An Investigation into the Factors Associated with the Success or Failure of New Products in the Irish Food Market

By

Abigail Melanie Samuels B.Sc. (Mgmt.)

Thesis Submitted for the Award of

M.B.S.

(Master Of Business Studies)

to the

Dublin Business School,

Dublin City University

September 1995

The present thesis is based on the work of Abigail Melanie Samuels, Post Graduate Research Student at the College of Marketing and Design, DIT, during the period November 1991-September 1995. The research was carried out under the supervision of Mr.Tom Fennell, Senior Lecturer, College of Marketing and Design, DIT.

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

Signed : Abigail Samuels Date : 21/9/95
Candidate

Acknowledgements

I am most grateful to my supervisor, Tom Fennell, for his valued guidance, assistance and support throughout the last two years and for always being available in my hours of need.

To my mother, Tamara, who I am indebted to, for her belief in me and for providing me with the confidence and motivation to see this thesis through. I would like to thank my father, Terry, for his constant phone calls of encouragement, and to my sister Tania, for being very supportive during the course of this study.

A special mention must be given to Paul O'Sullivan, whose foresight was instrumental in my pursuing post graduate research and for enabling me to finish typing my thesis with the loan of his personal computer.

I would also like to acknowledge the help I received from the following staff members at the College of Marketing and Design: To Eddie Rohan who provided many useful comments at the questionnaire design stage and offered useful advice at the analysis stage. To Dr. Katriona Lawlor, Course Director, for her interest and attention throughout the course. To Gerry Mortimer who offered advice, particularly in relation to the literature review. To Sean and Fintan from the computer department for their much appreciated help at the analysis stage of the research.

A special thank you to Mr. Cathal Cowan; National Food Centre, Mr. Barry Egan; Irish Trade Board, Mr. Michael Campbell; RGDATA, Mr. Tony Coleman; Food Ireland and Ms. Carmel Murphy; Food Product Development Centre, for their cooperation and interest.

I am extremely grateful to Mish, for her willingness to help at every stage of the research.

Thanks also to my fellow post graduate students; To Clare, Ide and Joanne for ensuring the necessary coffee breaks were taken and especially for their advice and assistance in the final weeks of the research. I would like to thank Kerry for reminding me how to laugh during some of the more intense times in the past two years, and to Noel, for all his answers to my persistent questions, especially at the analysis stage of the research. Finally I am extremely grateful to Joan for her wonderful friendship. In particular, her many phone calls and words of wisdom, support and motivation, enabled me to complete this work.

CONTENTS Page

FIGURES **Page**

TABLES **Page**

Abstract

An Investigation into the Factors Associated with the Success or Failure of New Products in the Irish Food Market

Research Student: Abigail Samuels

The main aim of this research was to determine the key factors which contribute to the success or failure of new products developed and launched onto the Irish food market. This involved examining the patterns of performance and management practices employed by companies which develop and distribute new food products and investigating those factors which influence new product outcomes.

The objectives for the research were drawn from the relevant literature pertaining to product innovation, new product development and the key factors critical to new product success. A conceptual framework of new product outcomes was devised based on the results of past research and empirical studies.

It was essential for the purpose of this research to investigate those firms active in new product development. The most appropriate firms were involved in the development or distribution of pasta, pasta sauce or pizza products in the past five years. This sector was chosen on the basis of industry analysis and consultation with experts. Due to the size and nature of this sector of the food industry, a census was compiled from available lists and directories. Twenty-nine respondent firms were interviewed personally using a structured questionnaire.

The results indicated that substantial differences exist in the development and launch of new food products on the Irish market which ultimately effect the level of success and failure achieved. Differences emerged in relation to the type of company, company ownership and company size which had previously been unreported. Other factors were identified which contribute to the level of new product performance achieved in the marketplace. If the success rate of new products is to be improved, companies must take cognisance of those factors and adapt accordingly.

Chapter 1

The Irish Food Industry

1.1 INTRODUCTION

The purpose of this chapter is to establish the relative importance of the food industry in the Irish economy and to identify the challenges it will meet in the next five to ten years. As this chapter will demonstrate, the nature and trends of the food industry in Ireland are unique and may have implications for new product development. Few studies have examined the level of new product development in small countries where the issue of scale, amongst other factors, may influence the level and outcome of new product development.

In order to set the context of new product development in the Irish food industry, the chapter begins by examining the way in which the industry has evolved. This is centred around a number of supply and demand related factors which contribute to the uniqueness of the industry in Ireland. Institutional and regulatory changes are also highlighted as they are likely to have a profound effect on the future of the industry. As the overall objective of this research is to investigate the factors associated with the success and failure of new products in the Irish food market, this chapter raises the question as to whether the nature of the food industry has implications for new product development in Ireland and for the ultimate success or failure of new products.

1.2 THE IMPORTANCE OF THE FOOD INDUSTRY TO THE IRISH ECONOMY

The food industry provides a significant contribution to the Irish economy. According to the PA Consulting Group (1992 p.87)*'the food industry is by far the most important component of the indigenous sector of Irish industry'*. This is reflected by the output, exports, balance of trade and employment in the food industry. The estimated annual output in 1992 accounted for £7.6bn (Expert Group 1993 p.4). This denotes nearly

a forty-percent increase in gross output since 1988 (Cork Examiner 1988 p.8). It is expected that there will be a continued modest growth in output in the future (PA Consulting Group 1992 p.2).

In 1992, the industry accounted for 25% of National exports (PA Consulting Group 1992 p.2). However, this is following a downward trend since 1972, when food exports accounted for 44% and stems from the fact that other industry sectors are growing at a faster pace than the food sector (Europen 1989 p.7). Robson (1989 p.34) suggests that in the long-term, the food market, while still remaining important, will no longer be the largest export sector in the Irish economy. Food exports accounted for 40% of foreign exchange earnings (PA Consulting Group 1992 p.2) and were expected to be valued at £3.5bn in 1992 (Expert Group 1993 p.16). Alongside Denmark, its food exports as a percentage of total exports, accounts for one of the largest in the European Union (Europen 1989 p.9) (see Appendix A, Table 1.1).

Ireland has enjoyed a trade surplus in food over the last few years which has culminated in a positive trade balance of £2bn in 1991. In addition, food and drink imports account for a smaller proportion of the domestic market than for any other manufacturing industry (Expert Group 1993 p.11, Europen 1989 p.7). This led the Expert Group (1993 p.16) to surmise that based on past performance ***'the record of the food industry in recent years is in fact quite a good one'.***

The importance of the food industry is also manifested in its contribution as a source of employment in Ireland. It accounts for one-fifth of all manufacturing jobs which is relatively more significant than in any other EU member state (Expert Group 1993 p.11). However employment has declined to around 40,000 in 1992. It is predicted that over the next five years, a stabilisation of employment is most likely to occur as further rationalisation and job losses in the commodity oriented sector are offset by increased opportunities in the consumer

foods sector and the development of added value (Expert Group 1993 p.11, PA Consulting Group 1992 p.2).

Irish consumers spent approximately £3bn on food in 1992. However when inflation is taken into consideration, the real level of spending has remained virtually static over the past ten years (Checkout 1992 p.17, Food Ireland 1992 p.41, Cork Examiner 1988 p. 8). In comparison with other countries in the European Union, the Irish agricultural industry plays a more significant role in its home economy.

However, the most notable weakness in the Irish industry is its poor record in value added, which is less than half that experienced by major competitor countries such as Denmark and the Netherlands (See Appendix A, Table 1.2). Many studies have repeatedly stressed the importance of value added, if Ireland is to achieve improved performance in the food sector (Europen 1989 p.11, Expert Group 1993 p.4, PA Consulting Group 1992 p.4). It is expected that the food industry will continue to contribute to the development of indigenous Irish industry in the future. Despite recent trends, some commentators consider that there is a viable potential for output and employment growth within the industry (PA Consulting Group 1992 p.88).

1.3 SUPPLY RELATED FACTORS

1.3.1 Orientation of Suppliers

There is a general consensus in Ireland that success in future will stem from a market-led, as opposed to production-led, food industry. According to Hedigan (1991 p. D5) *'we shouldn't sell what we make, we have to make what we can sell'*. In his opinion, this will transform the agricultural industry into a food industry and enable the food sector to capitalise on world markets, such as America and Japan, after the CAP review. Condon (1987 p.6) believes that the industry has previously been too

myopic and failed to appreciate that Irish products are in competition for shelf space and the consumer from some of the world's greatest companies. Cowan (1989 p.1) implies that a consumer-led strategy will enhance market opportunities as the Single European market is established. MacDonnell (1991 p.3) supports this view and surmises that *'the concept of market-led is here for real and for good, there is no going back'.* The agri-food sector must take cognisance of consumer needs and consumer choice, as this will be the principal aim of the most dynamic food firms. It has even been predicted that food in the next decade will become so consumer-oriented, that it will be marketed like fashion - with spring and autumn collections of new products. Consumers are set to become food 'kings' with food companies catering to their every need (Cork Examiner 1990b p.9).

This market-led approach was outlined by the Irish Development Authority (IDA) in their 'Strategy for the Food and Drink Industry' (1987 p.7). The report advocated that national thinking must be diverted from an over emphasis on production to an emphasis on the marketplace. Specifically, it recommended that the food industry must adapt from being an agricultural processing industry, supplying commodity products dependant on intervention, and instead become a food industry producing quality products for the European market. In effect *'the customers in the marketplace decide what type of food they want and it is up to the food industry and the farmers to meet these needs' (IDA 1987 p.7).* This policy was expected to have a major impact on the economy and on job creation. The report recognised that, in the short-term, it was unlikely that the industry would immediately switch from being a commodity producer to being a producer in the branded retail consumer category (IDA 1987 p.11). In addition, the PA Consulting Group (1992 p.53) reiterated the need to develop consumer products based on identified opportunities in the growth sectors of the food market.

It also recognised that the bulk of beef and dairy output will continue to go into commodity type products and, thus, stressed the importance of creating real end-user markets. This would ensure the products were not sold to intervention (PA Consulting Group 1992 p.3/53). It was concluded that priority should be given to identifying and satisfying customer needs and that state agencies should only provide financial assistance to those firms which are driven by consumer needs. Finally, Shanahan (1987 p.6) cautions that these market-led changes include an element of cost and risk and thus a traditional product mix will remain an important element of the Irish Food industry in the near future. This coincides with the PA's view that the Irish food processing sector should aim towards the simultaneous development of commodity products selling to final end-markets and a growing consumer foods sector (PA Consulting Group 1992 p.101).

1.3.2 The Issue of Scale

Various commentators and reports on the Irish food industry have advocated the need for economies of scale. For example, the IDA (1987 p.12) stressed the fact that most food companies in Ireland are smaller than their international competitors and this indicates a barrier to success. Primarily, this would ensure that marketing costs were absorbed, product development encouraged and production efficiency achieved. Similarly, the PA Consulting Group (1992 p.4) recommended that more food companies of European scale were required to fund the development of consumer food products.

The purpose of scale is to enable companies to achieve economies in manufacturing cost, new product and process development, logistics, brand development, information technology and market knowledge (PA Consulting Group 1992 p.52). A company may achieve it through merger/rationalisation, organic growth, marketing co-operation, acquisition or a link with overseas companies (IDA 1987 p.13).

A further threat, due to the relatively small size of Irish companies, is that there is a danger that the home market will be inundated by international branded products. To overcome this situation, there has been increased concentration in the manufacture of branded food products in an attempt to achieve economies of scale. It is envisaged that a major force of change in the Irish food industry over the next ten years will be the development of scale in the processing sector (PA Consulting Group 1992 p.89). In a European context, one study identified that the dominant strategy of giant food firms was to maximise brand strength over a wide geographic area, mainly through takeovers. However Irish food firms were perceived to be inadequate in terms of size and strength of brands. A number of Irish firms intend to form the basis of future multinational food firms and grow by acquisition (Europen 1992 p.29). In the U.K. and Irish food and drink industries there is a high level of concentration coupled with a great degree of polarisation as the bigger companies expand in scale leaving behind the smaller companies. This is reflected in an increase in merger and acquisition activity within Europe (EuroFood and Drink 1993 p.5).

Acquisitions have played a major role in the development of the Irish food sector and more acquisitions are needed in order that Irish food companies can build an international dimension in an attempt to realise their full potential (O'Connor 1990 p.15, Downes 1990 p.7). Companies really have little choice as the market is forcing mergers within the industry while the IDA are actively encouraging economies of scale. According to Gourlay (1991 p.11) the next decade will witness phenomenal merger and acquisition activity within Europe. He questions the effect this will have on smaller companies and strongly advises that those who are unable to accrue economies of scale must divest weaker brands. Most European companies favour merger and acquisitions as a more cost effective way of expanding in domestic and foreign markets and realise that size is an essential criterion for

competing effectively with Japanese and American multinationals (Euromonitor 1989 p.61).

One drawback of this is that in-house product development may be neglected as firms aim to grow through takeovers, mergers and acquisitions (Cowan 1989 p.22). The general view appears to be that in order to remain competitive in the Single Market, economies of scale are essential. A recent NESC Report (1989 p.28) advocated that this should be a central concern of industrial policy in Ireland. In recognition that this is not a viable alternative for all Irish companies, it has been suggested that small companies cater for niche markets (Europen 1989 p.29), the ingredients and sub-supply markets (EuroFood and Drink 1992 p.7), own label manufacture, contract manufacture or the food service (PA Consulting Group 1992 p.54). Finally, the Expert Group (1993 p.22) stresses that if economies of scale are sought after by Irish companies, the focus should be on *'the development of market power and appropriate scale in served markets rather than the pursuit of absolute scale'.*

1.3.3 The Need for Added Value

There has been much criticism in the food industry pertaining to the lack of high added value products available. For example, Fitzgerald (1988 p.12) questions *'why does industry and food processing in particular, continue to concentrate investment on the even more efficient production of low margin commodities, of which there is a surplus, and fail to invest enough in product innovation leading to high added value, high margin products which consumers want?'* Similarly, Moriarty (1992 p.4) queries the benefits of producing commodity products with low value and profits and which, in turn, fail to achieve a particular competitive advantage. He puts the onus on past policy because it was based on subsidies and not 'true markets'. Dand (1988 p.10) suggests that the lack of added value stems from a deficiency in the creation of either national or international Irish brands. In comparison with major European competitor countries Irish

performance in terms of value added is relatively poor. (See Appendix A, Table 1.1) This has led to the recognition that the survival of the Irish food industry is dependant on successfully switching from commodity products to value added food products (Hedigan 1991 p.5, Shanahan 1987 p.6, Irish Exporter 1991 p.19, Europen 1989 p.11, Expert Group 1993 p.4).

