 yrs.	More than 5 yrs.	Row Total	Row %
Performance						
Not satisfied at all	2	0	0	0	2	25.0
Dissatisfied	1	2	0	0	3	37.5
Neither dissatisfied nor satisfied	0	0	2	0	2	25.0
Satisfied	0	0	2	0	2	25.0
Extremely satisfied	0	0	0	1	1	12.5
Column total	3	2	2	1	8	
Column %	37.5	25.0	25.0	12.5		100.0

The set of data in table 8.12 reveals that none of the firms pursuing the differentiation strategy for less than 3 years (5 out of 8 firms) were satisfied with their return on sales (ROS). On the contrary, only 3 out of 8 firms that have implemented the differentiation strategy for more than three years indicate that they were satisfied or extremely satisfied with the return on sales (ROS).

The above analysis suggests that new entrants to the differentiation strategy may achieve sales growth and profit after tax as the consequence of the strategy that they are pursuing but take longer period to be satisfied with return on sales.

Following Norusis (1993) the current study uses the Pearson's (r) correlation coefficient to measure the relationship and associationship between the variables involved in the cross tabulation. The Pearson's (r) correlation coefficient was used because the variables involved in the cross tabulation were two interval variables.

This coefficient measures the strength of the linear relationship between two variables. The value of the coefficient ranges from +1 to -1 to indicates the positivity or negativity of the linear correlation.

From table 8.15, the cross tabulation statistics revealed that the Pearson's (r) correlation coefficient between the age of the differentiation strategy and return on sale (ROS) is 0.93642 with the observed significance level of 0.00061. Pearson's (r) correlation coefficient indicates that of the age of the differentiation strategy is significantly correlated with the firms financial performance. The positive value of the coefficient and with its value of almost +1, indicates that the older the age of the firms' differentiation strategy, the more satisfied they will be with their financial performance. Conversely, the new entrant will face mobility barrier due to the high investment and cost required to develop the unique distinctive competence required by the differentiation strategy (Reed and Defillippi, 1990).

The high positive correlation between the age of the differentiation strategy and performance was consistently observed for all financial indicators. The high positive Pearsons (r) correlation coefficient with the observed significant level of less than 0.05 between the age of the differentiation strategy and the financial indicators suggests a strong positive linear relationship.

Table 8.15 The Pearson's (r) correlation coefficient between the age of the strategy and financial performance for each group.

	ROS	ROA	PROFIT	SALEGROW	ROSHE
Grp1. Business alliance and cost efficiency strategy.	N/A	N/A	N/A	N/A	N/A
Grp2. Differentiation strategy	0.93642 (0.00061)	0.89848 (0.00242)	0.95832 (0.02086)	0.79612 (0.01808)	0.89869 (0.00594)
Grp3. Product variety strategy	0.80599 (0.02860)	0.90749 (0.00475)	0.64380 (0.11868)	0.18345 (0.69378)	0.68061 (0.09238)
Grp4. Business alliance and competitive std. of quality strategy	N/A	N/A	N/A	N/A	N/A
Grp5. Flexible manufacturing strategy.	-0.40825 (0.49503)	0.00000 (1.0000)	-0.40825 (0.49503)	0.0000 (1.000)	-0.40825 (0.49503)
Grp6. Cost efficiency strategy.	0.55820 (0.04742)	0.55286 (0.05004)	0.48869 (0.09016)	0.57755 (0.03873)	0.49491 (0.08553)
Grp7. Stuck in the middle	N/A	N/A	N/A	N/A	N/A

Note: (*) indicates the observed significant level related to the correlation coefficient.
'N/A' - not available due to small number of sample.

Incidentally, the foregoing relationship was only observed to occur for the differentiation strategy (see table 8.15). The above-mentioned observation supports

the study hypothesis 4 which states: *firms that have been pursuing a differentiation strategy will be more successful than new entrants.*

3. The product variety strategy

The product variety strategy emerged in the cluster analysis a posteriori. This strategy identified cannot be used to test the research hypothesis because it was being pursued without the combination of the cost efficiency strategy, since hypothesis 2 states that: *firms that adopt a combination of cost efficiency and product variety strategy perform better than those which follow solely on one or the other.*

On the average, firms pursuing the product variety strategy were neither satisfied nor dissatisfied with their business performance. The mean scores (Table 8.8) for the ROS, ROA, sales growth and profit after tax of the members of the strategic group are 3.20, 3.60, 3.10 and 3.90 respectively. Even though the means scores for performance indicate that the member firms are in the range of neither satisfied nor dissatisfied with their business performance, further investigation on the relationship between the age of strategic group and performance indicate that not all of the performance indicators are significantly correlated to the age of the product variety strategy. Only performance measured by ROS and ROA indicates that they are significantly correlated to the age of the strategy ($r = 0.806$ and $r = 0.907$ respectively, signif. 0.05). This result suggests that the strategy could be appropriate for the firms that have adopted it for a period of time but it could be a weak strategy for new entrants.

4. Combination of business alliance strategy with competitive standard of quality.

Only one firm was pursuing the combination of business alliance and competitive standard of quality strategy. Table 8.8 reveals that although the firm pursuing this strategy was satisfied with its sales growth, its profitability measured in term of return on sale, profit after tax and return on asset are not satisfactory at all.

The poor profitability ratio and return on assets despite a satisfactory performance in sales growth indicates that the strategy is not effective to combat the low cost import competition. The competitive standard of quality may stimulate sales but failure to

control the cost of maintaining the high standard of quality is likely to affect firms' profitability.

5. The flexible manufacturing strategy.

Among the seven strategic groups, the result of the one-way ANOVA (table 8.8) shows that the flexible manufacturing strategy is the most appropriate strategy to be pursued. The flexible manufacturing strategy scored between 4.0 and 4.2 for all the financial indicators including return on shareholders' equity (ROSHE). These mean scores indicate that the CEOs of firms within this strategic group were satisfied with the performance of their respective firms for all performance measure.

6. Cost efficiency and specialized manufacturing strategy

The previous discussion on the result of the factor analysis concluded that the cost efficiency strategy overlapped with the specialized manufacturing strategy. This is not unexpected. Manufacturing firms that engage in specialization manufacturing are attempting to achieve cost minimization. With the cost advantage position they harness the economies of scale for a bigger market share and competitive pricing.

The one-way ANOVA reveals that firms adopting the cost efficiency and specialized manufacturing strategy are largely dissatisfied with their financial performance. The finding neither support nor reject hypothesis 1 because the hypothesis states that: *firms that adopt a cost efficiency strategy and maintain a competitive standard of quality are more successful than those pursuing purely the cost efficiency strategy.*

The result shows that maintaining cost efficiency alone is not sufficient because the UK manufacturers cannot match the cost advantage of overseas manufacturers. Cost efficiency strategies were observed to be associated with an industry's structural characteristics (Murray, 1988). An increase in the number of firms pursuing the cost efficiency strategy would only increase the intensity of the interfirm rivalry and few firms will succeed in maintaining their competitive advantage by pursuing the cost efficiency strategy in the hostile environment (Parker and Helms, 1992). In such circumstances, Calorie and Ardison (1992) state that in a hostile environment, competitive advantage may only be achieved from the combination of cost activities and some types of differentiation strategy.

A comparison of the average performance of the strategic group pursuing the flexible manufacturing strategy with that of those pursuing the cost efficiency/specialized manufacturing strategies shows that firms adopting flexible a manufacturing strategy are the more successful (see also table 8.8). This finding support hypothesis 3: *firms that adopt a flexible manufacturing strategy are more successful than those which are highly specialized in their production.*

7. The stuck in the middle

Only two firms are considered 'stuck in the middle'. Table 8.8 indictes that these firms perform satisfactorily in terms of sales' growth and return on sales. However, the group performs poorly in term of profit after tax and return on share holders equity. This poor performance indicates a lack of cost efficiency in the strategy. However, the strategy seemed to achieve acceptable growth in sales and return on sales. This finding links well with Dess and Davis's (1984) argument that firms stuck in the middle may actually be able to adapt to changes in the industry environment more readily than firms committed to a specific strategy in a declining environment.

The result of the analysis

The a posteriori classification of strategy reveals the existence of 7 strategic groups in response to the low cost import competition that has caused their industrial decline. The strategic group concept adopted in this study is akin to a taxonomy of strategies because it emphasizes the classification of strategies chosen by firms operating under similar environments rather than by their industries.

Strategic group theory which postulates mobility barriers as providing protection for sustained inter-group differences, was evidenced in the analysis of financial performance amongst the 7 strategic groups.

The negative correlation between the age of the flexible manufacturing strategy and performance suggests that investment in new manufacturing technology could address the environmental uncertainties, complement the market driven strategy and lead to a greater competitive advantage.

The result of the data analysis supports the hypotheses put forward by the study which states:

1. Firms that adopt a flexible manufacturing strategy are more successful than those which are highly specialized in their production.

2. Firms that have been pursuing a differentiation strategy will be more successful than new entrants.

The study also provide evidence on the existence of the business alliance strategy. Neither forms of the business alliance strategy; the combination with cost efficiency and the combination with competitive standard of quality perform well. The finding supported Golden and Dollinger (1993) assertion that there is limited evidence that the inter-organization cooperative strategy with seemingly successful posture leads to improved performance.

Conclusion

The uncertainty and shrinkage in demand for the locally produced goods as a consequence of low cost import competition suggests the need for a business strategy which could achieve economies of scale at smaller volumes. The manufacturing strategy should dovetail with a market driven strategy which calls for manufacturing capabilities that could operate at a shorter machine running time and be able to produce a variety of products with lower cost penalties.

Most of the firms pursuing the cost efficiency strategy are unable to sustain their competitive position due the nature of the strategy that takes advantage of large market share and harnessing economies of scale.

Besides the flexible manufacturing strategy, the differentiation strategy and product variety strategy could be considered as feasible business strategies to arrest the intensity of the low cost import competition especially in the price insensitive segments of the market.

Chapter 9

THE CORRELATES BETWEEN COMPANY'S STRATEGIC CAPABILITIES AND PERFORMANCE

Introduction

This chapter will elucidate the data analysis and the findings on the research questions that probe into the link between strategic capability and successful implementation of strategy.

The theoretical background of strategic capability was derived from the views expounded by Hofer and Schendel (1978) and Chamberlain (1968) on organizational distinctive competence and Lenz (1980) on company capability for strategic actions.

The theoretical background

An organization's distinctive competence or strategic capability is the most important component of strategy at the business level because it dealts with the basic assumption that expertise and capabilities across the firms are heterogeneous and hard to duplicate (Dess and Miller, 1993, pp. 13; Hofer and Schendel, 1978 pp 25; Peteraf, 1993). Thus it creates asymmetrical mobility barriers (Peteraf, 1993; Burgelman, 1994) and affords a sustained competitive advantage (Hofer and Schendel, 1978; Snow and Hrebiniak, 1980; Meyer, 1991; Hall, 1993).

Harrigan (1980a) explained that what accounts for the success of a firm operating in a harsh environment is the strategic strengths that are within the control of the firm. The strategic strength encompasses the firm's capability for economies of scale, vertical integration, technological leadership, brand loyalty, strong distribution system, and the

like. Except for vertical integration, Harrigan's conception of strategic strength reflects Hall's (1993) description of 'intangible' distinctive competence of the firm.

The term distinctive competence was first conceptualized by Selznic (1947) to describe the unique capabilities and values possessed by firms vis-a-vis their competitors (Snow and Hrebiniak, 1980; Meyer, 1991). The resource base view maintained that certain organizational resources that are valuable, rare, difficult to imitate and non-substitutable are potential resources to yield a competitive advantage of a firm if deployed in a unique pattern of combination (Reed and Defillippi, 1990; Meyer, 1991). The organization's distinctive competence is an important aspect of strategy because it contributes to a sustainable competitive advantage (Hofer and Schendel, 1978, pp. 25).

As a strong proponent of the resource base view in strategic capability, Hofer and Schendel (1978) explained that the organization's distinctive competence stems from 5 organizational resources. The 5 organizational resources are the financial, physical, human, organizational and technological resources. Contrary to Hofer and Schendel (1978), Chamberlain (1968) maintained that the organizational strategic capability extends beyond those resources that an organization owns and controls. Chamberlain (1968) included the belief, attitude and commitments of customers, suppliers and the financial institutions towards the firm's business as the external resources that would contribute to the organizational capability for strategic action.

Chamberlain's sources of external support for strategic actions could be classified as positional capabilities that are acquired by a firm as the result of previous actions and decisions (Hall, 1993). These positional capabilities provide mobility barriers that contribute to sustainable competitive advantage.

Lenz (1980) argued that organization capability extends beyond the resources owned or controlled by the companies. Lenz's (1980) advances three dimensions of organization's strategic capability that encompasses:

1. The organization's knowledge and technological base for value creation,
2. The organization capacity to generate and acquire resources,
3. The organization's general management technology.