Cowan (1989 p.2) supports this view and states that added value and brand development is a common feature of companies who achieve high margins on international markets. Ireland has only a small number of international products, and therefore it is essential that more brands and value-added products are developed. Furthermore, an increase in exports and employment may be gleaned through the production of value added products and thus the shift in emphasis is viewed as 'critical' and necessary.

In an attempt to achieve this, State policy encourages the development of large Irish food and drink companies (Europen 1989 p.11). A prime example of this is evident in the approach taken by the Expert Group (1993 p.15), which aimed to identify how added value could be created in the food industry. The report found that the situation was encouraging as added value creation is already in existence at various stages of food production within the industry. It recognised that there are many different options for increasing the value generated in the food industry, but these will be dependant on the individual firm. One critical factor exists which dictates that the firm must provide what the market wants competitively. The report again highlighted the fact that the consumer foods sector may provide the potential for greatest growth, profitability and added value. Overall the Expert Group (1992) urged that with the correct policies, programmes and support, higher added value consumer foods and food ingredients would lead to the creation of 1,500 to 2,000 new jobs per year. This should significantly compensate for the job losses which may occur due to increased

competitiveness arising from the challenges of CAP, GATT and the Single Market (Expert Group 1992 p.17). It is therefore promising that the findings of a recent survey indicated that sixty-five percent of companies in Ireland plan to introduce added value products in the near future, while another twenty-two percent are considering this option (Law 1992 p.45).

1.3.4 Seasonality

One of the most notable features of Irish agriculture is that its greatest strength is also its greatest weakness (MacConnell 1993 p.9). Factor cost advantages accrue to Ireland through its grass-based production systems for dairy and beef products. Essentially the grass-growth pattern makes it cheaper to produce beef cattle and milk in the summer months and this low-cost production provides a natural advantage for Irish agriculture. Unfortunately, this ensures that only products which can be sold throughout the summer or easily and cheaply stored, can benefit from this natural advantage. This system results in a seasonality problem due to the relatively short growing season (MacConnell 1993 p.9, Expert Group 1993 p.5, PA Consulting Group 1992 p.3). In addition it prevents Irish exporters from guaranteeing a year round product supply.

The PA Consulting Group (1992 p.13) maintain *'the problem of excess seasonal products must be tackled if markets are to be served all year round.'* The Expert Group (1993 p.5/19) supported this view suggesting that seasonality must be reduced. This would foster product development while still ensuring that the cost advantages were retained. Previously EU support schemes have enhanced this imbalance by encouraging the production of commodities rather than persuading processors to concentrate on diversifying their product range and more efficiently utilising factory capacity (Expert Group 1993 p.5). However, additional costs will follow due to the change in seasonality being market-led and

so the development of new products and markets must yield greater returns than the higher input costs involved in out of season production. In the short-to-medium term, this will be a formidable task, but sustained competitiveness and profits should be gleaned in the longer term (Expert Group 1993 p.19).

1.3.5 Secondary Processing

One sector of the food industry has received special attention in various reports. The category of prepared consumer foods, which relates to those food products that have undergone secondary processing, have been specifically targeted for development in the recommendations of the Expert Group (1993 p.6) and the PA Consulting Group (1992 p.2). This is because prepared consumer foods generate significant value added and contribute to national output, exports and consequently employment. For example, Irish production in this sector accounted for £900m in 1992 which was equivalent to 12% of national output of the food industry (Expert Group, 1993 p.26). Coupled with this, output has been growing at the rate of 20-30% per annum between 1986 and 1990 (PA Consulting Group 1992, p.45).

Furthermore, the impact of modern technology has led to a demand for more prepared consumer foods. The growth in ownership of household appliances such as freezers and microwaves has resulted in a proliferation of these products on the market, for example, products which are frozen, chilled and shelf stable, convenience food and ready made, sauces and toppings and desserts (Cowan 1989 p.29, Young and Holmes 1991 p.5, O'Connor 1990 p.14). Irish manufacturers were initially slow to capitalise on this market and, as a consequence, opportunities for more new products still exist. This is further enhanced by the increase in microwaves at the workplace and the prediction that twenty-five percent of all cars in the future will be equipped with microwaves (Young and Holmes 1991 p.19, O'Connor

1990 p.12/14, Retail News 1992 p.4, Henry 1991 p.34).

The advent of the freezer has also had a dramatic impact on the food industry. Penetration in Ireland of home ownership of freezers is estimated at approximately forty percent and is continuing to increase. This has resulted in strong growth in the frozen, chilled and ready meals sector of the food market which is predicted to continue. Future technological developments should enhance food quality (Merrins 1989 p.79, Retail News 1992 p.22, Ulster Grocer 1992 p.23, Retail News 1992 p.4, Euromonitor 1989 p.21). Although some successful consumer food products are already in existence - such as fish processing, pizza's, ready meals, processed meals, yogurts, desserts, biscuits and confectionery - more are needed (PA Consulting Group 1992 p.4). The benefits of secondary food processing lie in the fact that the resultant products tend to encompass value added, are mainly consumer oriented and are branded. These three qualities have been strongly urged to form the basis of products in the future, in order that the Irish food firms may compete effectively. (See section 1.3.1, 1.3.2, 1.3.3)

The proliferation of imports and foreign food products has provided an opportunity for Irish manufacturers to compete based on import substitution. A recent report by the Irish Trade Board further identified an additional £450m worth of business which may be generated by import substitution in the food industry (Irish Trade Board 1993 p.1, Boyle 1993 p.7). The Expert Group (1993 p.17) corroborate this view and suggest that ***'the potential for greatest growth, added value and profitability lies in the prepared consumer foods sector'***. The report recommends that priority be given to projects in this area over the next five years, especially in light of the fact that this is one of the fastest growing areas in the European food industry. For example, ready meals, chilled foods, frozen pizza and pasta have shown rapid growth and are forecast to offer the main market growth opportunities in the future. In particular, these products have experienced increased growth in the UK market which

is the main export market for Irish food firms. However the market is intensely competitive and requires frequent adaptation of products to satisfy consumer trends and preferences. This translates into the need for continuous new product development in this sector.

A prime characteristic of this sector is the predominance of foreign owned multinational companies who command a good market position based on sustained investment and international brands. In comparison the majority of Irish secondary processors, are relatively small, lack sufficient industry scale, are poorly positioned and export relatively few brands. The net result has been little attention paid by these Irish firms to international marketing and new product development. The presence of the multinationals has served to heighten domestic competition. Therefore, great emphasis has been placed by Irish food firms on import substitution. Small companies tend to concentrate on providing such products. Moreover, in order to develop further, they are forced to become exporters, but tend to lack the necessary scale and expertise (Expert Group 1993 p.26, PA Consulting Group 1992 p.45) (see section 1.3.2).

The future for Irish manufacturers will therefore be dependant on their willingness to invest in R&D and new product development, target tightly, identify a basis of competition and be cost competitive. They should also take advantage of Ireland's positive image abroad (PA Consulting Group p.46/76). The development of a substantial and sophisticated local sub-supply sector such as food ingredients should become the way forward. Rather than compete directly with the major multinationals, Irish food firms should look to the manufacture of ingredients and sub-supplies which the MNC's need and build strength in those areas (Pabulum 1992 p.7, Expert Group 1993 p.26).

1.3.6 Research and Development in the Irish Food Industry

In 1991, the food, drink and tobacco industry accounted for one of the largest expenditures on research and development amongst all industry groups in Ireland. In addition, the majority of the expenditure came from Irish companies (Eolas 1991 p.4,5). This reflected an increase in investment in research by Irish food firms, although it has been identified earlier that low investment in R&D was a major weakness in the industry (Europen 1989 p.27). In addition, R&D and new product development appears to have received a higher priority in food industry development strategies outside of Ireland. This led the PA Consulting Group (1992 p.76) to criticise the minimal assistance provided by existing State support for R&D to the food sector and, in particular, that the level of funding is small compared with other competitor countries. In recognition of this inadequacy, the report urged for significantly improved state support and more resources; specifically, that assistance should be reallocated away from fixed asset investment towards R&D/new product development. It also maintained that better co-ordination of existing supports to be essential.

The findings of the Expert Group (1993 p.30) corroborated this view and suggested that a ***'significantly higher proportion of state aid to the food industry should be devoted to in-house and commissioned research and development'.*** It was strongly recommended that £15m per annum would be allocated to non-commissioned R&D. Financial resources should be derived from the industry, EU and nationally or publicly created funds for food research. In the event that investment aid is granted to individual firms, it should be aimed towards funding their research and in particular should assist in the building up of in-company product development teams (Expert Group 1993 p.44). Teagasc proposed that investment in food R & D should be increased to about £40m by 1994 - with £20m of this coming from public funds such as the EU structural

funds. This would significantly increase the amount presently devoted to R&D which lies at £15m per annum of which only £5m comes from the state (Farming Independent 1993 p.2).

To a certain extent, Irish industrial policy had already outlined that company research and development for medium sized Irish owned companies should be expanded in order to accelerate the rate of product development in Ireland. For this purpose, it was planned that research grants of up to fifty percent of approved costs incurred by firms would be provided (Programme for Industrial Development 1991 p.24). The benefit of all these suggestions would help small Irish food businesses who simply could not afford the costs of supporting in-house research (McDonnell 1991 p.3). An improvement in R&D would enable food companies to respond to tough competition from the marketplace (Co-Op Ireland 1992 p.11).

The government can only provide the framework for change but the responsibility to adopt R&D programmes primarily lies in the hands of the industry itself. Irish food firms have also been criticised for being slow to incorporate R&D programmes which would help secure their future (Irish Times 1991b p.7). A survey carried out by An Forais Taluntais (Harrington et al 1988 p.3) identified that investment in R&D was expected to increase up to the year 2000. Meanwhile, O'Connell (1987 p.9) argued that the reason why the Irish food processing industry has had a poor record in R&D compared to their European counterparts, is because the Irish industry is relatively young and weak and moreover, these firms do not have the necessary available capital resources. There appears to be a general consensus that Irish food firms need to increase their expenditure on R&D and, further, that the government should provide added assistance to enable them to do so (PA Consulting Group 1992 p.76).

1.3.7 The Importance of New Product Development

It has been strongly argued that the Irish food industry must invest in new product development. Cowan (1989 p.21) suggested that simply undertaking R&D is not enough, rather more research and more resources in new product development were needed to increase the chance of company success. At present, the Irish food industry devotes 36% of R&D expenditure to improving and developing existing and new processes, whilst 64% is spent on improving and developing existing and new products (Eolas 1991 p.9). One area was highlighted for specific mention in relation to product development - namely consumer foods. It was stated that successful consumer products already exist, such as pizzas, ready meals and so on, and that many more are needed. This will require substantial investment in product development and marketing.

The Expert Group (1993 p.12,21) also stressed the need for new product development as the Single Market will expose most Irish food companies to greater competition. The group advised that the overall objective of policy should be to encourage a culture of innovation particularly in those areas with the greatest potential for growth. Specifically, market-led innovation is a primary necessity in order that the food industry achieve its full potential and export profitably, particularly in the consumer food sector (such as dairy based food ingredients, ready meal/pizza type products). According to the report ***'if Irish companies are to be competitive in Europe then they will have to excel in those areas that are within their control, such as.....innovation' (Expert Group 1993 p.40).*** The results of the Europen Report (1989 p.27) indicate that Irish food firms have already dramatically increased investment in new products. In comparison with other industry sectors, a study by Cogan (1991 p.10) revealed that the food industry only accounted for two percent of Irish developed innovations, which was one of the lowest figures overall. According to Schalinski (1991 p.34) ***'there is an absolute need for Ireland's food***

industry to come up with a wider range of products'. Hamilton (1993 p.15) also stresses the need for Ireland to pursue innovation and states that it is within the control of any organisation to be innovative. Condon (1987 p.6) advises that product development is the key for the Irish food industry. This view is supported by Fitzgerald (1988 p.12) who comments that *'Ireland must stimulate the creative and innovative talents so vital if we are to compete successfully in today's and tomorrow's international consumer markets'.*

McCarrick (1991 p.3) meanwhile suggests that product development will become even more important than brand development. A prime example of this was identified in a study by Cullen (1992 p.25), which found that product development was a salient feature of the top five successful companies. Cowan (1989 p.25/26) supports this view and states that the most significant characteristic of leading companies is that they regularly launch updated and new products. In addition he advises that the likelihood of success may be enhanced for Irish food firms if they invest more in research and new product development, as this will ensure they remain competitive within Europe.

Mayo and Pender (1988 p.205) stress that the business climate now is more conducive to the development and introduction of new food products and thus it should be encouraged. Similarly Cowan (1989 p.6) states that evidence indicates that there are opportunities for new products on the Irish food market. This is associated with a high level of new product introductions in recent years. More importantly, he identified that there was a relatively high success rate for these new products within Ireland. Therefore a strong new product development orientation is vital for the Irish food industry - if it is to remain competitive in the future.

1.3.8 Image of the Food Industry

The Irish food industry is synonymous with an image of naturalness, wholesomeness and pollution-free in most European Countries (IDA 1987 p.13, Shanahan 1987 p.6, Irish Times 1988 p.6, Condon 1987 p.6, Expert Group 1993 p.14, Food Ireland 1991 p.1). It constitutes one of the greatest competitive advantages of the industry and should be strenuously marketed (Shanahan 1987 p.6, McDonnell 1986 p.13), especially to European consumers who are demanding such products. According to Heneghan (1991 p.17) the reputation and image that the food industry enjoys should enable it to expand even further in export markets, ***'Ireland's growing capacity as a food producing country is matched by a rising overseas demand for wholesome food from a clean and healthy environment'. (Heneghan 1991 p.18)***

Fitzgerald (1988 p.12) states that it is ironic that the industry has not fully exploited this image and reputation when it is more in demand today than previously. It is, therefore, advisable that the industry capitalise on, and develop, this favourable image abroad in a sophisticated promotional manner (Condon 1987 p.6). The IDA (1987 p.13) suggest that to ensure this image is sustained the industry should introduce high standards and guarantee that they would be strictly enforced. This was reiterated by the PA consulting group (1992 p.6) who suggested that ***'we should protect our green, environmentally clean image and capitalise on this factor in the marketplace'.*** To achieve this the report advocated applying rigorous environmental standards and establishing a generic Irish image for food products. It was suggested that this should be primarily funded by the industry and become a major policy instrument.

The Expert Group (1993 p.8) viewed this green image as a vital element of the overall promotion of the Irish food industry abroad. It stressed that this image coupled with high quality Irish raw materials,

constitutes a valuable marketing asset and needs to be safeguarded and promoted. Schalinski (1991 p.34) recommends that the industry should attempt to become world leaders in this regard, perhaps by developing products based on the 'green theme'. He stated that image was essential as international competition increased and thus the *'green theme should be the kernel of Ireland's policy'*. Emphasising this advantage is not sufficient, rather it must be matched by a policy which takes a stance against food irradiation and atomic waste (Schalinski 1991 p.7). This view is supported by the National Food Centre (1992 p.7) who stress that Irish food must be free of problems such as BSE, salmonella poisoning and so on, which could damage its image.

1.4 DEMAND RELATED FACTORS

1.4.1 Trends in the Food Industry

A number of recent trends in the food industry have created a favourable climate for new products, which will enable manufacturers to take advantage of changes in consumer habits and tastes (Cowan 1989 p.7, Gourlay 1991 p.10, Mayo and Pender 1988 p.205, Holmes and Young 1991 p.3). It is imperative that manufacturers adapt their products or create new ones in light of changing consumer trends, as this will ensure long term growth and survival (Williams 1986 p.65, O'Connor 1990 p.12). There is some debate as to whether the demand for new food products arises from changes in consumer trends or from innovative manufacturers adapting to it (Holmes and Young 1991 p.8, Gourlay 1991 p.1). According to Gourlay (1991 p.1) *'as tastes change it is not always clear whether the consumer is leading the manufacturer or vice versa'.*

Nevertheless manufacturers must take cognisance of the different trends to ensure that their products satisfy consumer needs. The most prominent trends likely to effect the food industry are discussed below. They refer to changes occurring not only in Ireland but also in other

foreign markets. It is essential for Irish food firms to take note of what is happening abroad because of their dependence on exports.

1.4.1a Changes in Lifestyle and Demographics

There is a general consensus that changes in lifestyle will have a direct effect on food consumption and therefore lifestyle marketing will become a necessary approach for manufacturers (Food Ireland 1992 p.35, Moorcroft 1987 p.27, Cork Examiner 1990a p.9). In essence it refers to the fact that *'products need to be targeted at those who lead a particular style of life, possessing its own intrinsic and often unique combinations of values and self images' (Food Ireland 1992 p.35).* One of the most notable changes has been the increasing number of women at work (Cork Examiner 1990a p.9, PA Consulting Group 1992 p.50, Retail Monitor International 1991 p.47, Retail news 1992 p.4). The ramification of this has been a demand for convenience foods that can be prepared quickly and with the minimum of effort. This has resulted in a growth in the ready-made food market and in restaurants/fast food outlets (IDA 1981 p.9, O'Connor 1990 p.14, Food Ireland 1991 p.4, Holmes and Young 1991 p.2).

There is also an increasing number of small households which is indicative of more single people and single parent families (Retail News 1992 p.4, Retail Monitor international 1991 p.47, Food Ireland 1992 p.37, Cork Examiner 1990a p.9). Coupled with this there has been a shift away from regular eating habits which has resulted in the need for single or double ready meals. The family tends not to eat together very much and when they do individualistic tastes emerge which require different dishes. Opportunities have arisen for food products which offer variety, convenience, are ready-made easily microwaved or frozen (Food Ireland 1991 p.4, O'Connor 1990 p.14, Retail News 1992 p.4, Holmes and Young 1991 p.3). A rise in overseas travel had led consumers to become more liberal in their eating habits, such as the

popularity in Ethnic foods (Holmes and Young 1991 p.3, Food Ireland 1991 p.4).

Certain demographic changes in Ireland are also evident such as the increase in the middle-aged and elderly, the emergence of a more middle class society and greater disposable income (partially due to more working wives). This will create a demand for healthy and nutritious foods by the older consumer and by more affluent consumers who tend to become more aware of issues relating to health and diet (Checkout 1992 p.17, O'Connor 1990 p.14, PA Consulting Group 1992 p.50, Food Ireland 1992 p.40, Todays Grocer 1991 p.3). Change will occur in the relative importance of certain food categories, whilst others may decline (Checkout 1992 p.17). Overall many of these factors are expected to continue throughout the next decade and it is advised that Irish food companies target their products towards different small segments of the market (O'Connor 1990 p.14, Retail News 1992 p.17).

1.4.1b Healthy Eating

Health issues have played an increasingly important role in the food industry. There has been a trend towards greater health consciousness and this had led to a demand for nutritional, low fat wholesome, healthy foods (O'Connor 1990 p.12, Cork Examiner 1990a p.9, Irish Exporter 1991 p.19, Williams 1986 p.67, Quinn 1986 p.67). According to Gourlay (1991 p.1) ***'food will increasingly be bought and marketed for its perceived health benefits'***. The potential therefore exists for food firms to exploit the 'green image' associated with Ireland (McDonnell 1986 p.13). The industry must recognise these changes and adapt accordingly (Checkout 1992 p.17, Harris 1991 p.III, Market Research Europe 1992 p.3, Food Ireland 1992 p.37).

1.4.1c Convenience

The emergence of the convenience food sector was mainly due to demographic and lifestyle factors and assisted by technical developments in food processing and cooking (Cowan 1989 p.29, PA Consulting Group 1992 p.51). For example, more working women, smaller households, more single-person households coupled with the development of the microwave, have all contributed towards the demand for convenience foods (Young and Holmes 1991 p.5, Cowan 1989 p.29, Retail News 1992 p.4, Mayo and Pender 1988 p.206). The trend for convenience eating and foods has resulted in the growth of many products such as ready meals, frozen/chilled meals, sauces, pasta and pizzas, while the potential for more new product development in this sector is evident (Wood 1988 p.16, Tyrell 1990 p.16 , Ulster Grocer 1992 p.23, Market Research Europe 1992 p.1, Retail News 1992 p.19). Similarly Mayo and Pender (1988 p.205) believe that the most successful new products will be those which offer an element of convenience. It cannot be denied that growth in this sector will continue in the future (Gourlay 1991 p.1).

1.4.1d Environmental/Green Issue

Concerns about the environment have led to an emphasis on the category of "green" foods or "environmentally friendly foods" which also consists of organic foods. The focus on these products has emerged in tandem with the healthy eating category (Cowan 1989 p.8, PA Consulting Group 1992 p.51, O'Connor 1990 p.16). This will have a major impact on the food industry and is already evident by the availability of organic foods in Irish supermarkets (O'Connor 1990 p.16, Cowan 1989 p.8). Therefore opportunities exist for Irish companies, specifically in the export markets (PA Consulting Group 1993 p.51, Tyrell 1990 p.16). An EU directive on organic produce is predicted to boost this market further (Cowan 1989 p.8). Furthermore, this has

provided an opportunity for Irish manufacturers to take advantage of the positive 'green' image Ireland and Irish food has abroad (Shanahan 1987 p.6, McDonnell 1986 p.13). Although this sector of the market has necessitated new products, organic produce has been slow to take off and some manufacturers are of the opinion that the pure 'green' market will remain only as a small element of the total food market (Tyrell 1990 p.16, Gourlay 1991 p.1).

1.4.1e Quality

Another notable priority for consumers in relation to food is the need for quality (O'Connor 1990 p.12, Market Research Europe 1992 p.20, Cork Examiner 1990a p.9, Foster 1991 p.44). Quality is dependent on the subjective and objective interpretation of a variety of attributes. Subjective factors consist of image, natural, wholesome and so on, while objective measures include high protein, absence of preservatives, organically grown, fresh. These factors have resulted in a demand for enhanced quality attributes in product formulation and ingredients (Food Ireland 1992 p.37). A recent Irish survey identified that good or excellent product quality was ranked first in terms of success by the majority of respondents. This is consistent with the findings of a similar British survey (Cowan 1989 p.10/15). Furthermore, ***'continuous quality improvement is recognised as a key factor in maintaining competitiveness in the Irish food industry' (Food Ireland 1992 p.38).*** In addition significant opportunities exist both at home and abroad for Irish quality products, especially as Irish food firms attempt to move away from commodity food products (Irish Exporter 1991 p.20, IDA 1987 p.12). Quality could become a major competitive advantage in import substitution (Merrins 1989 p.84).

1.4.1f Impact of Modern Technology

Modern technology is having a significant influence on the way food is processed and prepared and in turn on eating habits. There have been technological advances in terms of industrial capability, such as chilled distribution, and in home equipment, for example domestic freezers, fridges, microwave ovens and food processors (Mayo and Pender 1988 p.206/7, Young and Holmes 1991 p.9-11, Euromonitor 1989 p.67/8). This has resulted in a secondary effect on eating habits, through the increased usage of modern appliances and has led to the development of new products suitable for such appliances (Mayo and Pender 1988 p.207, Euromonitor 1989 p.68). The popularity of these appliances has stemmed from a demand for greater leisure time, because the technologies enable time to be saved on working (Retail Monitor International 1991 p.47). It has been suggested that in recent years the microwave has had the greatest impact on eating habits with rapid growth throughout the 1980's in the UK, although in Ireland it has not been quite so dynamic.

1.4.1g Future Trends

Several authors have attempted to predict future trends that will influence the food industry. For example it has been suggested that there will be distinct types of eating habits arising out of the trends currently experienced in the food industry such as quality ultra-convenient foods, exotic upmarket products and high quality, nutritious, low-calorie products (Young and Holmes 1991 p.18/19, Food Ireland 1992 p.40). Function foods are also expected to become popular in the future. Despite these changes which appear to be universal in Europe, it is doubtful that a total convergence will occur in regional tastes and eating habits. Some trends will always remain international and enable the development of global products, whilst opportunities will also exist for niche marketing at a local level (PA Consulting

Group 1992 p.51, Young and Holmes 191 p.20). Furthermore new product development and innovation will remain as a major force in the food industry (Brown 1991 p.10).

O'Connor (1990 p.14) contends that the principal message for the 1990's is that the industry must keep pace with the changes in consumer habits and tastes and exploit them fully. It has also been argued that because of the enormity of change occurring, there is no one dominant trend emerging and those involved in the food industry will have to be cautious not to anticipate that every trend will transform the industry overnight. Nevertheless the Irish food industry must take heed of the changes and adapt accordingly. According to Walsh (1991a p.19) ***'a modern food industry works back from the consumer. It is concerned about the habits, tastes and needs of consumers, what is selling in the market place, what or who are influencing consumer choices and what future trends are going to be'.*** This must be the path for Irish food firms entering into a more competitive European environment, if success is to be attained.

1.4.2 Growth Sectors in the Food Industry

Certain sectors within the food industry have experienced phenomenal growth in the past few years and a brief discussion of these will now be presented. Some of the information relates directly to the British food market but it was felt necessary to include it because according to the PA Consulting Group (1992 p.4), the U.K. should be considered as an extension of the home market. Furthermore, it accounts for the majority of our exports and thus changes there will have an impact on Irish food firms (Cowan 1989 p. 15, Euromonitor 1989 p.303, Merrins 1989 p. 78). In addition, there is a notable lack of information relating to some sectors in the Irish market (Merrins 1989 p.78, Cowan 1989 p.23). The following table shows the importance of the ready meal, pizza and pasta sectors in both the Irish and British food markets.

Estimated Value of the Irish Food Industry	£78 - £145m
Value of Growth Sectors in the Irish Food Industry	
Frozen - Ready Meals	£16m
- Other Ready Meals	£2m
Frozen Pizza's	£15m
Pasta - Dry	£3.5m
- Fresh	£0.4m
- Canned	£3.4m
- Sauce	£2.25 - £3.1m
Value of Growth Sectors in the British Food Industry	
Frozen Food Market	£3.3bn
Chilled Foods	£470m
Ready Meals	£772m

Table 1.1 Growth Sectors in the Irish and British Food Industry
Source : Pearson 1990, Checkout 1991, Heneghan 1991, Todays Grocer 1991, Ulster Grocer 1992, Food Ireland 1992, Retail News 1992.

1.4.2a Frozen Foods

Although the British frozen food market in 1988 had experienced a 2.1% growth since 1980 by 1991 the market declined by almost one-third on the previous year. Development was experienced most notably in the convenience food sectors with pizzas and ready meals being the prime products (Merrins 1989 p.78-80, Todays Grocer 1991 p.2, The Grocer 1992 p.9). In comparison the Irish frozen food market is considered to be mainly under-developed but is growing by 10% annually. Both pizzas and ready meals have shown the greatest opportunities for development and have been the most dynamic in terms of growth (Cowan 1989 p.82-84, Todays Grocer 1991 p.2, Market Research Europe 1992 p.9, Ulster Grocer 1992 p.23). Within the EU,

frozen pizza and ready meals have experienced an increase in market value from 12% in 1985 to 15% in 1990. European trends indicate that growth will continue in the frozen food sector but some areas will become saturated (McIntyre and Pitts 1992 p.18, Checkout 1989 p.14, Market Research Europe 1992 p.20, Euromonitor 1989 p.298, The Grocer 1992 p.9).

1.4.2b Chilled and Canned Foods

Chilled foods represent one of the fastest growing sectors in the UK market for nearly a decade, although growth is predicted to slow down in the future (Heneghan 1991 p.18, Pearson 1990 p.15). It encompasses a wide range of products including pizza, pasta and ready meals and these areas are viewed as having the most scope for growth. Production is mainly carried out in the home market although imports are expected to increase (Retail News 1992 p.4, Food Ireland 1991 p.4, Cowan 1989 p.23). Limited data exists for the Irish market on chilled foods, however it is suggested that trends are very similar to the UK market. There have been many recent new products introduction in this sector which indicates the growing importance of this market. However the likely decline in population and lower consumer spending power may inhibit the rate of growth (Cowan 1989 p.23/24). Within the canned food market, there has been a noticeable decline mainly due to the competition from frozen and chilled products, coupled with a lack of innovation. This has resulted in a general downward trend throughout Europe (Young and Holmes 1991 p.3/4, Wood 1990 p.14).

1.4.2c Ready Meals

On the Irish market, ready meals have experienced rapid growth and are expected to continue to do so over the next few years. This will be particularly due to the increasing use of microwaves in households.

Demand for this market has primarily stemmed from changing lifestyles and social patterns (IDA 1987 p.75, Checkout 1989 p.14). According to the PA Consulting Group (1992 p.4) successful ready meals are already in existence but there is a need for more. Similarly the Expert Group (1993 p.6/7) recommended that a complimentary industry or cluster of companies in ready meals should be encouraged as demand is growing both for direct retail sales and in catering. These type of products are forecasted to offer the main market growth opportunities in the future both within Europe and the UK (Todays Grocer 1991 p.6, Market Research Europe 1992 p.20, Food Ireland 1991 p.4).