The organizational knowledge-technique base for value creation refers to the degree that the firm has excelled in one or more value creating activities in product-market

development compared to their competitors. Lenz's second dimension of strategic capability refers to a firm's capacity to generate resources from its day-to-day activities and its capacity to acquire strategic support from entities within its environment, including the supplier, customer and financial communities. The third dimension of Lenz's strategic capability is the management technology - the general management expertise in administrating and coordinating the human effort in accomplishing the organizational goal as reflected in the implemented strategy.

In view of the importance of strategic capability to sustainable competitive advantage, the current study hypothesized that:

Hypothesis 5 : The success of a business strategy is a function of the firm's strategic capability.

This hypothesis proposed that the success or failure of a particular strategic option is dependent on the firm's ability to turn the strategy into reality.

Measuring the company strategic capability and performance

The study opted to measure a company's strategic capability based on two out of the three dimensions that had been advanced by Lenz (1980). These dimensions are those that represent the internal and external capability. The internal capability relies on the firm's functional capability in the knowledge, skill and experience owned and controlled by the company for value creation. The external capability relies on the firm's capacity to generate support from external entities on the basis of their goodwill and mutual relationship.

The knowledge-technique base of the company for value creation is an important internal resource that relies very much on the company's competency to create values that would benefit the customers especially in the form of product features and services that would contribute to customer satisfaction.

The company's ability to acquire and generate resources relies very much on the company's relationship and goodwill with the customers, suppliers or vendors and financial institutions. The aggregate company's ability to acquire or generate resources for strategic actions could be measure from the general attitude and commitment of these resources towards the company's businesses.

The current study has purposely dropped Lenz's third dimension of strategic capability (management technology) because the researcher was of the opinion that the firm's capacity for management technology is in essence already reflected in the firm's capability create goodwill and acquire support from entities in its external environment.

The instrument used to measure a firm's strategic capability

The variables used to measure a company's' strategic capability have been derived from Lenz (1980) and are represented by the following elements of strategic capability:

1. The capacity to create loyalty from the firm's major customers.
2. The capacity to create commitment and supportive attitude from the firm'smajor suppliers.
3. The capacity to gain support and commitment from relevant financial institutions to the firm's businesses.
4. The company's ability to create value that benefits customers and thus creating customer satisfaction.

These components of a firm's strategic capability were translated into variables in the questionnaire. These variables are as follows:

1. CUSTATTD = The attitude of the company's major customers toward the company's business, expressed in terms of customer loyalty.

2. FINATTD = The attitude of the financial institutions measured in terms of their supportiveness and willingness to extend credit facilities.

3. SUPPATTD= The attitude of the company's major suppliers to the business of the company in terms of their commitment in extending quality services, after sale services and credit terms.

4. CUSTISF = The ability of the company to create value to benefit the customers especially in the product features and contributes to customer satisfaction.

Data analysis

The study proposed that there is a functional relationship between the elements of the strategic capability and business performance. The most appropriate approach to analyze the proposed relationship is by analysis of the correlation between the variables for the strategic capability and the business performance of the company.

In examining the functional relationship between the company's strategic capability and performance, meticulous attention should be given to identifying spurious correlations between the variables of strategic capability (Norusis, 1993; pp. 201-225).

A technique that provides a single measure of linear association between two variables while controlling the linear effect of one or more variables is partial correlation analysis (Norusis, 1993; pp. 304). The techniques also enables intervening relationships between the variables to be detected before a multiple regression analysis is conducted.

The correlation between strategic capability, strategic orientation and performance.

Table 9.1 exhibits the correlation coefficients and the observed significance levels of the variables that are used to measure firms' strategic capability, strategic orientation and performance. The Pearson's correlation coefficient was used to examine the strength of the linear associationships.

From table 9.1, there were 4 important observations worth of note. First, it was observed that except for the variable that measures the firm's ability to create commitment from the firm's major suppliers (SUPATTD), none of the strategic capability variables is significantly correlated with the firm's strategic orientation. SUPATTD was significantly and positively correlated with FAC5_1, the firm's orientation to the differentiation strategy ($r = 0.4365$, $p = 0.006$).

Second, except for firms' following a product variety strategy (FAC2-1) , none of the strategic orientations was significantly correlated with financial performance. The variables that measure firms' orientation to the product variety strategy were negatively correlated with sales growth ($r = -0.332$; $p = 0.042$).

Third, among the variables used to measure organization's strategic capability, two variables were observed to have a positive and significant correlation with at least two of the financial indicators. They were CUSTATTD and CUSTISF. CUSTATTD, the variable that measures the firm's ability to create customer loyalty was observed to have a positive and significant correlation coefficient with all financial indicators used in the study. The correlation coefficients of CUSTATTD with return on sale (ROS) and Return on assets (ROA) were 0.4558 and 0.3940 with significance levels of $p = 0.002$ and $p = 0.007$ respectively.

The firm's ability to create value leading to customer satisfaction (CUSTISF) was observed to have a positive and significant correlation with PROFIT, the firms net profit after tax ($r = 0.2939$, $p = 0.05$).

Fourth, the variables used in the study to measure the firm's strategic capability was observed to be positively correlated amongst themselves, this predicts the existence of a linear relationship between those 4 variables used to measure the firms strategic capability.

In the first and the second observations above, the number of correlation was too large (Table 9.1) and some of the coefficient may be statistically significant by chance (Norusis, 1993; pp. 295). The variables used in Table 9.1 are expected to be unrelated if only 5% or less of the correlation coefficients are significant at $p < 0.05$. This would lead us to expect about 3 correlation coefficient in table 9.1 are significant simply by chance. Out of the 63 correlation between the variables in table 9.1 only 2 correlation coefficients between the strategic orientation and strategic capability was observed to be significant at $p < 0.05$ (that is, $r = 0.4365$ with $p = 0.006$ and $r = -0.3321$ with $p = 0.042$). Since the number of significant correlation ($p < 0.05$) is less than 3 the study therefore conclude that the variables are unrelated and occurred only by chance.

This suggests that overall, there is no relationship between strategic orientation and the firms strategic capability as well as between strategic orientation and the performance indicators.

Table 9.1. Correlation coefficient table between the variables for strategic capability and financial performance.

	CUSTATTD	CUSTISF	FINATTD	SUPATTD	ROS	ROA	PROFIT	ROSHE	SALEGROW
CUSTATTD	1.0000 (45) P=.								
CUSTISF	.3115 (45) P=.037	1.0000 (45) P=.							
FINATTD	.3073 (43) P=.045	.3404 (43) P=.026	1.0000 (43) P=.						
SUPATTD	.4547 (44) P=.002	.2798 (44) P=.066	.6070 (42) P=.000	1.0000 (44) P=.					
ROS	.4558 (45) P=.002	.2598 (45) P=.085	.1398 (43) P=.371	.0114 (44) P=.941	1.0000 (45) P=.				
ROA	.3940 (45) P=.007	.2844 (45) P=.058	.1284 (43) P=.412	.0054 (44) P=.972	.8387 (45) P=.000	1.0000 (45) P=.			
PROFIT	.4652 (45) P=.001	.2939 (45) P=.050	.2386 (43) P=.123	.0792 (44) P=.609	.9394 (45) P=.000	.8541 (45) P=.000	1.0000 (45) P=.		
ROSHE	.4512 (44) P=.002	.2351 (44) P=.125	.2076 (42) P=.187	.0324 (43) P=.837	.9198 (44) P=.000	.8322 (44) P=.000	.9474 (44) P=.000	1.0000 (44) P=.	

Table 9.1 (continued)

	CUSTATTD	CUSTISF	FINATTD	SUPATTD	ROS	ROA	PROFIT	ROSHE	SALEGROW
SALEGROW	.3303	.1338	.1800	.0462	.5860	.4750	.5080	.5351	1.0000
	(45)	(45)	(43)	(44)	(45)	(45)	(45)	(44)	(45)
	P= .027	P= .381	P= .248	P= .766	P= .000	P= .001	P= .000	P= .000	P= .
FAC1_1	.0078	-.1086	.0631	.0216	-.2274	-.0916	-.1350	-.0669	-.0238
	(38)	(38)	(36)	(38)	(38)	(38)	(38)	(37)	(38)
	P= .963	P= .516	P= .715	P= .898	P= .170	P= .584	P= .419	P= .694	P= .887
FAC2_1	-.0347	-.0256	.2127	.2272	-.0477	.0017	.0454	-.0186	-.3321
	(38)	(38)	(36)	(38)	(38)	(38)	(38)	(37)	(38)
	P= .836	P= .879	P= .213	P= .170	P= .776	P= .992	P= .787	P= .913	P= .042
FAC3_1	.0787	-.0581	.0752	-.0851	.0528	-.0242	.0591	.1138	.2178
	(38)	(38)	(36)	(38)	(38)	(38)	(38)	(37)	(38)
	P= .639	P= .729	P= .663	P= .611	P= .753	P= .885	P= .725	P= .502	P= .189
FAC4_1	-.2064	-.0824	-.0208	-.1556	-.0160	-.0970	-.1079	-.0534	-.1176
	(38)	(38)	(36)	(38)	(38)	(38)	(38)	(37)	(38)
	P= .214	P= .623	P= .904	P= .351	P= .924	P= .562	P= .519	P= .754	P= .482
FAC5_1	.0078	-.0062	.2921	.4365	-.1347	.0128	.0279	.0584	-.0796
	(38)	(38)	(36)	(38)	(38)	(38)	(38)	(37)	(38)
	P= .963	P= .970	P= .084	P= .006	P= .420	P= .939	P= .868	P= .732	P= .635
FAC6_1	-.1309	-.1840	.0828	.2095	-.1608	-.1614	-.2202	-.1647	-.1150
	(38)	(38)	(36)	(38)	(38)	(38)	(38)	(37)	(38)
	P= .433	P= .269	P= .631	P= .207	P= .335	P= .333	P= .184	P= .330	P= .492
FAC7_1	.1048	-.0258	.0976	-.0369	-.0725	-.0354	-.0142	-.0092	-.2721
	(38)	(38)	(36)	(38)	(38)	(38)	(38)	(37)	(38)
	P= .531	P= .878	P= .571	P= .826	P= .665	P= .833	P= .933	P= .957	P= .098

Note:

1. (Coefficient / (Cases) / 2-tailed Significance) 2. " . " is printed if a coefficient cannot be computed

1. FAC1_1= Cost efficiency and specialized manufacturing strategy; 2. FAC2-1 = Product variety strategy; 3. FAC3_1 = Competitive standard of quality strategy; 4. FAC4_1= Flexible manufacturing strategy; 5. FAC5_1= Business alliance strategy; 6. FAC6_1= Differentiation strategy; 7. FAC7_1 = Focus strategy

The third and the fourth points suggest that a spurious relationship might exist among the variables used to measure the firm's strategic capability and the indicators of the firm's performance. A spurious correlation between any two variables results from one of the variable observed being correlated with a third variable that is the true predictor of the magnitude of the correlation coefficient observed (Norusis, 1993; pp. 304).

A partial correlation analysis was undertaken in order to investigate the existence of spurious correlations between the variables for strategic capability. The partial correlation analysis provides a single measure of linear association between any two of the variables for the strategic capability (i.e. CUSTATTD, CUSTISF, SUPATTD and FINATTD) while adjusting the linear effect of one or more of the variable under observation (Norusis, 1993).

Table 9.2 Zero order partial correlation coefficient amongst the variable for strategic capability.

	CUSTISF	FINATTD	SUPATTD	CUSTATTD
CUSTISF	1.0000 (0) P= .	.3404 (41) P= .026	.2798 (42) P= .066	.3115 (43) P= .037
FINATTD	.3404 (41) P= .026	1.0000 (0) P= .	.6070 (40) P= .000	.3073 (41) P= .045
SUPATTD	.2798 (42) P= .066	.6070 (40) P= .000	1.0000 (0) P= .	.4547 (42) P= .002
CUSTATTD	.3115 (43) P= .037	.3073 (41) P= .045	.4547 (42) P= .002	1.0000 (0) P= .

(Coefficient / (D.F.) / 2-tailed Significance)
" . " is printed if a coefficient cannot be computed

Table 9.2 exhibits the zero order partial correlation that includes the correlation coefficient of all variables involved without controlling the linear effect of any one of the variables for strategic capability.

The zero order partial correlation coefficients between the strategic capability variables indicate that the attitude of the financial institutions (FINATTD) in supporting the business is highly correlated with the attitude of the main supplier

(SUPATTD). The correlation coefficient between the FINATTD and SUPATTD is 0.6070 with significant level at p = 0.0001. Neither of these variables are significantly correlated with any of the financial indicators in the correlation analysis conducted earlier (see table 9.1). The strong correlation between SUPATTD and FINATTD could be due to credit relationship extended by the vendors to the companies and the financial institutions that are directly dependent on the company's credit worthiness and good relationship with the financial institutions or vice versa.