1.4.2d Pizza, Pasta and Sauces

Pizza consumption within Ireland has increased by 250% over the past five years. This has mainly been due to changing consumer trends. The potential for further growth is evident especially considering that the UK market, which is deemed to be one year ahead of the Irish market, is also experiencing growth (Retail News 1992 p.19, Food Ireland 1992 p.31, Eurofood and Drink 1992 p.15,17, IDA 1987 p.68). Although successful pizza products are already in existence, there is still a need for more (PA Consulting Group 1992 p.4, Expert Group 1993 p.6/7/25). Another area of Italian cookery also recording major growth lies in pasta and complimentary sauce products. On the Irish market consumption of pasta has shown a 100% increase from 1,000 to 2,000 tonnes per annum over the past few years (Checkout 1990 p.26, Retail News 1992 p.19, Checkout 1991 p.40, Consumer Choice 1991 p.92). This growth is expected to continue since pasta consumption in Ireland, compared to other countries, is still quite low. Consumers are also experimenting with different types of pasta which has led to the demand for speciality pasta. Market and social trends for convenience, upmarket and healthy products has led to new product developments, such as light, microwaved and ready meal pasta's (Checkout 1991 p.40-

43, Checkout 1990 p.26-27, Sunday Business Post 1993 p.20, Market Research Europe 1990 p.1). Pasta is expected to offer one of the main growth opportunities in the future (Market Research Europe 1991 p.1, Expert Group 1993 p.25, Irish Trade Board 1992 p.52/61, Sunday Business Post 1993 p.20, Boyle 1993 p.7). In addition, the Irish Trade Board has identified a need for tomato sauce production to compete with imports which are currently valued at £13.52m (note that pasta sauce is only one variety of tomato based sauces). This reiterates the necessity for more new product development (Checkout 1991 p.42, Retail News 1992 p.20, Retail News 1992 p.17, Checkout 1990 p.27, Todays Grocer 1990 p.22, Sunday Business Post 1993 p.20, Irish Trade Board 1992 p.61).

1.5 INFLUENCES ON THE IRISH FOOD INDUSTRY

1.5.1 Institutional and Regulatory Changes

'The development of the food industry in Ireland in the next ten years will be dominated by institutional and regulatory changes ' (O'Neill 1991 p.17). Many forces are operating within the food industry and the resultant outcome is that change is inevitable. A number of these developments will provide opportunities for some companies, disadvantages will accrue to those who refuse to take cognisance of the situation and fail to adapt accordingly (O'Neill 1991 p.17). Specifically, the principal forces of change in operation include the EU single market programme, the GATT Negotiations and the CAP Reform (PA Consulting Group 1992 p.88, Expert Group 1993 p.4, O'Neill 1991 p.17, Euromonitor 1989 p.66). Consumer and market developments will also act as catalysts of change.

The main effect of the EU single market will be increased commercial pressure and the likelihood of impacting more on food manufacturers than farmers (Expert Group 1993 p.4, PA Consulting Group 1992 p.88).

In order to remain competitive, manufacturers will need to produce and market products on a pan-European basis. This trend favours the larger companies, whilst small manufacturers will have to rely on supplying identified market niches and segments (PA Consulting Group 1992 p.88). EU food legislation may also hinder the flexibility presently enjoyed by some food manufacturers in the community (Expert Group 1993 p.4). The Expert Group (1993 p.12) recommend that success for Irish companies in competition with European rivals will stem from ***'quality, new product development, niche marketing, flexibility, strategic acquisitions and alliances and price competitiveness'.***

The GATT negotiations offer a dichotomy of both opportunity and threat to the Irish food sector. Benefits may accrue from a reduction in cereal prices which will have a positive effect on Irish agriculture. The main drawback is likely to be a reduction in export refunds which previously accounted for over $300m per year to Irish food exporters. In line with past experience those products which suffered from a decline in export refunds would have been offered for intervention sale. The situation is further exacerbated as the CAP reform attempts to dismantle intervention prices. By reducing these market supports some sectors of the EU food industry are likely to experience a downward pressure on both supply and prices (Expert Group 1993 p.12, PA Consulting Group 1992 p.88). This will ensure an intensification of competition in food products.

For many years since joining the EU, Ireland has gained from the price and market support policy under the CAP, mainly through the transfer of substantial financial resources. Products which failed to find worthwhile markets were guaranteed sale through intervention with annual increases in price. This support system encouraged major market distortions, large scale surpluses, an emphasis on commodity production and significant costs for both taxpayers and consumers. Currently, a major reform is underway which aims to redress the

situation by reducing intervention prices. Both the Expert Group (1993 p.12) and PA Consulting Group (1992 p.95) advise that Irish food manufacturers must now employ a strategy of developing products demanded by the market, if they are to remain competitive. According to Shanahan (Irish Times 1988 p. 6) ***'it is a matter of survival for the Irish food industry that the sophisticated European, and even American, markets want what we produce and that we produce what these markets want, since we export more than three quarters of what we produce'.***

Condon (1987 p.6) criticises the Irish food industry for becoming too dependant on the CAP and failing to recognise that intervention was a short term solution. Instead companies should have been concentrating on the world market as an avenue for its products. The PA Consulting Group (1992 p.48) suggest that intervention has often been so attractive that organisations have failed to develop products which satisfy final consumer markets. Nevertheless, in the immediate future, the Irish food industry is likely to experience considerable uncertainty in light of the CAP reform and the present GATT negotiations. The only certainty is that the development of Ireland's agriculture and food industries is very much dependant on these forces of change (Expert Group 1993 p.4, PA Consulting Group 1992 p.2/95).

1.6 CONCLUSION

The Irish food industry is one of the most important sectors in the home economy and, by its very nature, is unique. In particular its uniqueness is derived by specific supply and demand related factors and forecast institutional and regulatory changes. Furthermore, if the industry is going to remain competitive, it needs to concentrate its resources on successful new product development. However, the question is raised as to whether the uniqueness of the industry will have an effect on the outcome of new products developed in the Irish food market and in turn what the implications are for future new

product development within the industry. In order to answer this question, chapter two will investigate key success and failure factors identified in previous studies while chapter three will examine specific aspects of the new product development process conducive to success. This will be done with a view to identifying if these factors are present within the Irish food industry and whether they, coupled with the unique nature of the industry, contribute to the ultimate success or failure of new products launched on the Irish food market.

Chapter 2

Key Success and Failure Factors in New Product Development

2.1 INTRODUCTION

'Firms report many problems and constraints in the creation of new products and the high failure rate (of products) which reach the market, gives further cause for concern" (Fletcher 1990 p.20). Marketing literature on new product development is replete with reportage on various experimental and field studies demonstrating that there is a pattern to success and failure, and that critical factors influencing new product outcomes have been identified. The previous chapter identified the importance of new product development within the Irish food industry and, more importantly, successful new product development if Ireland is to remain competitive. Therefore, this chapter reviews contemporary opinion regarding the reported level of new product success and failure rates and outlines a conceptual model of new product outcomes. In addition, an attempt is made to refine the numerous amount of critical success factors identified in previous research, into a number of key themes. The purpose of this is to provide indicators for assessing the outcome of new product development in the Irish food industry.

2.2 DEFINITIONS AND MEASURES OF SUCCESS AND FAILURE

Many authors have tried to measure the success rate of new products, each has used different descriptors of success, according to the criteria used by management to evaluate their products (Kraushar 1977, Crawford 1977, Hopkins 1980, Cooper and Kleinschmidt 1987). This has resulted in little consensus and much confusion as to the best definition. According to Susan Hart (1992 p.404) *'however prolific, scientific and insightful the various contributions have been, there is a notable lack of cohesion regarding its lynchpin, namely, the meaning of 'success ' in new product development'.* She stresses that it is vital to have a good understanding of how to define and measure success, if one wants to comprehend the factors that contribute to or inhibit it. Kraushar (1977 p.29) acknowledges that there is no precise definition of success and adds that descriptions will

vary according to different companies. In his opinion, theoretically a new product can be perceived a success, if it achieves the company's development criteria. However, in practice, criteria are rarely established, and so a product is often deemed a success if management simply feels that the results are satisfactory. This approach was employed by Hopkins (1980 p.4) in a survey on new product winners. Success was defined as a major new product which *'met management's original expectations for it in all important respects'.* Conversely, failure was interpreted to mean that the expectations were not reached. Crawford (1977 p. 51) reviewed various definitions used in the literature and recommends that this is the best method employed.

In order to determine whether a new product has either failed or succeeded, the outcomes must be measured in some way. Crawford (1987b p.21) suggested the following alternatives to have been frequently used. They may be categorised under three main headings based on the focus of measurement:

1. Success based on specific product criteria if it:-
   - has a certain degree of technical uniqueness
   - has a given degree of comparative advantage
   - sufficiently diversifies the firm's market offerings
   - protects a firm's market position

2. Success based on financial criteria if it:-
   - achieves a given level of sales
   - reaches a given level of profits
   - yields a satisfactory return on the total investment in product innovation

3. Success based on specific management criteria if it:-
   - passes the test market and is launched nationally
   - sells sufficiently to keep it on the shelves of wholesale and retail

firms being audited by the various market research services

- meets the expectations of the managers who marketed it

Hart (1992 p.405) and West (1992 p.39) agree that a broad range of financial measures of performance predominate in new product development literature. However, Cooper and Kleinschmidt (1987 p.215) suggest that financial measures of success may actually be inadequate; that these definitions are too narrow and may in fact have had detrimental effects on the field of product innovation. This view is supported by Maidique and Zirger (1985) who note that *'while financial return is one of the most easily quantifiable industrial parameters, it is far from the only important one'.* For example, a new product may achieve a limited financial return, yet be considered a great success because it had a major impact on its market or introduced a new technology to the industry or opened up a new window of opportunity for the firm. Furthermore, many researchers opt for only one measure of financial performance such as sales or profits. Yet on further examination, Hart (1992 p. 417) found that sales and profits cannot be assumed to be *'alternative indicators'.* By using either measure in isolation, an accurate reflection of financial success may not be achieved.

Other authors have instead chosen to measure success using non-financial criteria (Craig and Hart 1991 p.9). These include, importance of new products/amount of new product activities (Cooper 1984, Johne and Snelson 1988), proficiency of new product activities (Cooper 1984), degree of innovativeness of new products (Nystrom 1985), opening up of new markets (Cooper and Kleinschmidt 1986, 1987b,c), a technological race with competitors, cost reduction and price competitiveness, return-on-investment by being first to the market, research and development projects undertaken in the last five years, number of new product launches and the percentage of successful launches (Hart 1992 p.414), opportunity window and finally market impact (Cooper and Kleinschmidt 1987a p.216).

Although many authors have offered a multitude of criteria for success, this is not necessarily reflected in the way that companies actually measure it. Barclay et al (1990 p.17) specifically asked survey respondents to define exactly what their company regarded as a successful new product. The most frequently cited definitions included achieving the expected profit and market sales/share. However, twenty percent of the sample judged a product a success on whether it met the required quality standards, while ten percent were concerned whether the product was delivered on the specified launch date. Furthermore, these criteria were perceived as being crucial to achieving the required level of sales, which in turn would ensure the profit objectives were accomplished. This implies that companies are mainly concerned with the financial implications of success. Surprisingly though, the research found that companies lacked accurate or quantitative measures of new product success.

It is evident that there is no one clear definition of success, ***'success does not appear to be a simple one-dimension concept but rather a multi-dimensional concept consisting of both financial and non-financial measures' (Cooper and Kleinschmidt 1987 p. 217).*** A firm which examines only one aspect of success, such as financial performance, may ignore the underlying dimensions that contribute to a firm's overall performance. In this situation, the firm's myopic view may have a detrimental effect on future product strategy. Baker (1975 p.16) believes that because success or failure cannot be judged using a universally accepted measure, it ultimately rests with management, who must reach a conclusion based on their own criteria. Barclay et al (1990 p.23) recommends that an appropriate solution would be to measure new product success against initial plans and objectives and monitor it accordingly throughout the life of the product. This should result in a more efficient use of scarce resources. What is apparent from the literature, is that there is much debate concerning the appropriateness of particular measures of success, but as yet this issue has not been fully explored by the available literature

(Craig and Hart 1991 p.9). This remains an essential flaw in new product development research because as Hart (1992 p.404) states *'clearly the way in which new product success is defined, influences the findings which describe the factors contributing to new product success'*. It also has a profound effect on the reported success and failure rates (Hisrich and Peters 1984 p.15).

2.3 SUCCESS AND FAILURE RATES

The whole area of new product development addresses not only the issue of key success factors but also those factors that might engender failure. The high incidence of new product failure has long been acknowledged, although there is much variation in the literature as to the average failure rate (Johne 1985 p.l, Craig and Hart 1991 p.2, Hisrich and Peters 1984 p.14, Cooper 1986 p.15).

Hopkins (1980 p.4) states that *'all too often, loose talk about high rates of failure reflects imprecise dividing lines between what may appropriately be classed as 'success' or 'failure'*. This is a commonly held view by many authors who suggest that the differences in reported failure rates stem from variations in the products being measured, the methods used and the stage in the development process when calculated (Foxall 1988 p.231, Kraushar 1977 p.l9, Crawford 1987b p.21, Hopkins and Bailey 1971 p. 20).

West (1992 p.39) is reluctant to evaluate performance based on management's concept of success. In his opinion, management may be too concerned about their authority and prestige and thus may tend to present an unrealistic or overrecorded amount of successes. Similarly Davidson (1987 p.333) suggests that a manufacturer's view of success is likely to be *'unduly favourable'*. Regardless of this, Crawford (1979 p.9) has concluded that *'the exact failure rates don't really matter - whatever the true rates, they are high enough to warrant attention'*. Cooper (1982 p. 215) supports this view and questions whether *'any economy, industry or firm could survive with failure rates as high as ninety percent or even fifty percent'*. In an Irish

context, Tomlin and O'Sullivan (1985 p.65) reported that new product development mainly consists of low risk minor innovations such as product line extensions and slight product modifications and, therefore, these often result in a one-hundred percent success rate. This type of innovation induces comparatively little adoption or novelty and has little impact on performance. Nevertheless, a relatively high percentage success rate among Irish companies is achieved with major innovations. The research found that established companies produce a successful major innovation every three years, while newer companies do so approximately every nine months. In addition, the success rate of established companies was estimated to be sixty-eight percent, while that of newer companies was ninety-eight percent. Furthermore, almost three out of four new products developed for established markets were successful, while fifteen percent of new to the world products succeeded. According to these authors, it appears that in an Irish context,overall success rates are high for every type of innovation and company.

In comparison, the Booz Allen and Hamilton survey (1982 p.14) discovered that 67% of products fail in development or testing, while about three percent fail after commercialisation. The reverse situation occurs among Irish companies, with more failures resulting after commercialisation rather than during development. In addition, greater success accrues with new products which are more familiar to the company (such as improvements or line extensions) (Tomlin and O'Sullivan 1985 p.65).