The attitude of the main supplier (SUPATTD) and the financial institutions (FINATTD) were also observed to have a fairly strong positive and significant correlation coefficient with CUSATTD, the firm capacity to create customer's loyalty (r = 0.4547, p = 0.02 and r = 0.3073, p = 0.045 respectively). Table 9.2 also revealed that SUPPATTD and FINATTD correlate with the firm's ability to create customer satisfaction (CUSTISF) in a fairly positive linear relationship (r = 0.4547; p = 0.002 and r = 0.3404 and p = 0.026 respectively).

The above analysis suggests that customer loyalty and a firm's ability to create customer satisfaction are valuable assets for companies affected by low cost import competition to attract commitment and a favourable service from their major suppliers. Similarly, customer loyalty and ability to create customer satisfaction will boost the confidence and credit worthiness of the affected company in the eye of financial institutions to extend their credit facilities for the operation of the business.

The zero order partial correlation data in table 9.2 also reveals that there exists a fairly positive linear association between the firm's ability to create customer satisfaction (CUSTISF) and the firm's ability to create customer loyalty (CUSTATTD). The partial correlation coefficient between CUSTISF and CUSTATTD at zero order partials is r = 0.3115 and p = 0.037. The positive and significant correlation between CUSTATTD and CUSTISF suggests that the company's ability to create customer satisfaction does not contribute directly to the firm's financial performance (see table 9.1) but the ability to create customer's satisfaction leads to greater customer loyalty.

Table 9.3 First order partial correlation amongst variables for strategic capability, controlling for CUSTISF

	FINATTD	SUPATTD	CUSTATTD
FINATTD	1.0000	.5669	.2253
	(0)	(39)	(40)
	P= .	P= .000	P= .151
SUPATTD	.5669	1.0000	.4029
	(39)	(0)	(41)
	P= .000	P= .	P= .007
CUSTATTD	.2253	.4029	1.0000
	(40)	(41)	(0)
	P= .151	P= .007	P= .

(Coefficient / (D.F.) / 2-tailed Significance)
" . " is printed if a coefficient cannot be computed

Table 9.3, exhibits the first order partial correlation coefficients between the variables for the firm's strategic capability when the linear effect of CUSTISF was held constant the magnitude of the linear associationship between CUSTATTD and FINATTD is weakened and becomes less significant ($r = 0.2253$ and $p = 0.151$). However, the linear relationship between CUSTATTD and SUPATTD remained the same. The foregoing analysis supports the view that an ability to create customer loyalty is directly associated with firm's ability to create customer satisfaction. The above partial correlation analysis suggests the existence of a spurious relationship between CUSTISF and CUSTATTD where CUSTISF could be a true predictor of CUSTATTD.

Table 9.4 First order partial correlation amongst variables for strategic capability, controlling for FINATTD

	SUPATTD	CUSTATTD	CUSTISF
SUPATTD	1.0000	.3546	.0979
	(0)	(39)	(39)
	P= .	P= .023	P= .543
CUSTATTD	.3546	1.0000	.2312
	(39)	(0)	(40)
	P= .023	P= .	P= .141
CUSTISF	.0979	.2312	1.0000
	(39)	(40)	(0)
	P= .543	P= .141	P= .

(Coefficient / (D.F.) / 2-tailed Significance)
" . " is printed if a coefficient cannot be computed

Table 9.4 revealed that when the linear effect of FINATTD was held constant, the linear relationship between CUSTISF and SUPATTD as well as the linear relationship between CUSTISF and CUSTATTD was weakened and became insignificant (i.e. $p > 0.5$). The above phenomenon suggests the existence of a spurious relationship between FINATTD and CUSTISF where FINATTD could be a true predictor of CUSTISF.

Table 9.5 First order partial correlation amongst variable for strategic capability, controlling for SUPATTD

	CUSTATTD	CUSTISF	FINATTD
CUSTATTD	1.0000	.2155	.0443
	(0)	(41)	(39)
	P=.	P=.165	P=.783
CUSTISF	.2155	1.0000	.2236
	(41)	(0)	(39)
	P=.165	P=.	P=.160
FINATTD	.0443	.2236	1.0000
	(39)	(39)	(0)
	P=.783	P=.160	P=.

(Coefficient / (D.F.) / 2-tailed Significance)
" . " is printed if a coefficient cannot be computed

In table 9.5, when the linear effect of SUPATTD was held constant, the first order partial correlation coefficients between any two of the strategic capability variables was weakened across the board. The observation suggests that the firm's capacity to gain support from the supplier (SUPATTD) influences the value of all other variables for strategic capability.

By compounding the linear effect of CUSTISF, FINATTD and SUPATTD from the foregoing partial correlation analysis in table 9.2 to table 9.5, the study concluded that a spurious relationship between the firm's ability to create customer loyalty (CUSTATTD) and other variables for strategic capability does exist. Due to the spurious relationship, the predicted value of CUSTATTD is dependent on the strength of the value of CUSTISF, SUPATTD and FINATTD.

The relationship between the dimensions of organizational strategic capability and financial performance.

This study has hypothesized that successful implementation of strategy is a function of the firm's strategic capability. The hypothesis suggests the existence of a causal relationship between the dimensions of the firm's strategic capability and performance.

The most important objective of this chapter is to determine whether a firm's strategic capability could be the predictor for the firm's business performance. The appropriate approach to analyze the causal relationship between a firm's strategic capability and performance is by conducting a multiple linear regression analysis (McGhee, 1985, pp. 395; Norusis, 1993, pp. 311).

To investigate the functional relationship between a firm's strategic capability and performance the current study conducted a multiple regression analysis by choosing the variables for strategic capability as the independent variables and ROS as the dependent variable of the mathematical equation. The study used ROS as the dependent variable due to its reliability as has been explained in chapter 8.

As a first step, the forced entry method was used to build the multiple linear regression equation. In the forced entry method, all variables chosen are entered in a single step into the equation. The first equation resulted from the forced entry method is exhibited in table 9.6. The equation has an F value of 3.36697 with the observed significant level of $p < 0.05$. The F statistics indicate that there is a significant linear relationship between ROS and all other variables in the equation. However, SUPATTD was observed to have a negative relationship with company performance. This means that SUPATTD has a dampening effect to the firm's performance where a unit increase in the attitude of the supplier towards the company will reduce the performance level by 0.445267.

From table 9.6, it was observed that only the **t** value for CUSTATTD is fairly large and significant at $p< 0.05$ (**t** = 3.0112, **t** signif. = 0.0036). The **t** value for SUPATTD, FINATTD and CUSTISF in the equation is small and not significant at $p < 0.05$.

On the basis of the above statistics, the study conducted a backward elimination procedure of the multiple linear regression analysis to select the optimum variables to be included into the regression model. In the backward elimination method any variable with the probability of F greater than 0.10 is removed from the equation (Norusis, 1993; pp. 349). The backward elimination procedure would also eliminate the variables

with the small t value and observed significance t > 0.10 because the t value is equivalent to the square root of the F value (Norusis, 1993, pp 349).

Table 9.6 Multiple regression analysis of company performance against the variables of strategic capability by forced entry method.

Equation 1: Enter SUPATTD CUSTISF CUSTATTD FINATTD

ROS = - 0.372814 - 0.445267(SUPATTD) + 0.246693 (CUSTISF) + 0.774527(CUSTATTD) + 0.191894 (FINATTD)

Overall F = 3.36697, d.f. 4, 37, Sig. F = 0.0190 , R^2 = 0.26686

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
SUPATTD	-.445267	.231884	-.361511	-1.920	.0626
CUSTISF	.246693	.289344	.130434	.853	.3994
CUSTATTD	.774527	.248889	.501921	3.112	.0036
FINATTD	.191894	.231875	.150580	.828	.4132
(Constant)	-.372814	1.243790		-.300	.7661

By treating equation 1 with the backward elimination procedure, SUPATTD, CUSTISF and FINATTD was eliminated from the resulting equation. Equation 2 shows that only CUSTATTD has a significant linear relationship with ROS with F = 8.85266 and signif. F = 0.0049.

The result of the backward elimination procedure is in agreement with the outcome of the correlation analysis exhibited in table 9.1, where only CUSTATTD among the variables for strategic capability has a fairly strong and significant positive correlation coefficient with all indicators used to measure the firm's performance. The outcome of the correlation analysis in table 9.1 and the backward multiple regression analysis (table 9.7) revealed that CUSTATTD is a strong predictor of the firm's performance.

From the correlation analysis in table 9.1, it was observed that the variables for strategic capability are more correlated among themselves. The partial correlation analysis conducted on the strategic capability variables (table 9.2 through table 9.5) revealed that the value of CUSTATTD is dependent on the strength of SUPATTD,

CUSTISF and FINATTD due to the spurious relationship existing among the variables.

Table 9.7 Multiple regression of company performance against the variables of strategic capability by backward elimination method.

Equation 2: Backward elimination

ROS = 0.164223 + (0.656891) CUSTATTD

Overall F = 8.85266, d.f. 1, 40, Sig. F = 0.0049, R^2 = 0.18121

---------- Variables not in the Equation ----------

Variable	Beta In	Partial	Min Toler	T	Sig T
CUSTISF	.113286	.119704	.914191	.753	.4560
FINATTD	.001196	.001246	.889113	.008	.9938
SUPATTD	-.251169	-.247141	.792734	-1.593	.1193

A multiple linear regression analysis was conducted on the variables for strategic capability to investigate whether or not a linear relationship exists among the variables. The main aim is to justify that there is a significant linear relationship when SUPATTD, FINATTD and CUSTISF are used together as the independent variables to predict CUSTATTD in the multiple linear regression model.

Table 9.8 Multiple regression analysis between the variables for strategic capability with CUSTATTD as the dependent variable.

Equation 3: Dependent Variable CUSTATTD Customer Attitude

Method Enter SUPATTD CUSTISF FINATTD

CUSTATTD = 1.688930 + 0.304444 (SUPATTD) + 0.211074 (CUSTISF) + 0.035262 (FINATTD)

Overall F = 3.96313, d.f. 3, 38, Sig. F= 0.0149, R^2 = 0.23831

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
SUPATTD	.304444	.593610	.381424	2.131	.0396
CUSTISF	.211074	.586507	.172215	1.138	.2622
FINATTD	.035262	.340994	.042699	.233	.8166
(Constant)	1.688930	3.233501		2.214	.0329

The result of the multiple linear regression analysis is exhibited in table 9.8. Equation 3, shows that there is a significant linear relationship between CUSTATTD and the other variables in the equation (where the $F = 3.96313$ significant at $p < 0.05$). The linear equation also revealed that all of the independent variables (CUSTISF, SUPATTD and FINATTD) have a positive partial regression coefficient. The predicted value of CUSTATTD will increase by the sum of the coefficients of the independent variables in the equation when each of the independent variables increases by one unit.

Conclusion

The above explanation supports the hypothesis of the study that successful business strategy is a function of the firm's strategic capability. Due to the spurious relationship between the variables that measure a firm's strategic capability, the causal linkage between the strategic capability is more significant between the firm's capacity to create customer's loyalty (CUSTATTD) and performance (measured by ROS). The size of CUSTATTD in equation 1 is contingent on the firm's ability to create customer satisfaction (CUSTISF), the capacity to gain support and commitment from the major suppliers (SUPATTD) and the firm's capacity to gain support from financial institutions in term of loan and credit facilities for the firm's financial requirements (FINATTD).

Chapter 10

THE RELATIONSHIP BETWEEN ORGANIZATIONAL ENTREPRENEURSHIP, STRATEGY AND PERFORMANCE

Introduction

The relationship between organizational entrepreneurship, strategy and performance has become an important aspect of strategic management research (see Guth and Ginsberg 1990 and Sandberg 1992). To a certain extent economic theory has bridged the gap between the traditional approach to entrepreneurship theory and strategic management.

The traditional theoretical approach to entrepreneurship places the emphasis on the question of who is the entrepreneur and how they act in an economic environment (Miller, 1983; Sandberg, 1992) whilst the economic theory approach to entrepreneurship focuses on the risk and uncertainty in the distribution of income, the market process of perfect competition, the Schumpeterian model of innovation and the relationship between entrepreneurs and the firms that have the entrepreneur as the organizational decision maker (Casson, 1990).

The economic theory approach to entrepreneurship places emphasis on the entrepreneur as the arbitrator of organizational strategy and performance. It calls for the inclusion of the motivation of the entrepreneur and his or her perceptions of the environment as a factor that influences either the dominant individual or the dominant coalition (Miles and Snow, 1978) in the formulation of a competitive strategy (Casson, 1990).

This chapter is directed toward examining the relationship between organizational entrepreneurship, strategy and performance. The aim of this chapter is to provide

evidence to validate the hypothesis that entrepreneurial firms are more successful than those which are not entrepreneurial.

Theoretical background

Entreprenuership can be viewed from many perspectives. In the traditional theory of entrepreneurship there is a strong tendency to identify entrepreneurship with the dominant personality in an organization. This dominant personality is usually the owner-manager of a new or a small business organization (Miller 1983). The focus has been on the personal characteristic (for example, McClelland, 1961 and Kets De Vries et al., 1977), attitudes (for example, Robinson et al., 1991) and the anthropological aspects of the entrepreneurs (for example, Stewart, 1991). The above approach provides a useful emphasis on the entrepreneur as an individual pursuing an independent business (i.e., the new and small business) but does not provide the necessary linkages with organizational or corporate entrepreneurship.

The new and small business organization that is run by an owner manager is managed on the basis of simple leadership. Its organizational behaviour is predominantly influenced by the personality, motivation and entrepreneurial conduct of the owner-manager. As the organization evolves from a simple firm into a larger and more complex organization, the firm changes its organizational structure and the relationship of the individual to the new organization. As organizations grow, separation of ownership and control of the organization becomes inevitable. The separation between ownership and control complicates the simple relationship between the executives in the organization who are supposed to execute the owners' will (Czarniawska-Jeorges and Wolff, 1991).

Schumpeter (1934) has broadened the concept of entrepreneurship by defining entrepreneurs as those who carry out innovation for his/her organization by:

1. Introducing new goods or services,
2. Introducing new methods of production,
3. Operating in a new market
4. Finding a new source of raw materials

and

5. Reorganizing the industry.

Schumpeter (1934) termed the above activities as "the carrying out of a new combination" that disrupts the market equilibrium for economic development. He explained the new combination is carried out by the enterprises, particularly the individual whose function is to carry out innovation in the enterprise. These individuals are called the entrepreneurs.

The Schumpeterian model of innovation was labeled as a 'frame-breaking' change by Stopford and Baden Fuller (1994). They argued that the Schumpeterian model suggests a new way to contemplate competition that involves an innovative conception of business strategy that departs from the established generic strategies.

The 'carrying out of a new combination' manifested by Schumpeter translates into change in strategy that would alter the resource deployment pattern of the organization (Guth and Ginsberg, 1990), contributes to a better way of doing things and thus creating a competitive advantage (Porter, 1990; pp. 45). Chettipeddi and Tammy (1991) argued that entrepreneurship will be pervasive in the area of competitive strategy as organizations change from bureaucracy and rigidity to ad-hocracy and fluidity as the consequence of change in policy framework .

Schumpeter's model of entrepreneurship has shifted the focus on entrepreneurs from being a business owner manager to organizational innovator. The Schumpeterian model goes beyond the creation of small businesses and paves the way for the concept of corporate entrepreneurship by drawing the distinction between the role of investor, manager and entrepreneur in an organization. (Stevenson and Jarillo, 1990).

On the basis of Schumpeter's (1934) writings, Miller (1983) has shifted the emphasis from looking the entrepreneur as the dominant personality that determines the organizational entrepreneurship to the entrepreneurial activities of the firm as a whole when it engages in product-market competition. Miller(1983) argued that the entrepreneurial role stressed by Schumpeter can be performed by a decentralized organization better than or at least equally as well as the contribution of a dominant organizational personality.

According to Miller (1983) organizational growth and complexity continually require organizational renewal, innovation, constructive risk taking and the conceptualization of new pursuits and opportunities. The pursuit of complex and new opportunities often goes beyond the effort of one key manager. Baden Fuller and Stopford (1992,

pp. 92) expounded that "such strategic innovations are not the work of a single manager or even a single function: they require changes across the organization".

The characteristic of entrepreneurial firms.

Baden Fuller and Stopford (1992, pp. 95) described an entrepreneurial organization as reflected by team working in all parts of the organization, has the aspiration to achieve more than the immediate tasks, experimenting to explore what is feasible, building the learning and adaptive ability of the organization and able to recognize and resolve dilemmas. Jennings and Lumpkin (1989) supported Baden Fuller and Stopford (1992) that managers in entrepreneurial firms should not be penalized if a risky project fails so as to encourage experimentation.

An entrepreneurial mentality in an organization constantly seeks opportunities from external pressures such as changes in technology, consumer purchasing power, changes in social values and political actions that affect competition (Stevenson and Gumpert, 1985). In pursuit of the opportunity; the entrepreneurial mentality requires creativity, innovation and initiative.

In the area of decision making, Hartmann (1958) differentiates the entrepreneurs from the managers by the naturen of their decision making task. Hartmann (1958) defines the entrepreneurs as making decisions about goals and the managers as making decisions upon the means for the accomplishment of the goals. However, Jennings and Lumpkin (1989) as well as Baden Fuller and Stopford (1992) emphasized the concept of teamwork as the characteristic that will describe an entrepreneurial organization. The concept of teamwork encompasses participative decison making for strategic actions and the development of performance objectives (Jennings and Lumpkin, 1989).

Miller(1983) considers that the entrepreneurial firm engages in product-market innovation activities, undertakes risky ventures and is the first to come up with innovation. To Miller (1983), a non entrepreneurial firm is one that innovates very little, is highly risk aversive and imitates the moves of other competitors instead of leading the way. The ability to innovate is of fundamental importance to industrial development and in a market economy (Frost, 1983).

Covin and Slevin (1986) posit that entrepreneurial firms are those in which the top managers have an entrepreneurial management style as shown by the firm's strategic

decisions and operating philosophy. As a consequence, the organizational conduct in product-market activities (that is also referred to as the entrepreneurial process by Miles and Snow, 1978) will be influenced by the entrepreneurial management style of the top management team. Thus organizational entrepreneurship could be viewed as an organizational characteristic (Naman and Slevin, 1993).

The above view suggests that organizational entrepreneurship could be analyzed by examining the behaviour as the organization engages in product-market activities. Covin and Slevin (1991) explained that the organizational level behaviour could be measured objectively and suggested that the organization's entrepreneurial posture is reflected in three types of organizational behaviour:

1. Top management risk taking behaviours with regard to investment decision.

2. The extension and frequency of product innovation and the related tendency owards technological leadership.

3. The pioneering nature of the firms as evidenced by the firm's propensity to aggressively and proactively compete with industry rivals.

In agreement with Miller (1983), Covin and Slevin (1991) and Naman and Slevin (1993), this study identifies each of these entrepreneurial behaviours as the dimension of the organizational entrepreneurship. The composite combination of these dimensions contribute to the strength of the entrepreneurial posture exhibited by the organization.

The research instrument

A 9-item questionnaire derived by Covin and Slevin (1986 and 1988) and used by Naman and Slevin (1993) was adopted with slight modification. The questionnaire was structured into section C of the main questionnaire and was designed to measure the three entrepreneurial dimensions separately. The dimensions are labeled as INNOV for firm's level of innovation, INITIA to label the firm's proactiveness in product-market competition and RISKTAKER to label the firm's propensity to take risks.

The CEOs or the top management were asked to rate the position of their companies in a particular situation described in the questionnaire between the two extremes of

the 7-points Likert scale. All together, section C is a 9-item questionnaire where by each dimension is measured by 3 questions. The detail of the questionnaire design for section C was discussed in Chapter 4 of this dissertation.

Processing the score for each dimension of entrepreneurship

The data obtain from the CEOs were added for each of the entrepreneurship's dimensions and the total score for each dimension was divided by 3 to obtain an average score. This average score has then rounded up to the nearest round figure to produce new categorical data for each of the strategic dimensions to be saved in the SPSS for Windows data base.

The firm's entrepreneurship posture is measured by the aggregate score of the three dimensions for entrepreneurship. The aggregate score for entrepreneurship was then divided by 3 and rounded up to the nearest integer in order to obtain a 1 to 7-ranged score for the organization's (firm's) entrepreneurship posture (ETR). The averaged of the three dimension aggregate score is also labeled as the organization Entrepreneurship's Index in this study.

Exhibit 10.1 The method use to calculate the score for entrepreneurship dimensions and the organizational entrepreneurship index.

The entrepreneurship dimensions	Respondent's value on each of the questions.	Aggregate score for each dimension	Average score for each dimension
Proactiveness (INITIA)	(__) + (__) + (__) Q1 Q2 Q3	= INITIA ÷ 3	INITIA
Risk taking (RISKTAKER)	(__) + (__) + (__) Q4 Q5 Q6	= RISkTAKER ÷ 3	RISKTAKER
Innovativeness (INNOV)	(__) + (__) + (__) Q7 Q8 Q9	= INNOV ÷ 3	INNOV
Entreprenuership Index (ETR)	___ + ___ + ___ Initia Risk taker Innov	= Aggregate Entrep. Score ÷ 3	ETR

Note: (__) indicate the corresponding value rated by the CEOs for the the question Q1, Q2, ..., Q9 in section C of the questionnaire.

The correlation amongst the dimensions of organizational entrepreneurship

Table 10.1 exhibits the correlation coefficients between the dimensions of organizational entrepreneurship. The table reveals that there are positive linear relationships amongst the variables.

Table 10.1 Correlation coefficients between the dimensions of the organizational entrepreneurship

	ETR	INITIA	INNOV	RISKTAKER
ETR.	1.0000 (44) (" . ")			
INITIA	0.6265 (44) (0.00)	1.0000 (44) (" . ")		
INNOV	0.6642 (44) (0.00)	0.3044 (44) (0.045)	1.0000 (44) (" . ")	
RISKTAKER	0.6611 (44) (0.000)	0.4675 (44) (0.001)	0.4783 (44) (0.001)	1.0000 (44) (" . ")

Note: Coefficient / (Cases) / 2 - tailed significant
"." is printed id coefficient cannot be computed

The correlation coefficient between the firm's entrepreneurial dimensions (i.e., the firms' proactiveness in taking up the product-market competition (INITIA), innovativeness (INNOV) and propensity to take business related risk (RISKTAKER) and the organizational entrepreneurship is greater than 0.600 with the significant level less than 0.00001.

The positive correlation between each of the dimensions used to measure organizational entrepreneurship support the deduction adopted by the study that the entrepreneurial conduct of an organization could be observed in the process when the firms engage in product-market innovation or organizational renewal, proactive actions in the market competition and the firms' willingness to take high risk for a venture that promise a high return. Changes in any one of the entrepreneurship dimension might influence the organizational entrpreneurship posture. The study from here on will interchangeably refer the organizational entrepreneurship as

entrepreneurship posture of the organization and the average of the composite score for the organizational entrepreneurship as the entrepreneurship index of the organization.

The relationship between business strategy and organizational entrepreneurship

Table 10.2 exhibits the correlation coefficients between the organizational entrepreneurship posture, strategic orientation and performance. The correlation coefficient table revealed that there is no significant correlation between a firm's entrepreneurship posture and any of the performance indicators.

However, the correlation coefficient table reveals that the entrepreneurship posture does correlate to certain strategic orientation. The entrepreneurship posture was positively correlated with the orientation for cost efficiency strategy and product variety strategy ($r = 0.3817$, $p = 0.020$ and $r = 0.3837$, $p = 019$ respectively). The innovative dimension of the firm's entrepreneurship posture is positively correlated with the product variety strategy ($r = 0.3696$, $p = 0.024$). The risk taking dimension is positively correlated with the orientation for business alliance strategy and initiative dimension of the entrepreneurship posture is negatively correlated with the orientation for competitive standard of quality strategy ($r = -0.3342$, $p = 0.043$).

The above data revealed that the firm's entrepreneurship posture is not associated with the firm's performance. However, it could be an antecedent of the strategic orientation adopted by the firms. The above correlation analysis does not support the hypothesis of the current study: Entrepreneurial firm are more successful than those which are not entrepreneurial.

In the effort to explore the relationship between an entrepreneurship posture and strategies that show superior performance, the current study conducted a one-way ANOVA analysis between the dimension of the firm's entepreneurship posture and the strategic groups formed by the cluster analysis discussed in chapter 8.

Table 10.2 Correlation coefficient between the dimensions of organizational entrepreneurship, performance and strategic orientation.

	ETR	INNOV	RTAKER	INITIA	PROFIT	SALE GROW	ROSHE	ROS	ROA
ETR	1.0000 (44) P= .								
INNOV	.6642 (44) P= .000	1.0000 (44) P= .							
RTAKER	.6611 (44) P= .000	.4783 (44) P= .001	1.0000 (44) P= .						
INITIA	.6265 (44) P= .000	.3044 (44) P= .045	.4675 (44) P= .001	1.0000 (44) P= .					
PROFIT	-.0660 (44) P= .670	.0209 (44) P= .893	-.0774 (44) P= .617	.0229 (44) P= .883	1.0000 (45) P= .				
SALE-GROW	.0196 (44) P= .900	.1159 (44) P= .454	.0836 (44) P= .590	-.0311 (44) P= .841	.5080 (45) P= .000	1.0000 (45) P= .			
ROSHE	-.1374 (43) P= .379	-.0304 (43) P= .847	-.1100 (43) P= .483	-.0197 (43) P= .900	.9474 (44) P= .000	.5351 (44) P= .000	1.0000 (44) P= .		
ROS	-.0741 (44) P= .633	.0293 (44) P= .850	-.0659 (44) P= .671	-.0044 (44) P= .978	.9394 (45) P= .000	.5860 (45) P= .000	.9198 (44) P= .000	1.0000 (45) P= .	
ROA	-.0448 (44) P= .773	.0521 (44) P= .737	-.0663 (44) P= .669	.0365 (44) P= .814	.8541 (45) P= .000	.4750 (45) P= .001	.8322 (44) P= .000	.8387 (45) P= .000	1.0000 (45) P= .