In contrast in the food industry, there is no widespread agreement as to the level of success achieved by new products. For example, in 1976, Davidson (p.119) suggested that the failure rate was fifty percent. By 1987, this had increased dramatically to ninety percent. Goold and Campbell (1989 p.130) estimated it to be a more conservative seventy-eight percent. Meanwhile, a British study identified a similar failure

rate of seventy five percent (Byrne 1987 p.13, Cowan 1989/90 p.6). Again, caution must be stressed in reading these figures due to a lack of common definitional criteria in the different studies. Gorman (1989) provides a note of optimism and states that a one in ten success rate over a ten to fifteen year period, should easily generate enough resources to cover the other nine failures.

Due to the disparity of reported failure rates, Crawford (1979,1987) conducted an investigation of firms new product results and concluded that *'most reported values, now accepted as fact in the literature, were originally based on speculation, on personal claims or on studies of questionable scientific merit'.* Only seven reported results were deemed accurate and these indicated failure rates of approximately thirty-nine percent for consumer products and thirty-one percent for industrial products. This coincides with the opinion of many authors who estimate that the success rate has remained fairly consistent, at approximately two thirds of commercialised products (see table below).

Study	*Year*	*Failure Rate*
Conference Board	1964	30%
Booz Allen Hamilton	1968	37%
Hopkins	1980	40%
Booz Allen Hamilton	1982	35%
Tomlin & O'Sullivan	1985	32%
Foxall	1988	33%

Table 2.1: Reported Failure Rates

Source: Conference Board Study 1964, Hopkins 1980, Calantone & Cooper 1981, Booz Allen Hamilton 1968, 1982, Tomlin & O'Sullivan 1985, Foxall 1988.

Foxall (1988) is disheartened that there has been no improvement considering the plethora of management techniques and procedures

which have been developed over the past twenty five years. Nevertheless, he recognises that some companies have exceeded the average success rates and it is possible to identify common factors which may have led to their improved performance. It has been noted that these figures are less pessimistic than originally reported and are far from satisfactory, although some companies appear to be content with them (Crawford 1977 p.51). For example, Wind and Mahajan (1987 p.43) stress that ***' the percentage of new product failures is still alarming and any company embarking upon new product development faces a high risk of failure '.*** Several authors concur that this is partly attributable to a more competitive world which requires more resources and better management if success rates are to improve (Crawford 1987, Booz Allen and Hamilton 1982, Cooper and Kleinschmidt 1987).

Nevertheless, new products are essential to the growth and prosperity of most manufacturing firms (Cooper and Kleinschmidt 1987b p. 169). According to Booz Allen and Hamilton (1982 p.4) new product development will become even more important as new products are expected to account for forty percent of corporate sales and profits. Coupled with this, it is estimated that the number of new products introduced will double. This view is supported by Hopkins (1980 p.2), who noted that firms expected to be more dependent on new products in the future. Although for companies selling to consumer markets, future sales volume resulting from new products is not expected to be as dramatic as those selling to industrial markets.

Companies gain experience in introducing new products which enables them to improve new product performance (Booz et al 1982 p.6). If, as expected, companies do increase the number of new product introductions, then perhaps the learning experience may result in a higher success rate. Thus, ***'if businesses are to survive and prosper, managers must become more astute at selecting new product winners and at effectively managing the new product process from product idea through to launch' (Cooper and Kleinschmidt***

1987 p.215). Coupled with this, it is important to recognise that some failures are inevitable (Cooper 1986 p.17), but a reduction in the amount of failures will result in a greater utilisation of resources devoted to successful products (Rothberg, 1981 p.8). In spite of abundant research into the area, new product failures continue to occur. Notwithstanding the increased awareness of the need for improved practices, the results of many studies indicate that the success rate is still far too low and that a need exists to improve new product performance. This can only be achieved by examining past deficiencies as a method of developing prescriptive guidelines for the new product process (Cooper 1979 p.93). According to Kraushar (1971 p.21) ***'what is more rewarding and useful than the study of the failure rate, is analysis of actual failures, to establish whether there are any general principals which can be applied '.***

2.4 THE NEW PRODUCT DEVELOPMENT DILEMMA

A paradox exists in new product development where companies who do not develop new products are inviting a high level of risk, while the high failure rate of new products in the marketplace suggest that risk is also very much inherent in new product development (Kotler 1984 p.310, Davies 1987 p.10, Midgeley 1977 p.12). The financial cost of failure, in the extreme, may threaten the very survival of a company, whilst in the short-term will certainly result in a wastage of resources, which are frequently scarce in most companies (Baker 1975 p.17, Midgeley 1977 p.11, Davies 1987 p.10). Consequently, many companies are reluctant to engage in new product development or alternatively, opt for a conservative mix of new products, such as imitative or 'me-too' products (Kuczmarski 1992 p.5). Yet by so doing, they ignore the fact that greater financial return is always associated with a higher risk of failure (Crawford 1987 p.21).

Some authors argue that risk is a basic ingredient of new product development and that management must accept and learn to cope with

it. Companies should not fear failure; they should recognise that it is unavoidable in seeking success, and attempt to minimise risk rather than shy away from it (Kuczmarski 1992 p.15, Barclay, Benson and Lunt 1990 p.5). Schrage (1989 p.46) advances this notion even further and states that companies should learn how to fail, because success is a by-product of failure. He stresses that through experiencing failure, a company will strive for success and thus, it will eventually achieve it. Coupled with this, even though it is impossible to guarantee success, guidelines and procedures exist which are more conducive to improved performance and also reduce the level of risk in development (Midgeley 1977 p.12).

2.5 A CONCEPTUAL MODEL OF NEW PRODUCT OUTCOMES

New product success or failure does not appear to be amenable to any particular theory, rather a variety of factors have been identified as providing a useful insight into the understanding of new product outcomes. Conceptual models have been developed by Cooper (1979 p.94, 1980 p.ll) and by Maidique and Zirger (1984 p.202) who hypothesised that a positive outcome is derived from the interaction of critical components in the new product development process. The latter approach seeks explanations for success based on organisational and external entities which influence the outcomes of the development process. Similarly, Cooper's (1979 p.93) model highlights a distinction between environmental and controllable (organisational) variables and examines their individual and joint effect on new product success. The controllable variables describe the new product process and its output, whereas the environmental variables refer to the setting or environment in which a new product is developed.

Cooper (l980) examined the effect each of the individual variables had on the fate of the new product. Environmental variables were noted for their lack of impact on new product outcomes (there is one

exception, the compatibility of the firm's resource base with the needs of the venture is an important factor in new product success). Whereas in contrast, the controllable variables were found to have a significant impact on new product success. Thus Cooper surmised that *'the fate of new products appears to depend far more on variables over which the firm has control during the innovation process and not so much on situational or environmental variables' (Cooper 1980 p. 16).* These findings have serious implications for the way in which product ideas are initially screened. Traditionally, firms have tended to examine the environment as a method of assessing the feasibility of a new product project and then determined the controllable variables (for example the information needed, the activities to be undertaken). The results suggest that the controllable variables should be initially decided prior to any examination of the environment in which the firm operates.

On the basis of these research results and a review of more recent literature, Cooper and Kleinschmidt (1987 p. 169) redeveloped the conceptual model. The revised model links project outcomes to a number of key project descriptions. The relationship among all the variables are depicted in Figure 2. 1.

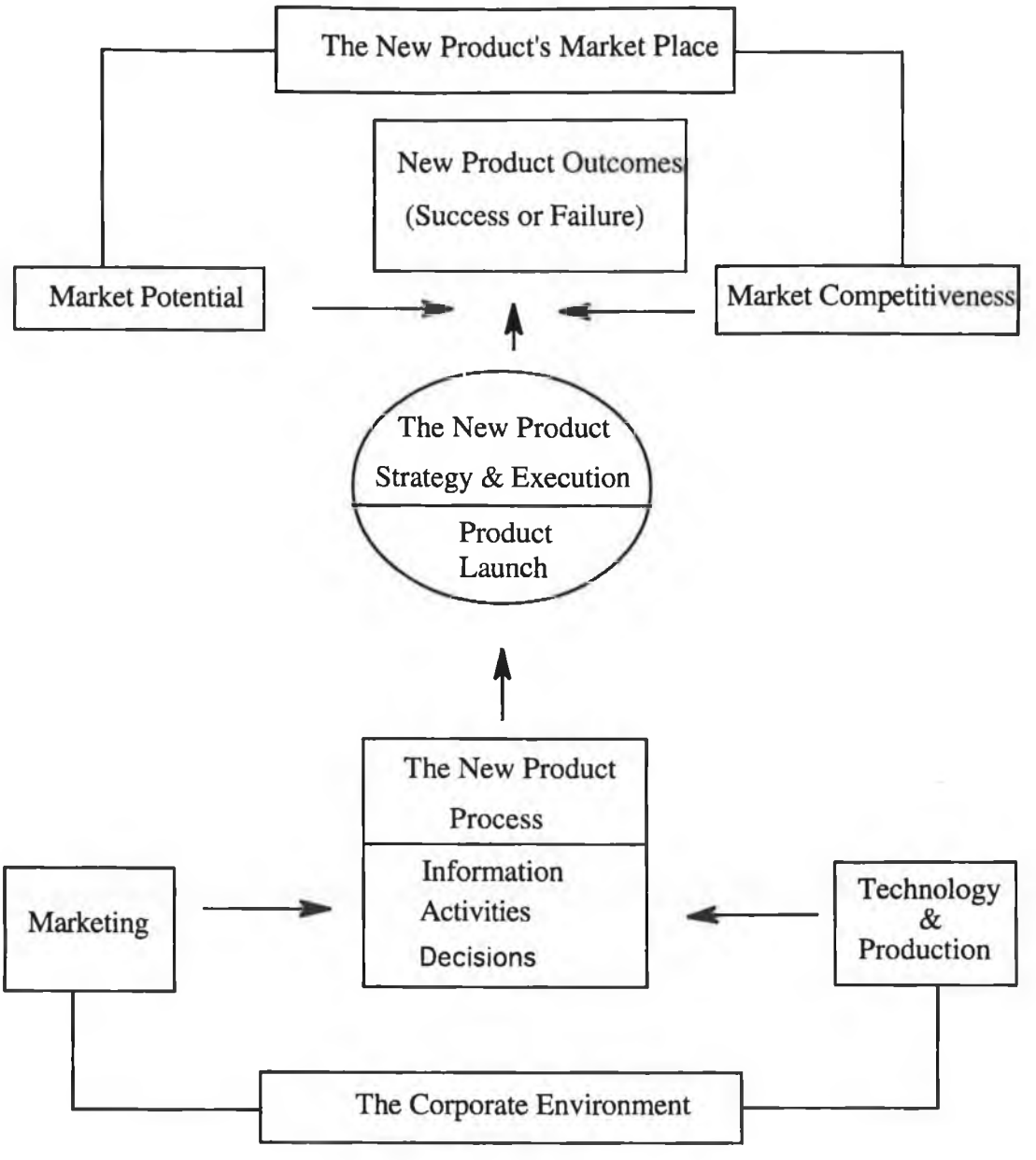


Figure 2.1 A Conceptual Model of New Product Outcomes
Source : Cooper and Kleinschmidt (1987a)

The model shows that the new product process takes place within the corporate environment. This environment consists of the resources, experience and skills in marketing, production and technology of the firm. This environment influences the new product process which in

return determines the new product strategy and execution (both the product itself and the launch). As a result of this, the outcome of the new product, either success or failure, is determined by the interaction of the market environment and the new product strategy and execution. It is important to note that the results did lend partial support to the conceptual model. Although a complete test of the model was not carried out, none of the results were in conflict with the model and therefore, Cooper and Kleinschmidt (1987 p.181) state that ***'the conceptual model appears to be a reasonable representation or model of new product outcomes'***.

One area of conflict has arisen between the findings of various authors. In his original study, Cooper (1980 p.12) identified that market variables were noted for their lack of impact on new product outcomes. In the revised model, Cooper and Kleinschmidt (1987 p.178) reevaluated this mainly because of the amount of attention it had received in the literature. They again found that market competitiveness was not a decisive determinant of new product success. In contrast, Maidique and Zirger (1990 p. 873) identified that it was a significant factor and that success was more likely to occur in markets with low levels of competition.

Perhaps the most significant finding by Cooper and Kleinschmidt (1987 p.182) was the validation of the earlier model which identified that controllable variables are the dominant factors in new product outcomes. The fate of new products rests within the company and it is the responsibility of the project manager and team to ensure that the new product process is managed and executed efficiently. The environmental/situational variables should only be incorporated as screening criteria for project selection. If this is adhered to, the ultimate result will be a positive outcome, namely success.

2.6 OVERVIEW OF PAST RESEARCH

Before describing the host of key factors relating to success and failure in new product development, attention must be drawn to the nature of the in-depth research conducted in this area. Recent years have witnessed a plethora of research studies in the field of successful new product development and several methodologies have been employed. The earlier studies tended to examine new product failure in the belief that by highlighting the causes of failure, those areas could be avoided in development. Conversely, other researchers concentrated solely on success. It has since been recognised that both of these approaches are inadequate and many authors now strongly disagree with their use (Cooper 1979, 1983, Calantone and Cooper 1981, Maidique and Zirger 1984/1990, Barclay, Benson and Lunt 1990, Barclay 1992, Craig and Hart 1991). ***'By focussing research on either just successes or failures, researchers ignore the possibility that the critical factors unearthed by the investigation, are also determinants of the opposite outcome' (Craig and Hart 1991 p 8).***

For example, by examining only key success factors, one cannot be sure that those factors are not also related to new product failures (Maidique and Zirger 1990 p. 868, Barclay et al 1990 p. 6, Cooper 1979 p.94). This flaw can be overcome by investigating the critical factors in both success and failures. Subsequent studies have employed this approach because it would appear that ***'in order to uncover success factors one must identify characteristics which discriminate between commercial success and failures ' (Cooper and Kleinschmidt 1987b p. 173).***

Differences exist between all of these studies that are not just confined to whether success and/or failure was examined. Operational definitions, sample sizes, methodological approaches, analysis techniques and type of respondent all vary throughout the different research thrusts. Nevertheless, despite the diverse approaches, there is much consistency in the findings (Craig and Hart 1991 p.12, Barclay

1992 p.255, Barclay et al 1990 p.6, Lilien and Yoon 1989 p.4). This leads Barclay (1992 p.255) to surmise that *'the factors leading to success (and failure) have remained largely unchanged throughout the time period '*. However he fails to recognise that the reason for the similarity may stem from the fact that the studies tend to derive the variables for investigation by examining previous literature (Craig and Hart 1991 p.12). It is not surprising therefore, that there is analogy between the various critical success factors identified. Even when different methodological approaches were employed, the results were similar to previous research.

A common criticism has been that in spite of this extensive research into new product outcomes and the valuable results recorded, management is largely unaware of it and even more seriously, not practising it (Craig and Hart 1991 p.13, Midgeley 1977 p.14, Barclay 1992 p.255, Cooper 1983b p.2). It has been argued that this is mainly due to the presentation of the results and a lack of clear and meaningful normative guidelines which could be employed (Cooper 1983 p.2, Calantone and Cooper 1981 p. 48, Barclay 1992 p. 255, Barclay et al 1990 p. 11). Furthermore, one study specifically identified that less than seven percent of respondents were actually aware of the research into new product success and only half of them had attempted to apply the results in some way (Barclay et al 1990 p.19). According to Barclay, Benson and Lunt (1990 p.11) the hypocrisy of it all lies in the fact that *'authors keep concluding that management action is required, as if managers will automatically know exactly what action to take'*. Future research studies must be more amenable to management action and presentation of results should be easily translated into guidelines so that they are comprehensible to the very people that have to employ them. Otherwise the high incidence of new product failure will continue (Craig and Hart 1991 p.13).

The importance of examining critical success factors stems from a need to reduce the high failure rate, to provide better guidelines for the screening of new product projects and to glean greater insights into the way the new product project should be managed. This should result in improved new product performance and the continued competitiveness of most firms (Cooper 1990 p.27, Cooper and Kleinschmidt 1987b p.169, Maidique and Zirger 1990 p.871). According to Cooper (1990 p.27) though, success is not elusive, ***'there is a pattern to success, indeed significant differences emerge between successful and unsuccessful projects'.***

2.7 KEY SUCCESS AND FAILURE FACTORS

The increasing interest in new product success and failure determinants found in the literature has produced a vast amount of studies dealing with this topic. The intention of these studies is to probe the question of what constitutes a successful new product. This is achieved by examining past performance in an attempt to develop prescriptive guidelines for the new product process (Cooper 1979, p. 93). One must recognise though, that the factors identified are not intended to guarantee success, rather they were found to be associated with successful product innovation (Barclay et al 1990, p.6).

However, all of this research has resulted in an inordinate number of factors being identified. The necessity of reducing the amount of factors is evident. The practicality of a list in excess of one hundred and forty factors for managers involved in the new product development process, is at the very least debatable (Barclay 1992 p.256). The contribution of the literature to reducing the failure rate has disappointingly remained unchanged and this may be in part due to the overabundance of suggested success factors. In an endeavour to clarify the situation, some authors have further analysed the proposed factors and classified them under common themes, although

confusion has again arisen due to the differences in labels used.

Johne and Snelson (1988) categorised the results using the McKinsey 7S (skills, strategy, structure, shared values, style, staff, systems) framework to review factors that affect success at the project level. Lilien and Yoon (1989) employed a three dimensional framework based on whether the innovation was a product or process, the decision focus used and the level of managerial control. Craig and Hart (1991) recognised that the literature consisted of two separately identifiable components; generalist studies which concentrate on the factors contributing to the success and failure of new products and specialist studies which investigated specific areas of new product development in-depth.

Craig and Hart (1991) further identified key themes common to the generalist studies and which described the success factors in new product development. These include management, information, strategy, process, company characteristics and people. In essence, all of these approaches are based on the results of the same research findings, differences exist only in the way the information has been categorised and labelled. It must be noted that other authors have attempted a similar review but opted instead to examine the literature in chronological order (Barclay et al 1990, Maidique and Zirger 1984, 1990, Barclay 1992, Cooper and Kleinschmidt 1987b, Cooper 1983).

Due to the fact that so much has been written about new product success and the confusion that has arisen because of variations in methodologies and operational definitions, an attempt was made by this author to regroup the common findings in a more meaningful manner and thus provide a clearer presentation of the key success and failure factors. This is shown below where each of the studies identifying a common factor are grouped together. Furthermore, these correlates of success are subsequently used to devise a questionnaire for

identifying the specific key success and failure factors in the Irish food industry.

CORRELATES OF SUCCESS AND FAILURE

1. Product Advantage

National Industrial Conference Board	1964,1971,1980
Booz Allen Hamilton	1968, 1982
Utterback	1976
Cooper	1981, 1987a, 1987b, 1990
Maidique & Zirger	1982,1984,1990
Crawford	1987
Link	1987
Cowan	1989
Lilien & Yoon	1989
Barclay	1992

2. Market Potential

Rubenstein et al	1976
Cooper	1981, 1987a, 1987b, 1990
Maidique and Zirger	1982,1984,1990
Link	1987
Cowan	1989
Lilien and Yoon	1989

3. Market Competitiveness

National Industrial Conference Board1964,	1971, 1980
Cooper	1981, 1987a, 1987b, 1990
Maidique and Zirger	1982,1984,1990
Link	1987
Lilien and Yoon	1989

4. Marketing Synergy

Booz Allen Hamilton	1968, 1982
Kulvik	1977
Cooper	1981, 1987a, 1987b, 1990
Maidique and Zirger	1982,1984,1990
Baker et al	1986
Link	1987
Lilien and Yoon	1989
Barclay	1992

5. Technological Synergy

Kulvik	1977
Cooper	1981, 1987a, 1987b, 1990
Maidique and Zirger	1982,1984,1990
Baker et al	1986
Link	1987
Lilien and Yoon	1989

6. Protocol

Booz Allen Hamilton	1968,1982
Myers and Marquis	1969
Sappho	1972, 1974
Globe, Levy & Schwartz	1973
Roberts and Burke	1974
Townsend	1976
Utterback	1976
Rubenstein et al	1976
Cooper	1981, 1987a, 1987b, 1990
Barclay	1992

7. Proficiency of Predevelopment Activities

National Industrial Conference Board1964,	1971, 1980
Booz Allen Hamilton	1968, 1982
Myers and Marquis	1969
Sappho	1972, 1974
Globe, Levy & Schwartz	1973
Roberts & Burke	1974
Constandse	1975
Rubenstein	1976
Townsend	1976
Utterback	1976
Cooper	1981, 1987a, 1987b, 1990
Maidique and Zirger	1982,1984,1990
Cowan	1989

8. Proficiency of Market Related Activities

Sappho	1972, 1974
Globe, Levy & Schwartz	1973
Constandse	1975
Rubenstein	1976
Utterback	1976
Cooper	1981, 1987a, 1987b, 1990
Maidique and Zirger	1982,1984,1990
Crawford	1987
Link	1987
Lilien and Yoon	1989
Barclay	1992

9. Proficiency of technological activities

National Industrial Conference Board	1964, 1971, 1980
Sappho	1972, 1974
Globe, Levy & Schwartz	1973
Constandse	1975
Cooper	1981, 1987a, 1987b, 1990
Voss	1985
Link	1987
Barclay	1992

10. Top Management Support

Booz Allen Hamilton	1968,1982
Sappho	1972, 1974
Constandse	1975
Rubenstein et al	1976
Utterback et al	1976
Cooper	1982,1984,1990
Maidique And Zirger	1982,1984,1990
Voss	1985
Baker et al	1986
Lilien and Yoon	1989
Barclay	1992

11. Firm Characteristics - Finance

National Industrial Conference Board	1964, 1971, 1980
Globe, Levy & Schwartz	1973
Cooper	1981, 1987a, 1987b, 1990
Maidique And Zirger	1982,1984,1990
Voss	1985
Baker et al	1986
Crawford	1987
Link	1987

12. Firm Characteristics - Marketing Mix

National Industrial Conference Board1964,	1971, 1980
Sappho	1972, 1974
Utterback	1976
Cooper	1981
Maidique and Zirger	1982,1984,1990
Voss	1985
Link	1987
Cowan	1989

13. Organisation Structure & Style/Human Resources

Myers and Marquis	1969
Sappho	1972, 1974
Globe, Levy & Schwartz	1973
Roberts and Burke	1974
Rubenstein et al	1976
Townsend	1976
Maidique and Zirger	1982,1984,1990
Voss	1985
Baker et al	1986
Crawford	1987
Link	1987
Lilien & Yoon	1989
Barclay	1992

The thirteen correlates of success may be further categorised into two main areas: controllable variables (that is variables over which management has control), and those which relate to the environment (that is the setting in which the new product is launched).

Controllable Variables: Product Advantage, Proficiency of Activities, Synergy, Organisational Structure and Style, Firm's Characteristics.

Environmental Variables: Market Potential and Market Competitiveness.

The interrelationship between the various correlates of success is further addressed in the methodology section, where a conceptual framework has been devised to show how the factors interrelate. Overall though, it is evident that success is a multi-dimensional concept. The reported research provides a vital insight into the critical success factors in new product development. The single most important dimension appears to be product uniqueness and superiority, although other factors were found to have a significant effect. If one reviews the results over time, it is surprising to note how little change there has been in the findings coupled with the recurrence

of the same key criteria in many different research studies in various countries. This is quite surprising when one takes into consideration the increased competitive environment, significant technological change and shortening product life cycles. However, failure to recognise that there is a key to new product success and implement the necessary research findings will only lead to the maintenance of the presently high failure rates. As Cooper (1990 p.27) states ***'an accurate understanding of why new products succeed or fail is vital to improving new product performance'.***

2.8 CONCLUSION

This chapter has shown that there are various measures which can be used for identifying the level of success and failure in new product development and, ultimately, for identifying key success factors. Furthermore, reported levels of new product outcomes vary enorously in the literature due to the differences in measures employed. Irrespective of this a clear pattern has emerged that distinguishes between successful and unsuccessful products. The most important factor appears to be having a unique superior product offering distinct benefits to the consumer, although an inordinate number of factors have been identified in past studies. However, by grouping together the common findings from previous research, thirteen correlates of success were identified, which could be subdivided into two groups of controllable and environmental variables. These variables will form the basis for designing the questionnaire for this research.

In order to conclude, Cooper and Kleinschmidt (1987c p.189) state that ***'investigations into new product success and failure are central to uncovering the key criteria for project selection and the clues to more effective process management'.*** It is only by evaluating the strategies adopted by firms and examining the processes used, that the secrets to new product success and failure may be identified Therefore, the next chapter will examine the new product

development process with a view to understanding how it can play a key role in influencing new product outcomes.

Chapter 3

New Product Development

3.1 INTRODUCTION

Many of the key studies which probed the issues surrounding new product success and failure, examined the vast body of literature describing the new product development process and its underlying influences, in attempt to identify the key success and failure factors. The purpose of this chapter is to investigate the nature and process of new product development with a view to understanding how success may be achieved. Furthermore, the insights gleaned from this will be used to develop a questionnaire for the research. The chapter will begin by highlighting the importance of new product development, followed by an examination of the degrees of product innovation and the new product development process. Finally, the dynamics and influences on the new product process will be discussed in greater detail.

3.2 THE IMPORTANCE OF PRODUCT INNOVATION AND NEW PRODUCT DEVELOPMENT

Many authors advocate the importance of new product development, especially as a strategy for future corporate growth and survival (Littler 1984, p.155, Booz Allen and Hamilton 1982, p.1, Skinner 1984, Drucker 1985 p.5, p.25, Barclay, Benson and Lunt 1990 p.5). According to Kraushar (1977, p.2) *'the case for innovation seems proved and nearly every company accepts it'*. He argues that this is evidenced by the continuation of new product activity even in climates where a poor economic situation might be expected to deter most companies. Indeed, many companies actually increase their development of new products and planned launches under these conditions. Rothberg (1981 p.4) cites the implications of not introducing new products and stresses that the business environment consists of many companies who have failed due to the neglect of new products.

Specifically in the food industry, manufacturers view new product development as an opportunity to expand value added, provide a defence mechanism against private labels and discounting, maintain a competitive advantage, gain brand leadership and maintain buoyancy in the market sector (Mayo and Denison - Pender 1985, p.205).

The need for new product development, crucial to the long term survival of business enterprises, may be stimulated by a host of internal factors. Littler (1984, p.156) suggests that (the need for) product innovation may stem from a lack of achieving corporate objectives (sales and profits) due to the inabilities of the existing product range and, or from the obsolescence of existing products. Other authors have referred to stage in the product life cycle as a determinant of innovation (Midgley 1972, p.ll, Kraushar 1977, p.4). For example Skinner (1984, p.25) stresses that as a product reaches the decline stage of the cycle, a company must plan for the eventual replacement of it through new product development. This involves either the extension of the uses of the product or the addition of something new.

The need for product innovation is also born out of environmental forces operating in the marketplace such as changing consumer preferences and sophistication of competition (Rothberg 1981, p.5), technological advances, changing market requirements, world market competition (Booz Allen and Hamilton 1982, p.l) and demographic and lifestyle changes (Urban, Hauser and Dholakia 1987, p.6). It is therefore evident that the need for product innovation is manifested in a variety of factors which arise not only from internal company forces but also from the external environment within which the company operates.

However, Kraushar (1977, p.7) stresses a cautionary approach to viewing new product development as a panacea. He observes that *'this attitude can lead to a new disease, 'new product hysteria'* which is typified by accelerated new product launches or acquisitions. In this scenario, if the

new product is unsuccessful, the resultant outcome may be the sustained inhibition of a company's progress due to both financial and psychological barriers. In addition, Littler (1984, p.159) recognises the risk associated with product innovation, mainly owing to the high proportion of failure on the market which, in itself, is a consequence of the uncertainty involved in development. Booz Allen and Hamilton (1982 p.5) identified that certain internal factors, such as a short term orientation by management, may become obstacles to successful new product development. Davidson (1987, p.344) also questions the return on investment by new products when one takes into consideration their reported low success rate, the level of long term investment necessary and the amount of management time required.

Yet common to other authors is the belief that the inherent risks associated with product innovation are more than offset by the advantages gleaned from launching a successful product (Littler 1984, p.159, Kuczmarski 1992, p.5, Johne and Snelson 1990, p.146, Crawford 1987, p.21). Coupled with this is the view that although success cannot be guaranteed, certain precautionary steps may be taken which will substantially reduce the risks involved (Midgley 1977, p.12). Davidson (1987, p.345) aptly summarises the overall situation by stating that *'new product investment is essential for all companies ... it is necessary both to secure their existing position and to achieve new competitive advantage as a basis for further growth. The costs and risks in driving to success are high. But the penalty for not taking part in the race will be eventual extinction. '*

3.3 DEGREES OF PRODUCT INNOVATION

There are varying degrees of product innovation extending from completely new products to simple style changes. According to Heany (1983 p.3) *'business managers need to understand the entire spectrum of product innovation in order to be able to compete effectively in the marketplace'.* Alternative sets of definitions and categorisations of new products have

been suggested in the literature. Booz Allen and Hamilton (1982 p.8) identified six categories of new products and found that a company's new product program typically includes a mixture of the following:

*New to the world products - these are essentially the first of their kind and create an entirely new market.