Table 10.2 (continue)

	ETR	INNOV	RTAKER	INITIA	PROFIT	SALE GROW	ROSHE	ROS	ROA
FAC1_1	.3818	.1950	.0322	.1823	-.1350	-.0238	-.0669	-.2274	-.0916
	(37)	(37)	(37)	(37)	(38)	(38)	(37)	(38)	(38)
	P= .020	P= .248	P= .850	P= .280	P= .419	P= .887	P= .694	P= .170	P= .584
FAC2_1	.3837	.3696	.0916	.2799	.0454	-.3321	-.0186	-.0477	.0017
	(37)	(37)	(37)	(37)	(38)	(38)	(37)	(38)	(38)
	P= .019	P= .024	P= .590	P= .093	P= .787	P= .042	P= .913	P= .776	P= .992
FAC3_1	-.1170	.1654	-.0886	-.3342	.0591	.2178	.1138	.0528	-.0242
	(37)	(37)	(37)	(37)	(38)	(38)	(37)	(38)	(38)
	P= .490	P= .328	P= .602	P= .043	P= .725	P= .189	P= .502	P= .753	P= .885
FAC4_1	.3139	.1079	.2187	.3051	-.1079	-.1176	-.0534	-.0160	-.0970
	(37)	(37)	(37)	(37)	(38)	(38)	(37)	(38)	(38)
	P= .059	P= .525	P= .193	P= .066	P= .519	P= .482	P= .754	P= .924	P= .562.
FAC5_1	.1840	.1453	.3243	.2677	.0279	-.0796	.0584	-.1347	.0128
	(37)	(37)	(37)	(37)	(38)	(38)	(37)	(38)	(38)
	P= .276	P= .391	P= .050	P= .109	P= .868	P= .635	P= .732	P= .420	P= .939
FAC6_1	.1697	.2290	.4134	.0439	-.2202	-.1150	-.1647	-.1608	-.1614
	(37)	(37)	(37)	(37)	(38)	(38)	(37)	(38)	(38)
	P= .315	P= .173	P= .011	P= .796	P= .184	P= .492	P= .330	P= .335	P= .333
FAC7_1	-.0476	.0374	-.1189	-.0460	-.0142	-.2721	-.0092	-.0725	-.0354
	(37)	(37)	(37)	(37)	(38)	(38)	(37)	(38)	(38)
	P= .780	P= .826	P= .483	P= .787	P= .933	P= .098	P= .957	P= .665	P= .833

(Coefficient / (Cases) / 2-tailed Significance)
" . " is printed if a coefficient cannot be computed

The summary of the one-way ANOVA for the mean value of the strategic group's entrepreneurship posture and the dimensions of organizational entrepreneurship is tabulated in table 10.3. The study uses the Levene test for homogeneity of variance and the F statistics to determine whether or not there is a significant difference between the mean of the entrepreneurship dimensions measured for the different strategic groups.

Table 10.3 Comparing means and analysis of variance of entrepreneurial attribute of each of the strategic groups.

A. Mean Scores	Count (n)	INITIA	INNOV	RISK-TAKER	ETR
Cluster					
Grp.1 Business alliance and cost efficiency strategy	2	6.0000	3.0000	3.5000	4.5000
Grp.2 Differentiation strategy	8	4.7500	5.3750	4.7500	4.7500
Grp.3 Product variety strategy	6	3.8333	4.1667	3.5000	3.8333
Grp.4 Business alliance and competitive standardof quality trategy	1	3.0000	5.0000	4.0000	4.0000
Grp.5 Flexible manufacturing strategy	5	4.4000	4.6000	3.8000	4.4000
Grp.6 Cost efficiency strategy	13	3.5385	4.4615	3.7692	4.3077
Grp. 7 Stuck in the middle strategy	2	3.0000	3.5000	3.5000	3.5000
Total population mean	37	4.0541	4.5135	3.9189	4.2973
Missing	8				
Means squares:		**INITIA**	**INNOV**	**RISK TAKER**	**ETR**
Between groups		3.1880	2.2674	1.2748	0.7379
Within groups		1.3588	1.3880	1.5036	1.1101
d.f.		6 , 30	6 , 30	6 , 30	6 , 30
F-ratio		2.3462	1.6336	0.8479	0.6647
P-value		0.0562	0.1724	0.5436	0.6785
Levene test: 2-Tail signif.		0.5250	0.2770	0.3810	0.3410

From table 10.3, the Levene test statistics revealed that the observed significance level for organizational entrepreneurship (ETR) and each dimension of organizational entrepreneurship (i.e., for INITIA, INNOV and RISKTAKER) is greater than 0.05. Therefore there is not sufficient evidence to reject the null hypothesis that the groups come from a population with the same variance. The Levene statistic suggests that there is no significant difference in the variability of organizational entrepreneurship (ETR), firms' proactiveness in product-market competition (INITIA), innovativeness in creating new products and the related tendency toward technological leadership (INNOV) and firm's propensity to take risk with regard to investment decisions and strategic action (RISKTAKER) measured across the strategic groups.

The above observation was further tested with the analysis of variance by calculating the F statistics of the within group and between group variability. Table 9.3 revealed that the F-ratio for ETR and RISKTAKER is less than 1 with their observed significance level greater than 0.05. The F statistic indicates that there is no significant difference in terms of entrepreneurial behaviour and propensity to take risks amongst the seven strategic groups.

The F ratio for the groups' innovativeness was observed to be slightly more than 1 with its observed significance level greater than 0.05. The F statistic for the group mean on innovativeness also indicates that there is no significant difference in group behaviour towards product innovation.

Among the three dimensions for organizational entrepreneurship only the groups' proactiveness (INITIA) exhibits an F-ratio of greater than 1 with the observed significance level of less that 0.1 (i.e., at 0.056). The current study decided not to consider the F ratio as significant enough to suggest that there are significant differences in proactiveness (INITIA).

The one-way ANOVA statistics revealed that there are no significant differences between the groups' entrepreneurship posture or in the group's dimension of organizational entrepreneurship. The current study therefore concluded that the entrepreneurship posture are not associated with any of the groups' performance.

Table 10.3 also revealed that the population mean score for the risk taking dimension of the firm's entrepreneurship posture is the lowest (3.9189), compared to the population's mean score for the innovative (4.5135) and proactive (4.0541) dimension

of the entrepreneurship posture. The moderate score in the firm's entrepreneurship dimensions obviously reduces the score for the firm's entrepreneurship index.

Result of the data analysis.

The theoretical framework on corporate entrepreneurship that had been advanced by earlier researchers (e.g. Miller and Friesen, 1982; Miller, 1983; Zahra, 1991 and Stopford and Baden Fuller, 1994) posited that organizational entrepreneurship is associated with the increased in dynamism and hostility in the organization's environment.

Data analysis of the current study revealed that its finding did not support the above theoretical framework. Table 10.3 showed that the population mean score for propensity to take business related risk was 3.9189 with the standard deviation of 1.12106. The moderate propensity in risk taking has a moderating effect on entrepreneurship posture. As a consequence, firms tend to take moderate position in product innovation and technological leadership (population mean of 4.5125 with the standard deviation of 1.2388) and be moderately proactive to market competition (population mean of 4.0541 with the standard deviation of 1.2898).

Conclusion

The results of the above data analysis did not support the study hypothesis that postulates superior performance amongst entrepreneurial firms as compared to non-entrepreneurial firms. The analysis has shown that not all firms in the hostile environment would shed their past behaviour and foster a high entrepreneurship posture as expounded by Stopford and Baden Fuller (1994). Indeed, most of the firms react to the environmental hostility by moderating their business related risk in order to avoid business failure.

The current study revealed that business performance of firms operating in a declining industry caused by the low cost import penetration is not dependent on the firm's entrepreneurship posture. Indeed, the entrepreneurship posture seem to be the antecedents to firm's strategic orientation as oppose to the views expounded by Zahara (1991).

Chapter 11

THE ROLE OF INFORMATION TECHNOLOGY IN BUSINESS STRATEGY AND PERFORMANCE

Introduction

The role of IT in creating and sustaining competitive advantage has become an important factor that contributes to organizational business performance (Porter and Millar, 1985). IT has been useful in electronically collecting, assembling, transmitting and retrieving business related information and can be an important source for a sustainable competitive advantage (Bharadwaj, Varadarajan and Fahy, 1993).

The role of IT may be critically important in a hostile environment where there is great uncertainty in market demand. A well-developed IT capability enables firms to select an appropriate strategy by providing the user of IT with complex information regarding customers such as their purchasing habits and behaviour (Clemons and Weber, 1994).

The huge contribution of IT to firms' competitive advantage has drawn the attention and commitment of most managers to use IT as a mean to improve their companies' productivity and their general performance (Moad, 1994)

Theoretical background

Information technology (IT) has been recognized either implicitly or explicitly as a major source influencing business performance (Porter and Miller, 1985 ; Waema and Walsham, 1990; and Mahmood and Mann, 1993). This recognition was empirically supported by the study conducted by Mahmood and Mann (1993) in which they concluded that a firm's investment in IT is related to organizational strategic and economic performance.

Most of the recent literature indicates that IT plays a very important role in strategy formulation (e.g., Waema and Walsham, 1990) as well as in the implementation

process of the strategy (e.g., Porter and Miller, 1985; Clemons and Weber, 1994). IT is crucial either in the data-driven model or power-behaviour model (which emphasized on the socio-political content) of the strategy formulation process (Waema and Walsham, 1990).

Waema and Walsham (1990) write that the power-behaviour model alone is not sufficient to enable comprehensive strategy formulation. In order to gain power the various groups involved in the strategy formulation process should have access to information. As Osborne (1992) put it, " Private companies that disdain data-intensive decision process in favour of the gut-feeling approach to management are inviting less than optimal results".

The current study is in agreement with Waema and Walsham (1990) and Osborne (1992) that the appropriate approach to strategy formulation is the combination of data-driven (i.e., make use of IT) and the power-behavioral approaches that take into consideration the human content of the strategy formulation process. The combination of the two approaches facilitates the various social groups in an organic organization to express their interest in the outcome of the strategy formulation by bounded rationality and enhanced support from the group members to make the strategy formulation process effective.

Porter and Millar (1985) argued that IT is affecting the interfirm's competition in three ways :

1. It changes the industry structure and in so doing it alter the rules of competition.

2. It creates competitive advantage by supplying companies with the information about their customers and suppliers that allows them to formulate a new way to outperform their rivals.

3. It generates new business by facilitating information that would enhance the business feasibility in terms of technology and creating demand for new products.

IT's capability to give firms information about customers' preferences, purchasing power and switching cost (Mahmood and Soon, 1991) allows firms to achieve sustainable competitive advantage by maintaining the unique characteristics of the firm's strategy (Kettinger et al., 1994 and Green et al., 1994). Besides supplying the

user with market intelligence, IT is also capable of creating a sustainable competitive advantage by transforming the product design and manufacturing processes (Porter and Millar, 1985 and Kettinger et al., 1994).

Porter and Millar (1985) as well as Clemons and Weber (1994) explained that IT could helps companies to gain competitive advantage by exploiting changes in competitive scope such as lowering the company's cost or enhancing differentiation in any part of the value adding activities.

On the basis of the theoretical foundation described above, the study hypothesized that:

Hypothesis 7: The success of a strategy is directly related to the use of IT in the strategy formulation and implementation process.

The term 'successful strategy' is defined as a set of competitive methods pursued by a firm that has contributed to satisfactory performance of the firm as viewed by top management. The firm's use of IT is defined as the extent to which the organization deploys IT to support its operational and strategic tasks.

Since the firm's strategic orientation was explained as representing the underlying pattern of strategic choice adopted by the firm, the study therefore examines the strategic orientation as the unit of analysis for the relationship between a firm's use of IT and successful strategic choice adopted by the firms.

The hypothesis advanced by this study implies that a firms' use of IT either in strategy formulation or implementation contributes to the adoption of a strategic option that is related to a successful business performance. Information regarding the firms' awareness and uses of IT in strategy formulation and/or formulation was elicited from question 5 and 6 of section A of the questionnaire returned by the respondents.

Question 6 of the questionnaire elicits information about the firm's awareness of the role of IT that includes the management information system (MIS) or any data base system in designing and implementing the business strategy of their respective companies. The respondents were asked to indicate whether or not they actually used IT in the process strategy formulation and/or strategy implementation of their respective firms .

Data analysis

Data gathered from the field survey was analyzed for the relationship between a firm's use of IT in strategy formulation/implementation with business performance measured by ROS and ROA financial indicators.

The following analysis was conducted to substantiate the hypothesis advanced by this study on the role of IT in the adoption of appropriate business strategy:

1a. Cross tabulation between firms' use of IT in strategy formulation/implementation (ITINFORM/ITIMPLMT) and performance measured by ROA and ROS.

1b. Cross tabulation between strategic group and firms' use of IT (i.e. ITINFORM and ITIMPLMT) and compare with the average performance of each strategic group.

2. Correlation analysis between the variables that represent firms awareness on the role of IT in strategy design and implementation (ITAWARE), use of IT in strategy formulation (ITINFORM), use of IT in strategy implementation (ITIMPLMT), the variables on strategic orientation which represent strategic choices pursued by the firms (Factor1 to Factor7) and business performance measured by the financial indicators.

The relationship between firms' use of IT in strategy formulation / implementation and performance was first analyzed by examining the Pearson's (r) correlation coefficient provided by the cross tabulation statistics of the SPSS for windows programme. These relationship are shown in tables 11.1, 11.2, 11.3 and 11.4.

Table 11.1, 11.2, 11.3 and 11.4 also exhibit the Pearson's (r) correlation coefficients and their significant levels for each cross tabulation between firm's use of IT in strategy formulation/implementation with performance measured by ROA and ROS. An analysis on the Pearson's (r) correlation coefficients revealed that there is no significant direct (linear) relationship either between the firm's use of IT in strategy formulation or implementation with performance. The finding is substantiated by the large significance level for the Pearson's (r) correlation coefficient (i.e. $P > 0.05$).

The result of the foregoing analysis suggests that there is no direct relationship between firms' use of IT in strategy formulation and/or strategy implementation with the firms' business performance.

The above finding neither supports nor rejects the hypothesis of the current study on the relationship between firms use of IT and performance because the above hypothesis applies only to the relationship between firms use of IT with the strategic choices that contribute to a successful business performance of the firms. The purpose of conducting the above analysis is merely to explore if there is a direct relationship between firms uses of IT in strategy formulation / implementation with performance as has been posited by many researchers and has been described earlier in this chapter.

The outcomes of the above analysis failed to support the view advanced by earlier researchers (see Porter and Miller, 1985; Waema and Walsham 1990; Mahmood and Mann 1993) that there is a direct relationship between firms use of IT and performance.

Table 11.1: Relationship between firms use of IT in strategy implementation and performance measured by Return On Sales (ROS).

Firms utilization of IT	Perfor-mance by ROS	Not at all satisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Extr. satisfied	Row total %
Did not use IT	Count Percent	7 58.3	6 60.0	1 50.0	8 50.0	2 66.7	24 55.8
Use IT	Count Percent	5 41.7	4 40.0	1 50.0	8 50.00	1 33.33	19 44.2
Total	Count Percent	12 27.9	10 23.3	2 4.7	16 37.2	3 7.0	43 100.0

Table 11.2 Relationship between firms use of IT in strategy implementation and performance measured by Return On Assets (ROA).

Firms utilization of IT		Not at all satisfied	Dissatisfied	Neither ssatisfied nor tisfied	Satisfied	Extr. satisfied	Row total %
Did not use IT	Count	7	3	4	7	3	24
	Percent	63.4	37.5	57.1	53.8	75.0	55.8
Use IT	Count	4	5	3	6	1	19
	Percent	36.4	62.5	42.9	46.2	25.0	44.2
Total	Count	11	8	7	13	4	43
	Percent	25.6	18.6	16.3	30.2	9.3	100.0

Table 11. 3 Relationship between firms use of IT in strategy formulation and performance measured by Return On Sales (ROS).

Firms utilization of IT	Perfor-mance by ROS	Not at all satisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Extr. satisfied	Row total %
Did not use IT	Count	7	7	2	7	2	25
	Percent	58.3	63.6	100.0	41.2	66.7	55.6
Uses IT	Count	5	4	0	10	1	20
	Percent	41.7	36.4	0.0	58.8	33.3	44.4
	Count	12	11	2	17	3	45
Total	Percent	26.7	24.4	4.4	37.8	6.7	100.0

Table 11.4 Relationship between firms use of IT in strategy formulation and performance measured by Return On Assets (ROA).

Firms utilization of IT	Perfor mance by ROA	Not at all satisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Extr. satisfied	Row total %
Did not use IT	Count	8	3	5	6	3	25
	Percent	66.7	37.5	62.5	46.1	75.0	55.6
Use IT	Count	4	5	3	7	1	20
	Percent	33.3	62.5	37.5	53.9	25.0	44.4
Total	Count	12	8	8	13	4	45
	Percent	26.7	17.8	17.8	28.9	8.9	100.0

The correlation between use of IT, strategic orientation and performance.

A correlation analysis was conducted to examine the relationship between firms' use of IT, strategic orientation and the financial indicators for business performance. Table 11.5 exhibits the Pearson correlation coefficient between these.

In table 11.5 it was observed that 4 out of 21 correlation between the variables used to measure firms use of IT and strategic orientation were significant at $p < 0.05$. It is expected that 5% of the correlation significant at $p < 0.05$ occurs by chance if the correlation matrix is large. This would lead us to expect about 1 correlation significant at $p < 0.05$ to occur by chance. In Table 11.5, more than 1 correlations (4 correlations) were observed to have significant level at $p < 0.05$. This suggests that in overall there is a relationship between firms use of IT for strategy formulation and strategy implementation with the strategic orientation.

However, only 1 correlation between the variables that measure firms use of IT and the financial indicators were observed to be significantly correlated at $p < 0.05$. In order for the firms use of IT to be truely related with the financial indicators, we should expect more than 5% of the correlation are significant at $p < 0.05$ (i.e. more than 1). This revealed that there is no relationship between firms use of IT and performance.

In table 11.5, it was observed that certain strategic orientations that describe the pattern of strategic choices adopted by the firms were significantly correlated with firms' use of IT in strategy implementation and/or strategy formulation.

From table 11.5, the strategic orientation that represents the flexible manufacturing strategy was observed to have positive correlation with the variables that describes the firm's awareness to the role of IT in strategy formulation and implementation (ITAWARE), firm's use of IT in strategy implementation (ITIPLMT) and firm's use of IT in strategy formulation (ITINFORM).

The strategic orientation that describes the flexible manufacturing strategy was observed to correlate positively with the use of IT in strategy implementation (ITIMPLMT). The correlation coefficient of the relationship between flexible manufacturing strategy and ITIMPLMT is 0.5060 at significant level of $P < 0.01$. The strategic orientation was also observed to have a positive correlation with the use of IT in strategy formulation (correlation coefficient of 0.3672 at significant level $P < 0.05$).

A significant positive correlation ($r = 0.3999$ with significant level $P < 0.05$) was also observed between firms use of IT in strategy implementation (ITIMPLMT) with the strategic orientation that describe differentiation strategy. The strategic orientation did not correlate significantly with the use of IT in strategy formulation (ITINFORM).

Even though the two strategic orientations described above have significant positive correlation with at least one of the variables measuring the firms use of IT, the average performance of firms pursuing the two strategies were observed to be different.

Table 11.6 reveals that on the average the strategic group pursuing the flexible manufacturing strategy was performing better than others. The mean scores for the group's business performance measured by ROS and ROA was 4.20 for both of the financial indicators (which indicates satisfactory level of performance in the 5-scaled measure of performance).

On the contrary the strategic group pursuing the differentiation strategy was observed to have unsatisfactory business performance despite the significant positive correlation between the firms' orientation to differentiation strategy and use of IT in strategy implementation (ITIMPLMT). Table 11.6 revealed that the strategic group pursuing the differentiation strategy has the mean score of 2.75 for both ROS and ROA (which indicate an unsatisfactory level of performance in the 5-scaled measure of performance).

The above analysis suggests that firms pursuing the flexible manufacturing strategy are achieving superior business performance when compared to the group that pursues the differentiation strategy. The difference in performance most certainly lies in the extent to which the core component of strategy of a particular strategic group, correlates with the use of IT in strategy formulation and implementation process.

Table 11.5 Correlation between Use of IT in strategy formulation/implementation, strategic orientation and performance.

	1 Factor1	2 Factor2	3 Factor3	4 Factor4	5 Factor5	6 Factor6	7 Factor7	8 ITAWRE	9 ITIPLMT	10 ITINFORM
8. ITAWRE	-.2400*	.2396	.1107	.3442	-.1811	.1603	-.1503	1.000		
	(38)**	(38)	(38)	(38)	(38)	(38)	(38)	(45)		
	.147***	.147	.508	.034	.277	.336	.368	P= .		
9. ITIPLMT	-.2536	.2547	.0607	.5060	-.2115	.3999	-.0975	.5881	1.000	
	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(45)	(45)	
	.130	.128	.721	.001	.209	.014	.566	0.000	P= .	
10. ITINFORM	-.2638	.2772	.0951	.3672	-.1655	.2180	-.2856	.6047	.8114	1.000
	(38)	(38)	(38)	(38)	(38)	(38)	(38)	(45)	(43)	(45)
	.110	.0920	.570	.023	.321	.189	.082	.000	.000	P= .
11. PROFIT	-.1350	.0454	.0591	-.1079	.0279	-.2202	-.0142	.2257	.0061	.0863
	(38)	(38)	(38)	(38)	(38)	(38)	(38)	(45)	(43)	(45)
	.491	.787	.725	.519	.868	.184	.933	.136	.969	.573
12. ROA	-.0916	.0017	-.0242	-.0970	.0128	-.1614	-.0354	.1642	-.0353	.0294
	(38)	(38)	(38)	(38)	38)	(38)	(38)	(45)	(43)	(45)
	.584	.992	.885	.562	.939	.333	.833	.281	.822	.848
13. ROS	-.2274	-.0477	.0528	-.0160	-.1347	-.1608	-.0725	.2493	.0440	.1086
	(38)	(38)	(38)	(38)	(38)	(38)	(38)	(45)	(43)	(45)
	.170	.776	.753	.924	.420	.335	.665	.099	.779	.478
14. SALEGROW	-.0238	-.3321	.2178	-.1176	-.0796	-.1150	-.2721	.3076	.0334	.2144
	(38)	(38)	(38)	(38)	(38)	(38)	(38)	(45)	(43)	(45)
	.887	.042	.189	.482	.635	.492	.098	.040	.831	.157
15. ROSHE	-.0669	-.0186	.1138	-.0534	.0584	-.1647	-.0092	.1606	-.0699	.0428
	(37)	(37)	(37)	(37)	(37)	(37)	(37)	(44)	(42)	(44)
	.694	.913	.502	.754	.732	.330	.957	.298	.660	.783

Note: * Correlation coefficient, ** Number of cases ( ), *** Significant level

Table 11. 6 Summary on the relationship between the use of IT amongst strategic group and performance.

Utilization of IT in strategy implementation/formulation			Strategy Implementation		Strategy formulation	
The Strategic groups	Mean for ROS	Mean for ROA.	Did not use IT	Use IT	Did not use IT	Use IT
Grp.1 Business alliance and cost efficiency	1.500	2.000	2 100. 0	0 00.0	2 100. 0	0 00.0
Grp. 2 Differentiation strategy	2.750	2.750	1 12.5	7 87.5	1 12.5	7 87.5
Grp.3 Product variety strategy	3.174	3.571	4 66.7	2 33.3	3 42.9	4 57.1
Grp. 4 Business alliance and Competitive standard of quality strategy	1.000	1.000	1 100. 0	0 00.0	1 100. 0	0 00.0
Grp. 5 Flexible manufacturing strategy	4.200	4.200	2 40.0	3 60.0	2 40.0	3 60.0
Grp. 6 Cost efficiency	2.538	2.692	9 69.2	4 30.8	10 76.9	3 23.1
Grp. 7 Stuck in the middle	4.000	2.500	1 50.0	1 50.0	1 50.0	1 50.0
Column total count Column total %			20 54.1	17 45.9	20 52.6	18 47.4

Firms pursuing a flexible manufacturing strategy were observed to have access to IT in both the strategy formulation and implementation stages.

The above finding suggests that the use of IT in strategy implementation alone (as exhibited by the differentiation strategy) is not sufficient. Firms need information regarding their customers, suppliers, product performance and competitors right from the strategy formulation stage or in the interplay between intended and the implemented strategy to enable firms to select an appropriate strategic option.

Conclusion

The above analysis reveals that the use of IT in the process of strategy formulation and implementation coupled with flexible manufacturing strategy provides a better position towards business profitability in industries affected by the demand uncertainty due to the low cost import competition. The finding supports Green et al.'s, (1994) view that information technology and flexible manufacturing technologies provide firms with the capability to prosper with market driven manufacturing activities.

Even though the outcome of the above analysis does not support the view of earlier researchers (e.g. see Mahmood and Mann, 1993) on the direct relationship between a firm's use of IT and business performance, the above finding explicitly supports the theory expounded by earlier researchers (Porter and Millar, 1985; Senker and Senker 1992; Kettinger et al., 1994) on the role of IT towards sustainable competitive advantage (SCA).

The above finding implicitly supports the hypothesis advanced by the current study that states: The success of a strategy is directly related to the use of IT in strategy formulation and implementation process.