* New product lines - new products that enable a company to enter an established market for the first time.

* Additions to existing product lines - these are new products that enhance a company's established product lines.

* Improvements and revisions to existing products - new products that provide improved performance or greater perceived value and replace existing products in a firm's product line.

* Repositionings - essentially new applications for existing products which are targeted to new markets or market segments .

* Cost reductions - new products that provide similar performance and benefits at a lower cost.

Other contributors to the literature on the degrees of product innovation include Davidson (1987 p.327) who stresses the importance of differentiating between the various degrees of product innovation. This is because new brands and products viewed as a developmental activity will enhance a company's market position and enable it to grow, whereas it is myopic to view line extensions as similar. In effect their role is essentially to maintain a brands position.

Mayo and Denison Pender (1988 p. 206) defined new products in the context of the food industry but their categories were not of relevance to this study. Heany (1983 p.3/4) positions new products on an innovation continuum where each category implies a different level of risk involved. Kuczmarski (1992 p. 60) suggests an additional category titled licensed, joint ventured or acquired new product. These refer to new products that are obtained through licensing agreements, joint ventures or acquisitions from another company.

One of the limitations of the literature on new product development is its failure to classify new products appropriately. According to Craig and Hart (1992 p.10) ***'unfortunately, it is not always evident from the literature if research is aimed at one particular point on the continuum, and if so at which point, or whether the research includes products from the breadth of the continuum'.*** Cooper (1986 p.7) holds that the majority of new products are not innovations. The typical company portfolio consists mainly of line modifications, extensions and additions. Another important distinction between innovations and the other types of new products lies in the criteria used to measure their success. Schlossberg (1991 p.11) advocates that it is inappropriate to use return-on-investment for evaluating embryonic ideas. Instead, a long term focus would be more appropriate. The findings of Booz Allen and Hamilton's (1982) research is indicative of this. New product managers tend to be reluctant to introduce innovative new products, such as new to the world and new product lines, because their variability of return is greater.

According to a Conference Board Study (Hopkins 1980), the number of major new product introductions varies enormously from one company to another. On average industrial firms introduced eight new products over a five year period, whilst consumer firms introduced six. Booz Allen and Hamilton (1982) found the median number of launches was five. In an Irish context, a study by O'Sullivan & Tomlin (1985 p. 68/69) noted that Irish companies launched fewer products

than their American counterparts due to a more conservative policy. As competitors launch new products onto the marketplace, a gradual erosion will occur between the differentiation established by another company's products. Due to this dynamic situation, companies must take heed of such movements in the market and industry and develop and launch different types of new products (Davidson 1987 p.3).

In summary, the different approaches presented classify products according to the level of newness in, and varying degrees of, product innovations. For the purpose of this research it is felt that the Booz Allen and Hamilton taxonomy is the most appropriate. This is primarily because it was based on longitudinal research, extending from 1968 to 1981, and incorporating a large sample size of American companies (700). It is also one of the most frequently cited surveys in new product development research. It will therefore be used when examining the level of new product development in Irish companies.

3.3.1 Types of Product Innovation

As well as an acceptance that there are varying *degrees* of product innovation, the notion that there are different *types* of innovation is well supported in the literature; although much confusion surrounds it, mainly due to the difficulty in categorising the different product developments (Craig & Hart 1992, p.10). According to Ansoff (1965) product innovations may be characterised by the degree of technological change and the type of market (either existing or new) at which they are aimed. Similarly, Crawford (1987, p.25) contends that there is a distinction between innovations which are derived from technology and those which stem from the market. The supply-pushed or technology driven innovation is attained when a company develops new products based on a strong technical capability. The products derived from this process are then placed on the market. Conversely, demand-pull or market driven innovations arise from needs identified

in the market, which are then translated into new products. Both approaches can be successful but the market driven innovations tend to have a higher success rate and are more common in the typical new product process (Marquis 1981, p.21, Littler 1984, p.172, Cooper and Kleinschmidt 1986, p.76, Johne and Snelson 1987, p.133).

This approach of either technology-push or demand-pull innovation has now been replaced by the concept of dual drive product innovation. In essence, it refers to a combination of both approaches. According to Crawford (1991, p. 36) ***'neither technology nor markets can drive product innovation by themselves. They need each other for optimum performance'.*** Some authors make the distinction based on technological change alone and suggest that new products may be either evolutionary or radical. Evolutionary innovations refer to a process of continuous modification to and improvement on existing technology, which results in the creation of new products or product variations for existing markets (Littler 1984, p.156, Ramanujam and Mensch 1985, p.220). Axel Johne (1985, p.4) classifies this as 'incremental', incorporating the exploitation of less advanced technology. Whereas radical innovations relate to technological breakthroughs or inventions which result in the establishment of new markets for new products (Ramanujam and Mensch 1985, p.220, Gomory 1989, p.100).

Marquis (1981, p.14) insinuates that firms should pursue incremental innovations because they require lesser amounts of investment than radically new products and also they contribute significantly to commercial success. Cooper (1980) supports this argument and states that incremental innovations are more likely to succeed than radical ones.

3.3.2 Types of Process Innovation

Other authors stress the importance of process or systems innovation which involves reducing the costs of manufacturing existing products or improving their performance (Johne 1985, p.3, Abernathy and Utterback 1981, p.430). Tushman and Nadler (1986, p.76) describe it simply as *'a change in the way a product is made'*. In some cases, as a direct result of major system process innovations, minor product and systems improvements have occurred. According to Utterback and Abernathy (1975, p.641), as a production process develops over time, fundamental changes occur which may be characterised by an evolutionary pattern within a company.

Tushman and Nadler (1986, p.76) depict the differences between product and process innovation and demonstrate their effect on the types of innovations which a company may develop. The level of risk and learning is also acknowledged. They conclude that both product and process innovation may be achieved by those companies who can effectively manage to innovate for today, whilst simultaneously experimenting for tomorrow's new products.

3.3.3 A Conceptual Model of Process and Product Innovation

According to Johne (1985, p.5), both product and process innovation are of equal importance to firms operating in dynamic environments. Difficulty lies in achieving an optimum balance of the two. Other authors have used the 'life cycle' concept to illustrate the dominance of emphasis on either process or product innovations, suggesting that firms in different stages of evolution will develop different types of innovation (Abernathy and Utterback 1975, p.641/644, Utterback (1979, p.5). They further claimed the existence of two distinct cycles of innovation within a company - reflecting both product and process innovation. Utterback and Abernathy (1975, p.645) subsequently

developed a conceptual model depicting this scenario and characterised by three stages.

The primary stage is termed 'uncoordinated' typified by a process which mainly consists of unstandardised and manual operations. The process itself is fluid but generally inefficient. The next stage which evolves is called 'segmental'. Production systems are typically mechanistic, rigid and designed increasingly for efficiency. Finally the 'systemic' stage results when the process has become more highly developed and integrated. At this stage, improving or changing the process becomes increasingly difficult and costly. The relationship between the stages are depicted in the model below which hypothesises that firms will follow an evolutionary pattern of both product and process innovation.

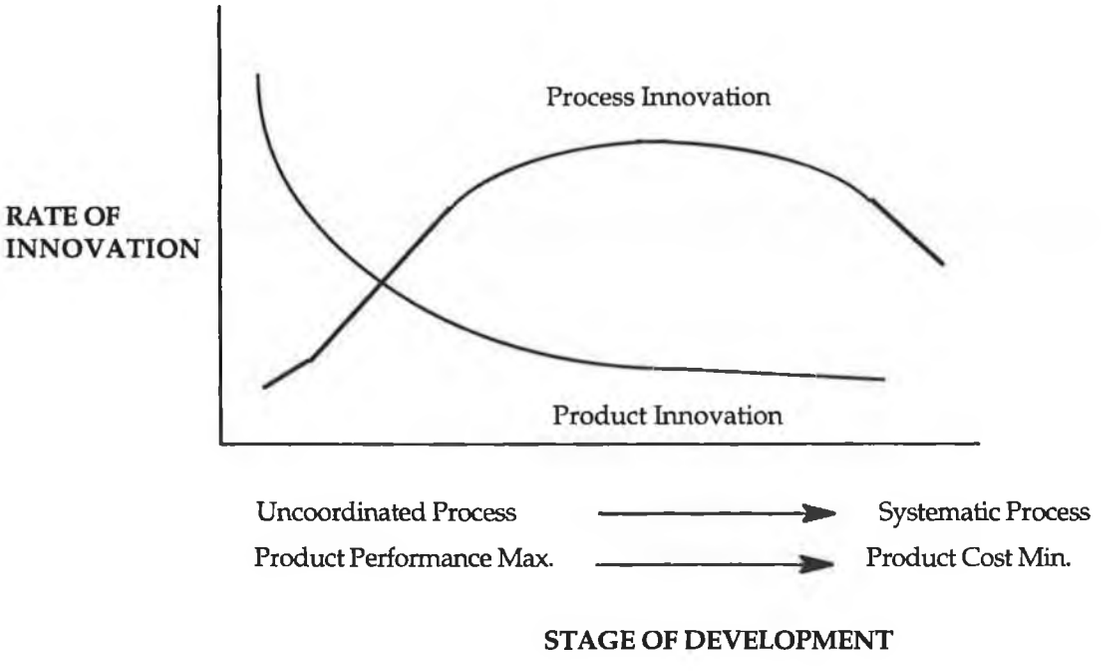


Figure 3.1 : Model of Innovation and Stage of Development
Source : Utterback and Abernathy 1975

It is advisable that a company maintains an appropriate mix of both process and product innovations. Cooper (1980) contends that process innovations are more likely to succeed than product innovations. Similarly, Abernathy and Utterback (1981, p.33) implied that for commercial importance, process and incremental innovations were more significant than product innovation. They discovered that process improvement resulted in a high rate of productivity improvement. In an Irish context one study supported this view and identified that established companies achieved a higher rate of success with process innovations (71% success) than with product innovations (58% success). Although newer companies were totally successful with both product and process innovations (O'Sullivan and Tomlin 1985, p.67).

3.4 THE NEW PRODUCT DEVELOPMENT PROCESS

The new product development process is believed to be a significant factor in the success or failure of new products. The process has been the attention of much research (Cooper 1979, 1983, 1988, Rothwell et al 1974, Maidique and Zirger 1984, Cooper and Kleinschmidt 1987). The process of new product development typically includes a series of activities, stages and decisions to be taken, which ultimately result in the launch of a new product onto the market (Cooper 1983a p. 1, Craig and Hart 1991, p. 21).

Various normative and descriptive new product models have evolved from empirical studies and are frequently cited in the literature (Booz Allen and Hamilton 1968, Myers and Marquis 1969, Little 1970, Utterback 1971, Rothwell 1972). These models were based on observation and analysis of many firms' actual behaviour and prescribe the actions a company should undertake. ***'Despite their phenomenal success in the 1980's, the validity and reliability of new product models has also been challenged' (Mahajan and Wind 1992 p.128).*** Although theoretically valid, the amount of stages involved in some of the

studies render them impractical. Examples include Klompmaker's (1979) twenty-seven step model for consumer goods and Hanan's (1970) detailed twenty-four flow diagram (Cooper 1983b, p. 6).

'Managing new products successfully requires a commonly applied, disciplined process that is consistently used and understood by all managers' (Kuczmarski 1992 p.161). There is no typical new product process, rather companies tend to use a variety of methods to develop new products, however these may be characterised by common elements. For example, Kotler (1986 p.337) proposes a unidirectional eight stage model consisting of idea generation, screening, concept development and testing, marketing strategy, business analysis, product development, market testing and commercialisation. An analogy exists between this model and a seven-stage model developed by Cooper (1983b p.6) for industrial products. The theory behind the models is essentially the same, differences occur only in the labelling of the distinct stages. Similarly another process was developed by Miaoulis and LaPlaca (1982) for high technology products. It involves only three stages of assessment, development and execution. Craig and Hart (1991 p.22) cite further models from the domain of design (Pugh 1983) and engineering (Pahl and Beitz 1984). In essence these process models describe a series of activities based on the evaluation of information, although details of the models may differ.

One model has received widespread attention throughout the literature. According to Boag and Rinholm (1989 p. 109), there is ***'little published disagreement'*** with the new product development process devised by Booz Allen and Hamilton (1968, 1982). Initially it consisted of a six-step model, but the model was refined and a new stage added following the results of their later study (Booz Allen and Hamilton 1982 p. 11). The process involves the following stages:-

1. **New product strategy development** - this stage is a recent addition to the process and involves specifying the strategic business role the new products should achieve.

2. **Idea Generation** - a systematic search for new product ideas to meet company objectives.

3. **Screening and Evaluation** - a quick analysis to determine and evaluate which ideas are pertinent and merit more detailed study.

4. **Business Analysis** - appraisal of the business attractiveness of the proposal incorporating sales, costs and profit projections.

5. **Development** - translation of the product idea into a physical product - generally in the form of a prototype.

6. **Testing** - the commercial experiments necessary to gauge consumer reaction to the new product. Also facilitates testing of the entire marketing program for the new products.

7. **Commercialisation** - launching the product via full-scale products and involving a commitment of the company's resources.

The rate at which new product ideas are screened out at successive stages in the process is characterised by a mortality curve. Booz et al (1982) discovered a dramatic reduction in the amount of new product ideas considered for every successful product launched from an average of fifty eight (1968) to seven (1982). Considering fewer ideas was also found to be a distinctive trait of companies with more successful products. It is suggested that the utilisation of a more sophisticated new product process led to this situation.

3.5 THE DYNAMICS OF THE NEW PRODUCT DEVELOPMENT PROCESS

3.5.1 Formal Process

A formal process will ensure that all necessary activities will be undertaken *'the more formalised the process is, the less likely is the possibility that a product will fail because some factor was ignored' Moore (1987 p. 9).* Many authors contend that new product success is closely linked to the use of a formal process (Boag and Rinholm 1989 p.118, Booz Allen and Hamilton 1982 p.6). This formal process should begin when developing the new product strategy and continue throughout the entire process (Moore 1987, Boag and Rinholm 1989). Some authors identified the use of formal methods to be seriously lacking in many companies across different industries (Boag and Rinholm 1989 p.120, Cooper and DeBrentani 1988 p.240, Johne 1993 p.25). Cooper and DeBrentani (1992 p.240) suggest that formal new product processes alleviate some of the deficiencies in companies new product activities and contribute to improved success rates and accelerated time to launch.