Chapter 12

THE CONCLUSION AND IMPLICATION FOR FUTURE RESEARCH

Introduction

The most fundamental assumption made by the current study is that a firm's performance is significantly influenced by the strategic posture adopted by the firms operating within a given environment. The current study is in agreement with the contingency approach expounded by Hofer and Schendel (1978, pp. 203) that environmental changes have a great impact on the firm's strategy and in different environmental circumstances different strategies will produce the best result.

As the consequence of the above assumption, the current study has developed hypotheses which explicitly imply that a firm's business performance as the ultimate dependent variable whose value is determined by the strategy adopted by the firm.

The current study also hypothesized that there are three factors antecedent to the successful strategic posture and the firm's business performance. These factors are termed as the success factors by the current study. The three success factors that are antecedents to the strategic choices and performance are the firm's strategic capability, the firm's entrepreneurship posture and the firm's use of IT in the strategy formulation and implementation process.

The three success factors could either be directly associated with the firm's performance or indirectly associated with performance by influencing the choice of strategy adopted by the firm.

The major finding of the study

The major finding of the current study are of two types. The first deals with the appropriate business strategy for firms operating in declining industries and the second deals with the factors that are antecedent to the firms' business performance.

The appropriate business strategies are:

1. The flexible manufacturing strategy; a strategy that is capable to address the uncertainty in demand (see also Slack (1991), pp. 77; Gerwin (1993) and Boer (1994), pp. 87) due low cost import competition.

2. The product vriety strategy and the differentiation strategy; Both of the business strategies are appropriate for those that have been pursuing the strategy before the declining stage of the industry but they are vulnerable to the new entrant (see Grant, (1969)).

Factors that are antecedent to the firms' business performance are:

1. The data analysis revealed that the firms' entrepreneurship posture does not directly related to business performance but is antecedent to certain strategic orientation.
2. The firms' performance is influenced by their strategic capability.
3. Strategy that contributes to a firm's performance is directly related to the firm's use of IT in the formulation and implementation stage of the strategy.

Implication of the findings to managers

The result of the one-way ANOVA between the strategic groups and performance revealed that different strategic groups are associated with different level of business performance. The finding supports the theory of performance differences between strategic group membership that has been advanced by Newman (1978), Porter (1979), McGee and Thomas (1986), Fiegenbaum and Thomas (1990) and Cool and Dierickx (1993).

The current study concluded that the flexible manufacturing strategy was a viable strategic option by which manufacturing firms could address the uncertainty in the aggregate product demand and product variety as the consequence of the low cost import competition.

According to Gerwin (1993) the decision to adopt manufacturing flexibility is normally considered as an adaptive response to the environmental uncertainty. Among the type of uncertainty faced by the firms operating in the industries affected by low cost import competition are the uncertainty related to the aggregate demand, which requires volume flexibility, and the uncertainty related to the product acceptance by the market.

The current study also revealed that firms that have been pursuing the differentiation strategy and the product variety strategy are protected by mobility barriers. The finding was supported by the cross tabulation statistics that indicate significant dependency between the age of the differentiation strategy pursued by a firm and its business performance. The finding supports the hypothesis of the current study which postulates that a manufacturing firm that has been pursuing the differentiation strategy will be more successful than the new entrants. This relationship between the age of the firm's strategy and performance was observed to be inconsistent with the flexible manufacturing strategy and the product variety strategy. The current study offers asymmetrical mobility barrier (Hatten and Hatten 1987) as the explanation that causes the inconsistency in the relationship between the age of the firm's strategy and performance.

The profitability of pursuing a differentiation strategy in an industry affected by low cost competition lies in the ability of the firms pursuing the differentiation strategy to create customer switching cost and also how soon a competitor could imitate the uniqueness of the strategy (Grant, 1986). The distinctive competence developed by a firm to achieve a unique position with the differentiation strategy requires considerable amount of lead time and investment (Reed and Defillippi, 1990). Thus the relative investment and complexity the distinctive competence developed for a particular strategy determined the differences in the mobility barrier amongst the strategic groups.

Managers who intend to use the above finding as the guideline should consider the key set of competitive methods that have been classified as the underlying dimensions of the strategic orientations used in the strategic groupings.

The set of the competitive methods represent the scope of activities carried by the competitors in their effort to achieve a sustained competitive position in the interfirms rivalry.

The antecedents to business performance.

Besides appropriate business strategies, the current study also revealed that there are three other success factors contribute either directly or indirectly to a firm's business performance. The above findings provide the following implications to the managers who involves in the strategy formulation and implementation process:

1. Firms' entrepreneurship posture influence the strategy adoption pattern. The data analysis on the relationship between a firm's entrepreneurship posture, strategy and performance revealed that the finding of the current study does not support the view of Miller (1983), Guth and Ginsberg (1990) and Zahra (1991) that environmental dynamism and hostility increase the level of organizational entrepreneurship. The data analysis also revealed that the firm's entrepreneurship posture does not directly relate to the firm's performance as expounded by some researchers in the field of entrepreneurship (e.g., Covin and Slevin, 1989; Zahra, 1991).

The current study concurs with Covin and Slevin (1991) and as well as with Naman and Slevin (1993) that the organization entrepreneurship is not limited to new ventures or new business only and antecedent to organization's strategy is the organization entrepreneurship posture.

The Covin and Slevin (1991) dimension of organization's entrepreneurship places emphasis on the firm's risk taking propensity, the extent of firm's involvement in product innovation and the related tendency toward technological leadership and the firm's propensity to proactive engagement in the market competition. The dimension of entrepreneurship expounded by Covin and Slevin (1991) fits well with the aim of current study because it could be viewed as an organizational characteristic and could be measured when the firm engaged in the product/market competition (Naman and Slevin, 1993) which is pertinent to business level strategy.

The result of a one-way ANOVA analysis between the strategic groups and the dimensions of the organization entrepreneurship posture indicates that firms tend to be moderate risk taker in response to the hostile environment of low cost import competition. This cautiousness has a moderating effect on the firm's entrepreneurship

posture by influencing the group to take a moderate position in contemplating investment for technological leadership and moderately proactive in the product/market competition.

The significant positive correlation between a firm's entrepreneurship posture and the cost efficiency and product variety strategies suggests the existence of a relationship between firm's entrepreneurship posture and the choice of strategy opted by the firms. The positive correlation between a firm's entrepreneurship posture with certain strategic orientations and the lack of correlation between firm's entrpreneurship posture with performance imply an antecedent relationship between entrepreneurship posture and the choice of strategy pursued by the firms.

The finding suggests that the top management should inculcate entrepreneurship culture in their respective organizations to stimulate innovative and proactive production and marketing activities. The managers should also be more willing than ever to take a calculated business related risk to ensure the proliferation of innovative and proactive business strategies.

2. The firms' performance is directly related to their strategic capability. The study observed two situations from the correlation analysis between the variables that measure firms' strategic capability, strategic orientation and performance. In the first observation the partial correlation analysis revealed a spurious relationship between the variables of the firms' strategic capability with performance. The spurious relationship suggest that performance is a direct consequence of firms strategic capability. The second observation revealed that there is no significant correlation between the firms' strategic capability and the strategic orientations pursued by the firms. The existence of relationship between firm's strategic capability and performance supports the view that strategic capability is a unique competence developed by a firm to ensure the success of the strategy pursued by that particular firm (Hofer and Schendel, 1978; pp. 66 ; Snow and Hrebiniak, 1980).

3. Strategies that exhibit high performance are directly related to the firms' use of IT in the formulation and implementation stage of the strategy. The study also revealed that the firm's use of IT does not correlate to performance. However, the correlation analysis between a firm's use of IT by strategic grouping and performance indicates that firm's use of IT in both phases of the strategy formulation and implementation process was observed to be positively and significantly correlated to strategy that exhibit high performance. As opposed to the group that pursues a differentiation

strategy, the flexible manufacturing strategy that exhibits the best performance used IT in the strategy formulation and implementation process whilst the group that pursues the differentiation strategy used IT only in the strategy implementation process.

The study concluded that the successful strategies adopted by firms are directly related to the firms' use of IT in the strategy formulation and implementation stage of the strategy designing process. The finding implicitly supports Clemons and Webber (1994) view that IT enables firms to select more finely tuned strategic options by providing more accurate customer information especially that related to their switching cost, preference and creating alternative products to suit with the customers need.

On the basis of the foregoing discussion the current study would draw a conclusion that a firm's business performance is the ultimate dependent variable as the consequence of strategic posture and strategic capability developed by a firm operating in a declining industry. The firm's strategic capability is a unique competence developed by a firm to ensure the success of the strategy pursued by a particular firm. Antecedent to the successful strategic posture are the firm's use of IT in the strategy formulation and implementation phase of the strategy making process and the firm's entrepreneurship posture.

The limitation of the study

Even though operationalizing a firm's competitive methods as the variable for strategy is capable of capturing the complexity and identifying the key dimension of the strategy constructs, the a posteriori classification of strategy is running the risk that some of the strategies hypothesized by the study might not emerge as a strategic group in the cluster analysis. Failure to conceptualized the strategy that has been hypothesized from the empirically derived strategy classification would lead to insufficient ground to support the hypothesis that has been postulated.

Small number of cases available for the survey and the constraint faced by the researcher in implementing the expert rating on important competitive methods pursued by the firms in a particular industry also contributes to the limitation faced by the study. The current study has to infer the competitive methods used as the underlying dimensions of strategy pursued by the firms from secondary sources. The worry of inferring the competitive method from a secondary sources is the possibility of excluding some important methods pursued by the firms.

Another source of limitation to the current study is the generalizability of the findings. The industries that have been identified as the sample for the study are coincidentally fragmented industries. Firms operating in industries concentrated by large enterprises under similar environmental setting may pursue different strategies. Factor that limits the generalizability of the finding also lies in the operational definition of industry adopted by the study that excludes firms from outside the UK.

Suggestion for future research

Future research could determine the generalizability of the strategic options identified in the current study by enlarging the sample across the national boundaries and incorporate the industries that are less fragmented.

To enhance the validity of the variable for strategy there is a need to operationalized the competitive methods used by the affected firms from the words of the practicing managers. A case study approach would facilitate a qualitative conceptualization of the important strategies and competitive methods used before they were constructed into the research design.

The current study would recommend a longitudinal case study approach to examine the applicability of the strategies that had been recommended by the current study for the manufacturing firms affected by the low cost import competition. The approach could be helpful to see what is actually important as perceived by practicing managers.

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Appendix 5.1 Pilot questionnaire for expert rating

Appendix 5.1

Loughborough University Business School Import Penetration Study

A. First, we would like to ask you for some background information about yourself and your company.

1. Your name (optional): _ _____

2. Your job title: _____

3. Please give the number of years you have worked:

   a. In your present company:_____ years.

   b. Within your present industry:_____ years.

4. Have you been substantially involved:

   a. In the formulation of business strategy? Yes [ ] No [ ]

   b. In the implementation of business strategy? Yes.[ ] No [ ]

5. Is your company part of a larger organization? Yes [ ] No [ ]

6. Is your company autonomous:

   a. In the planning of its business strategy? Yes [ ] No [ ]

   b. In the implementation of strategy? Yes [ ] No [ ]

B. The cost leadership strategy.

This section is concerned with the importance of the competitive methods used in your industry (***NOT*** necessarily by your own company) when a ***Cost leadership strategy*** is being pursued. (By cost leadership strategy is meant aiming at achieving a lower cost position than competitors).

For each of the ***competitive methods*** listed below, please ***circle the number*** that best represent your views.

The competitive methods	Is of no consequence	Unimportant	Neither unimportant nor important	Important	Extremely important
Cost control	1	2	3	4	5
Competitive pricing	1	2	3	4	5
Broad range of product features	1	2	3	4	5
Product quality control	1	2	3	4	5
Product standardization	1	2	3	4	5
Product simplification	1	2	3	4	5
Narrow product lines	1	2	3	4	5
Customer services	1	2	3	4	5
Brand identification	1	2	3	4	5
Multiple market segments or niches	1	2	3	4	5
Mass market	1	2	3	4	5
Control of channel of distribution	1	2	3	4	5
Skillful human resources	1	2	3	4	5
Operating efficiency	1	2	3	4	5
Numeric control machines	1	2	3	4	5
CAD/CAM facilities	1	2	3	4	5
Advertising	1	2	3	4	5
Make to order	1	2	3	4	5
Shorter machine running time	1	2	3	4	5
Information technology	1	2	3	4	5
Business alliances	1	2	3	4	5
Please write in the spaces below if other competitive methods are used:					
_____	1	2	3	4	5
_____	1	2	3	4	5

D. Competitive standard of quality.

This section is concerned with the importance of the competitive methods used in your industry (***NOT*** necessarily by your own company) when ***Competitive standard of quality*** is being pursued. (By competitive standard of quality is meant to emphasize on achieving higher product quality than competitors).

For each of the ***competitive methods*** listed below, please ***circle the number*** that best represent your views.

The competitive methods	Is of no consequence	Unimportant	Neither unimportant nor important	Important	Extremely important
Cost control	1	2	3	4	5
Competitive pricing	1	2	3	4	5
Broad range of product features	1	2	3	4	5
Product quality control	1	2	3	4	5
Product standardization	1	2	3	4	5
Product simplification	1	2	3	4	5
Narrow product lines	1	2	3	4	5
Customer services	1	2	3	4	5
Brand identification	1	2	3	4	5
Multiple market segments or niches	1	2	3	4	5
Mass market	1	2	3	4	5
Control of channel of distribution	1	2	3	4	5
Skillful human resources	1	2	3	4	5
Operating efficiency	1	2	3	4	5
Numeric control machines	1	2	3	4	5
CAD/CAM facilities	1	2	3	4	5
Advertising	1	2	3	4	5
Make to order	1	2	3	4	5
Shorter machine running time	1	2	3	4	5
Information technology	1	2	3	4	5
Business alliances	1	2	3	4	5
Please write in the spaces below if other competitive methods are used:					
_____	1	2	3	4	5
_____	1	2	3	4	5

E. Product variety strategy.

This section is concerned with the importance of the competitive methods used in your industry (***NOT*** necessarily by your own company) when ***Product variety strategy*** is being pursued. (By product variety strategy is meant to emphasize on achieving substantial variations in product feature).

For each of the ***competitive methods*** listed below, please ***circle the number*** that best represent your views.

The competitive methods	Is of no consequence	Unimportant	Neither unimportant nor important	Important	Extremely important
Cost control	1	2	3	4	5
Competitive pricing	1	2	3	4	5
Broad range of product features	1	2	3	4	5
Product quality control	1	2	3	4	5
Product standardization	1	2	3	4	5
Product simplification	1	2	3	4	5
Narrow product lines	1	2	3	4	5
Customer services	1	2	3	4	5
Brand identification	1	2	3	4	5
Multiple market segments or niches	1	2	3	4	5
Mass market	1	2	3	4	5
Control of channel of distribution	1	2	3	4	5
Skillful human resources	1	2	3	4	5
Operating efficiency	1	2	3	4	5
Numeric control machines	1	2	3	4	5
CAD/CAM facilities	1	2	3	4	5
Advertising	1	2	3	4	5
Make to order	1	2	3	4	5
Shorter machine running time	1	2	3	4	5
Information technology	1	2	3	4	5
Business alliances	1	2	3	4	5
Please write in the spaces below if other competitive methods are used:					
_____	1	2	3	4	5
_____	1	2	3	4	5

F. The flexible manufacturing strategy.

This section is concerned with the importance of the competitive methods used in your industry (*NOT* necessarily by your own company) when ***Flexible manufacturing strategy*** is being pursued. (By flexible manufacturing strategy is meant to emphasize on the ability to manufacture a wide variety of products).

For each of the ***competitive methods*** listed below, please ***circle the number*** that best represent your views.

The competitive methods	Is of no consequence	Unimportant	Neither unimportant nor important	Important	Extremely important
Cost control	1	2	3	4	5
Competitive pricing	1	2	3	4	5
Broad range of product features	1	2	3	4	5
Product quality control	1	2	3	4	5
Product standardization	1	2	3	4	5
Product simplification	1	2	3	4	5
Narrow product lines	1	2	3	4	5
Customer services	1	2	3	4	5
Brand identification	1	2	3	4	5
Multiple market segments or niches	1	2	3	4	5
Mass market	1	2	3	4	5
Control of channel of distribution	1	2	3	4	5
Skillful human resources	1	2	3	4	5
Operating efficiency	1	2	3	4	5
Numeric control machines	1	2	3	4	5
CAD/CAM facilities	1	2	3	4	5
Advertising	1	2	3	4	5
Make to order	1	2	3	4	5
Shorter machine running time	1	2	3	4	5
Information technology	1	2	3	4	5
Business alliances	1	2	3	4	5
Please write in the spaces below if other competitive methods are used:					
_____	1	2	3	4	5
_____	1	2	3	4	5

G. Specialized manufacturing strategy.

This section is concerned with the importance of the competitive methods used in your industry (*NOT* necessarily by your own company) when ***Specialized manufacturing strategy*** is being pursued. (Specialized manufacturing strategy is meant to achieve economies of scale in manufacturing of products).

For each of the ***competitive methods*** listed below, please ***circle the number*** that best represent your views.

The competitive methods	Is of no consequence	Unimportant	Neither unimportant nor important	Important	Extremely important
Cost control	1	2	3	4	5
Competitive pricing	1	2	3	4	5
Broad range of product features	1	2	3	4	5
Product quality control	1	2	3	4	5
Product standardization	1	2	3	4	5
Product simplification	1	2	3	4	5
Narrow product lines	1	2	3	4	5
Customer services	1	2	3	4	5
Brand identification	1	2	3	4	5
Multiple market segments or niches	1	2	3	4	5
Mass market	1	2	3	4	5
Control of channel of distribution	1	2	3	4	5
Skillful human resources	1	2	3	4	5
Operating efficiency	1	2	3	4	5
Numeric control machines	1	2	3	4	5
CAD/CAM facilities	1	2	3	4	5
Advertising	1	2	3	4	5
Make to order	1	2	3	4	5
Shorter machine running time	1	2	3	4	5
Information technology	1	2	3	4	5
Business alliances	1	2	3	4	5
Please write in the spaces below if other competitive methods are used:					
_____	1	2	3	4	5
_____	1	2	3	4	5

Thank you for completing the questionnaire

Appendix 5.2 The final questionnaire for field survey

Appendix 5.2

LOUGHBOROUGH UNIVERSITY BUSINESS SCHOOL
IMPORT PENETRATION STUDY

This questionnaire forms part of a study whose overall aim is to determine the most appropriate strategies for UK companies facing severe low cost import competition.

Most parts of the questionnaire require you to either ***tick*** (✓) the appropriate boxes or ***circle*** a number that best represents your views.

Please be assured that all responses will remain **CONFIDENTIAL** to the Loughborough University research team.

The members of the research team would like to thank you in advance for your cooperation and willingness to participate in this study.

Please return this questionnaire by

Return to:

N.M. Jan
Loughborough University Business School
Import Penetration Research Team
Loughborough
Leicestershire LE11 3TU.

A. First, we would like to ask you for some background information about yourself and your company.

Please tick (✓) the appropriate boxes.

1. Is your company part of a larger organization? ☐1 Yes ☐2 No

2. Is your company independent in the planning of its strategy? ☐1 Yes ☐2 No

3. Have you been practically involved in the formulation of your company business strategy? ☐1 Yes ☐2 No

4. How long has your company been pursuing its present business strategy?

☐1 Less than 1 year
☐2 Between 1 year to 2 years 11 months
☐3 Between 3 to 5 years
☐4 More than 5 years

5. Is your company aware of the role of information technology (the Management Information System (MIS) or any database system) in designing or implementing a strategy?

☐1 Aware ☐2 Not aware

6. Does your company use any form of information technology in:

a. formulation of company strategy. ☐1 Yes ☐2 No.
b. implementation of company strategy. ☐1 Yes ☐2 No.

7. What is the general attitude of your major customer(s) toward your business?

☐1 I don't know
☐2 Cannot be depended on
☐3 Occasionally loyal
☐4 Loyal
☐5 Extremely loyal .

Please tick (✓) the appropriate boxes.

8. What is the general attitude of your major supplier(s) toward your business?

☐1 I don't know
☐2 Not committed
☐3 Occasionally committed
☐4 Committed
☐5 Highly committed

9. What is the general attitude of the financial institutions towards your business?

☐1 I don't know
☐2 Not supportive
☐3 Occasionally supportive
☐4 Supportive
☐5 Very supportive

10. How do you rate your company's ability to create customers satisfaction in term of benefits in its product features?

☐1 I don't know
☐2 Not capable at all
☐3 Less capable than others
☐4 Capable
☐5 Extremely capable

B. Your industry has been identified as having been persistently affected over the past 5 years by low cost import competition. In this survey we are interested to know the ***competitive actions*** that are important to the overall strategy taken by your company to combat this form of competition.

For each of the competitive actions below, ***please rate*** its importance to the company's strategy by ***ticking (✓)*** the boxes that best represent your views. You may choose **'no consequences'** if that particular competitive action is not taken by your company.

THE COMPETITIVE ACTIONS	No Consequences	Unimportant	Less important	Important	Extremely important
Emphasis on cost control	☐1	☐2	☐3	☐4	☐5
Adoption of competitive pricing	☐1	☐2	☐3	☐4	☐5
Emphasis on broad range of product features	☐1	☐2	☐3	☐4	☐5
Increase in product quality control	☐1	☐2	☐3	☐4	☐5
Emphasis on product standardization	☐1	☐2	☐3	☐4	☐5
Emphasis on product simplification	☐1	☐2	☐3	☐4	☐5
Adoption of narrow product lines	☐1	☐2	☐3	☐4	☐5
Emphasis on customer services	☐1	☐2	☐3	☐4	☐5
Emphasis on brand identification	☐1	☐2	☐3	☐4	☐5
Use of Multiple market segments or niches	☐1	☐2	☐3	☐4	☐5
Use of Mass market	☐1	☐2	☐3	☐4	☐5
Control of distribution channels	☐1	☐2	☐3	☐4	☐5
Emphasis on skillful human resources	☐1	☐2	☐3	☐4	☐5
Improvement of operating efficiency	☐1	☐2	☐3	☐4	☐5
Investment in computer aided machines	☐1	☐2	☐3	☐4	☐5
Emphasis on makes to order production.	☐1	☐2	☐3	☐4	☐5
Emphasis on shorter machine running time	☐1	☐2	☐3	☐4	☐5
Use of information technology	☐1	☐2	☐3	☐4	☐5
Use of business alliances	☐1	☐2	☐3	☐4	☐5
Increase in Advertising	☐1	☐2	☐3	☐4	☐5
Emphasis on new product development	☐1	☐2	☐3	☐4	☐5
Emphasis on capability to manufacture variety of products	☐1	☐2	☐3	☐4	☐5
Control of procurement of raw material	☐1	☐2	☐3	☐4	☐5

Please write in the spaces given below if other competitive actions are used:

1. _____	☐1	☐2	☐3	☐4	☐5
2. _____	☐1	☐2	☐3	☐4	☐5

C. In each of the questions below, please indicate by ***circling the number*** that represents ***your perceptions*** of your company position on the scale between the two statements.

In dealing with competitors my company ...

1.	**Typically responds to actions which competitors initiate.**	1	2	3	4	5	6	7	**Typically initiates actions to which competitors then respond.**
2.	**Is very seldom the first business to introduce new products.**	1	2	3	4	5	6	7	**Is very often the first business to introduce new products.**
3.	**Typically seeks to avoid competitive clashes.**	1	2	3	4	5	6	7	**Typically adopts a very competitive posture towards the competitors.**

In general, my company has...

4.	**A strong inclination to adopt low risk projects with average rate of return.**	1	2	3	4	5	6	7	**A strong inclination to adopt high risk projects with a strong chance for a good return**

In general, my company believe that ...

5.	**Owing to the nature of the environment, it is best to explore gradually and cautiously the necessary acts to achieve the company's objectives.**	1	2	3	4	5	6	7	**Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the company's objectives.**

When confronted with decision making situations involving uncertainty, my company...

6.	**Typically adopts a cautious, wait and see posture in order to minimize the probability of making costly wrong decisions.**	1	2	3	4	5	6	7	**Typically adopts a bold and aggressive posture in order to maximize the probability of exploiting potential opportunities.**

In general, my company is in favour of...

7.	**A strong emphasis on the marketing of tried and tested products or services.**	1	2	3	4	5	6	7	**A strong emphasis on either R&D, technological leadership or innovation.**

In the last 5 years, my company has marketed ...

8.	**No new lines of products.**	**1 2 3 4 5 6 7**	**A great many new products compared to others in the industry.**

In my company ...

9.	**Changes in product lines have been mostly of a minor nature.**	**1 2 3 4 5 6 7**	**Changes in product lines have usually been quite dramatic.**

D. What is your reaction ***to the financial performance*** of your company?

Please ***tick*** (✓) the appropriate boxes to indicate your reactions toward each of the following financial indicators.

Financial performance/reaction	**Not at all satisfied**	**Dissatisfied**	**Neither dissatisfied nor satisfied**	**Satisfied**	**Extremely satisfied**
Sales growth in the past five years	☐1	☐2	☐3	☐4	☐5
Return on share holder equity	☐1	☐2	☐3	☐4	☐5
Net profit after tax from the operation	☐1	☐2	☐3	☐4	☐5
Return on sales	☐1	☐2	☐3	☐4	☐5
Return on total assets	☐1	☐2	☐3	☐4	☐5

To help us understand the ranges of financial performance in your industry, please fill in the spaces below some items from your company's last year financial statement (If this information is sensitive there is no need for you to complete this section):

Financial Statements

1. The actual sales from last year statement. _____
2. The net income after tax in last year statement. _____
3. Total assets in last year statement. _____

Thank you for completing the questionnaire.

Appendix 8.1 The dendogram of the hierarchical cluster formation

Appendix 8.1 The dendogram of a hierarchical cluster analysis by using Ward's method.