3.5.2 Sequential or Simultaneous Stages

The underlying notion behind many of the traditional new product development models, is that the stages should be undertaken sequentially (Kotler 1986 p.337, Booz et al 1982, Heany and Vinson 1984 p.23, Takeuchi and Nonaka 1986 p.137, Cooper 1988 p.247, John and Snelson 1987 p.138). This approach is characterised by communication problems due to the amount of participants involved (Heany & Vinson 1984 p.23). Coupled with this, it results in unnecessary time delays and incompletion of process activities (Cooper 1988 p.247). An alternative process has been suggested which takes cognisance of the need for speed and flexibility in new product development. Classified

as parallel processing or the rugby approach, it involves the simultaneous development of a product by various groups or teams (Cooper 1988, Takeuchi and Nonaka 1986, Johne & Snelson 1987). The resultant outcome is that more activities are undertaken in a shorter period of time, thus enhancing the speed at which new products may be launched on the market. The process is very much dependent on the integration of the people and functions involved (Craig and Hart 1992 p.27, Cooper 1988 p.247, Takeuchi and Nonaka 1986 p.138, Johne & Snelson 1987, Kennard 1991 p.187). The difference between the sequential and simultaneous methods are represented in the following diagram.

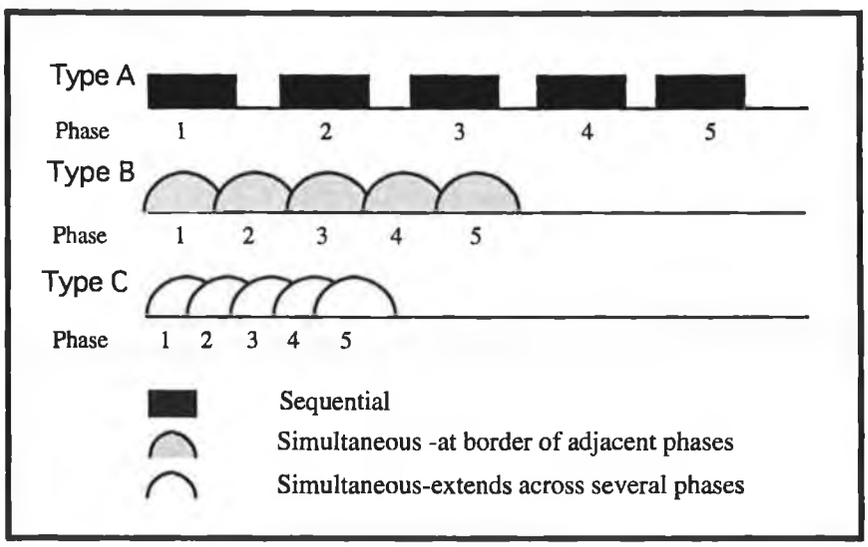


Figure 3.2 Sequential (A) and Overlapping (B and C) phases of development

Sources: Takeuchi and Nonaka 1986

Although Craig and Hart (1992 p.28) support the theoretical reasoning behind parallel processing, they stress the lack of research in demonstrating how it may be realistically achieved and suggest it needs to be further examined.

3.5.3 Completion of Process Activities

Although models of new product development processes are plentiful, they do not necessarily reflect the extent to which they are employed in practice. Craig and Hart (1992 p.25) question whether in fact they are *'far removed from reality'*. Moreover, Moore (1984 p.ll) suggested that products may not even complete all the stages in the process, the time spent at each stage may vary and the order in which they are executed may also differ.

Various studies have revealed that completion of the process is directly related to success, yet many of the stages or activities are omitted by companies. Furthermore, quality of execution of the process activities was identified as a strong contributor to success (Cooper and Kleinschmidt 1986 p.73, Cooper and Kleinschmidt 1993 p.91, De Brentani and Cooper 1992 p.235, Mahajan and Wind 1992 p.133, Dwyer and Mellor 1991 p.41). Another noticeable result was the finding that the up front or pre-development activities were pivotal to success. These relate to initial screening, preliminary market and technical assessment and a detailed market study. Yet, again, in terms of quality of execution, they were the weakest rated activities and were highlighted by management as the areas requiring the most improvement (Cooper and Kleinschmidt 1986 p.76, Cooper 1988b p.241/9, DeBrentani and Cooper 1992 p.239, Dwyer & Mellor 1991 p.41, Mahajan and Wind 1992 p.132).

Crawford (1984 p.85 - 91) suggests that the use of a new product protocol may enhance the execution of the predevelopment activities. In essence, there must be an agreement between marketing, technical and general management as to exactly what research and development aims to achieve. One other group of activities, namely the marketing activities, have been emphasised in the literature as being of critical importance to overall company performance (Cooper 1979, 1988,

Cooper and Kleinschmidt 1987, Maidique and Zirger 1984, National Industrial Conference Board 1964, Hopkins & Bailey 1971, Rothwell et al 1974).

3.5.4 The Need for Better Screening and Evaluation

Improved screening and evaluation focuses scarce resources on the better projects (Cooper 1992 p.114). Cooper and Kleinschmidt (1986 p.76) identified that initial screening was rated as one of the weakest activities in the new product development process and greatly in need of improvement. Furthermore, Crawford (1986) suggests that better evaluation can improve the chances of success ***'evaluation is a continuing flow of decisions, assessments and measurements, all designed to lead ultimately to a successful product being established in the marketplace'.*** Some authors have identified methods of achieving better screening and evaluation. They incorporate the notion of specific points or stages at which one can guage whether to proceed with or drop a new product idea (O'Meara 1961 p.83, Nayak 1992 p.48, Goltz 1986 p.245, Cooper 1988 p.242, Crawford 1984 p.54).

Cooper (1988, 1991) later proposed a stage-gate system for developing new products which incorporates decision points or 'gates' throughout various stages in the model. The gates act as preset evaluation points and are analogous to quality control inspection points on a production assembly line. This system tackles most of the issues raised in the literature. Firstly, it is a formal process which ensures discipline. It is also visible and relatively simple and thus requirements for each stage may be clearly understood by management. Parallel processing is a facet of stage-gate models and enhances timely completion of projects. Key activities are acknowledged and attention is focused on the pre-development and market-oriented activities. Finally the process, by its very nature guarantees better screening and evaluation and the resultant outcome is improved execution of all activities (Cooper 1991

p.12).

3.5.5 Accelerating New Product Development

'Time to market is becoming a highly competitive issue for manufacturing companies and in the 1990's it may be the single most critical factor for success across all markets!' (Vesey 1991 p.12). The time required to develop a new product from the idea stage through to launch, has been the focus of much attention due to the rising costs associated with slow product development (Gupta and Wileman 1990 p.24), increased competitive pressures and rapid technological change (Gupta and Wileman 1992 p.28). The need for accelerated product development stems primarily from a decrease in the typical life cycle of a product which requires replacing obsolete or mature products at a faster pace (Rosenau 1987 p.27, Millson, Raj and Wileman 1992 p.53, Uttal 1987 p.54). Advantages accrue to firms who are first to market and even to be a successful later participant requires more rapid development (Uttal 1987 p.54, Millson, Raj and Wileman 1992 p.53, Rosenau 1989 p.29). According to Uttal (1987 p.54) it is an essential requirement as *'leisurely product introductions look more and more like corporate suicide'.*

A variety of techniques for achieving accelerated development abound in the literature such as parallel processing (Kraushar 1985 p.24, Millson, Raj and Wileman 1992 p.55, Takeuchi and Nonaka 1986 p.137, Uttal 1987 p.54) and employing modern technology (Uttal 1987 p.56, Vesey 1991 p.14, Rosenau 1989 p.33, Gupta and Wileman 1990 p.36, Millson et al p.210). The importance of team membership and interaction has also been stressed (Uttal 1987, Rosenau 1989, Slone 1991 p.73, Mabert et al 1992, Gupta and Wileman 1990), coupled with the role management plays (Gupta and Wileman 1990). Conducive to this is creating an effective organisational environment (Vesey 1991) or as Uttal (1987) proposes, even creating separate organisations, especially for this purpose. The new product development process itself has also

been under scrutiny. Millson et al (1992) recommend simplifying process tasks and eliminating delays between the tasks. Similarly Mabert et al (1990) advise reducing delays by compressing the time devoted to the initial phases. Crawford (1992 p. 191/2) further examined some of the ramifications of accelerated product development. In his opinion, hidden costs exist which may be manifested in this new approach. He claims that this method results in incremental innovation at the expense of breakthroughs, due to limitations in resources.

Within the food industry true innovations are a rarity, rather it has employed accelerated product development for many years. Furthermore, the high failure rates within this industry leads one to question the benefits of such an approach for this sector. Other drawbacks include unexpected inefficiency, the necessity of increased resources, increased costs and management time, organisational tension and confusion, and competitive pressures rendering the new product obsolete (Uttal 1987 p.57). Whilst Crawford (1992) acknowledges its importance he also suggests that until more empirical research has been conducted in this area, one should cautiously approach accelerated product development and recognise its limitations. However, common to other authors is the view that the benefits far exceed the disadvantages (Millson et al 1992, Vesey 1991 p.14, Gupta and Wileman 1990 p.25). Thus as one survey surmises ***'the question is not whether to accelerate new product development, it's how to best get a new product development acceleration plan implemented!' (Millson et al 1992 p.65).***

3.6 INFLUENCES ON THE NEW PRODUCT DEVELOPMENT PROCESS

3.6.1 Organisation for New Product Development

There is a general consensus in the literature that no perfect method exists for new product organisation, although considerable attention has been directed towards identifying ideal normative models of organisation (McTavish 1984 p.30, Sands 1983 p.31, Barclay, Benson and Lunt 1990 p.14, Francis and Winstanley 1988 p.250). For example, according to Tushman and Nadler (1986 p.83) *'no single organisation form is inherently more conducive to innovation than the next, each can either stimulate or retard innovation'*. Instead, a variety of organisation structures abound which are appropriate to different types of new product development, different types of companies and different types of products (Barclay et al 1990 p.4). Francis and Winstanley (1988 p.250) propose that management's choice is dependant on their particular circumstances. Smale (1985 p.82) recommends that the organisational structure should elicit an environment conducive to fostering creativity in a systematic way. However, it has been identified that the new product organisation structure is only a minimal factor contributing to the success of new products (Booz et al 1982 p.16, Kuczmarski 1992 p.204).

Cooper (1986 p.42) suggests that companies employ different organisational structures to satisfy the needs of product innovation. This is primarily due to the inability of the traditional structure to fulfil new product requirements. In addition, Sowrey (1987 p.23) believes that effective innovation cannot exist without effective organisation in a company.

Booz Allen and Hamilton (1982 p.13) found that almost fifty percent of companies use more than one type of organisational structure and that choice was associated with product-specific requirements. This view is

supported by McTavish (1984 p.31) who states that a formal organisation structure is suitable for incremental innovations, whereas radical innovations require a major organisational change. Similarly, Johne (1986 p.293) also draws a distinction between those structures necessary for radical as opposed to incremental innovations. Mahajan and Wind (1992 p.131) confirmed that firms organise in different ways for new product development. They suggest the most popular approaches are a marketing department, separate new product departments and specific new product development groups.

Organisational structures may be classified into two groups: free standing units include interdisciplinary teams (eg. new product committee), separate new product departments and venture groups (Booz et al 1982 p.15, McTavish 1984 p.41, Barclay et al 1990 p.15) and; functionally based units which consist of units that are part of existing marketing, planning, research and development or engineering departments (Booz et al 1982 p.13, McTavish 1984 p.41, Barclay et al 1990 p.15). However, establishing an appropriate organisational framework will not automatically guarantee new products success. Certain other organisational conditions are a necessary requirement to ensure efficient development.

3.6.2 The Need for Flexibility

'Successful new product development is not simply a matter of choosing a structure and management style to fill a given situation. It resides far more in management willingness and ability to change' (McTavish 1984 p.41). Urban and Hauser (1980 p.63) recognise that because a company is pursuing a strategy of new product development, the company is ***'plunging itself into the unknown'*** and therefore an uncertain future warrants organisational change where necessary.

Smaller companies, by virtue of their size, tend not to have a new products organisational problem. It is sufficient for them to pursue new product development through their existing structures and have little need for specialised approaches. Conversely, the various structures are more suited to larger companies who may consider more active projects (Crawford 1987 p.474, Barclay, Benson and Lunt 1990 p.22, McTavish 1984 p.38). As Johne (1986 p.292) stresses ***'the best structure will not guarantee results and performances, but the wrong structure is a guarantee of non performance'.*** Thus, as new product opportunities change over time, it is essential that companies modify their organisational structure (Booz Allen and Hamilton 1982 p.13, Johne and Snelson 1988 p.123).

3.6.3 Top Management Support

Numerous studies have acknowledged top managements' contribution to successful new product development (Johne and Snelson 1988 p.124, Sands 1983 p.28, Craig and Hart 1991 p.215, Barclay Benson and Lunt 1990 p.16, Booz et al 1982 p.3). However, it was identified that top management supported failures almost as frequently as success (Cooper 1990 p.29). Johne and Snelson (1987 p.134) suggest that lack of commitment by top management is characteristic of failure. Furthermore, they identified that active product developer firms were characterised by top management involvement, whereas less active firms were typified by distant top management.

Sowrey (1987 p.33) recommends that if top management takes an active role in product development and is seen to be committed to it, this will reverberate throughout the entire company, resulting in a commitment to new product development by all employees and thus a strong organisational structure will ensue. Similarly Kotler (1984 p.312) believes that responsibility for the quality of new product development work lies with top management. Bingham and Quigley (1990 p.47) outline a tripartite role for top management which involves specifying

the direction the new products should seek, providing leadership that creates an innovative climate in the organisation and employing procedures to coordinate and control the product development and its implementation. Hisrich and Peters (1984 p.102) suggest that a positive attitude by top management towards new product development will be reflected throughout the entire new process. Craig and Hart (1991 p.19) contend that the most important role for top management is to establish a climate conducive to new product development and disseminate this to the rest of the organisation to ensure a strong development culture. The overall organisational structure which management chooses should facilitate the creation of this corporate climate.

3.6.4 Selecting the right people

Achieving good project leadership is a major consideration in new product development. According to Craig and Hart (1991 p.220) ***'choosing the right person to lead a new product development project team is very important'.*** Various suggestions abound in the literature as to who this person should be and what qualities they should possess. Sowrey (1987p.33) proposes that someone senior should head the development team in order that commitment to new products is reinforced. He contends that this person should be competent, creative and a respected leader. Crawford (1987 p.483) states that it should be a general manager appointed full time as opposed to a functional specialist assigned on a temporary basis. Sands (1983 p.28) offers a compromise and recommends that the ideal person will have the ***'broad outlook of a generalist and the skills of a specialist'.***

Irrespective of the qualities required of them, many authors advocate the importance of team leaders (Crawford 1987 p.475, Johne and Snelson 1987 p.136, Cooper and Kleinschmidt 1993 p.97). This view is supported by Barczak and Wileman (1992 p.61) who stress that team

leaders have a significant impact on project performance because they motivate the team members to work towards a common goal.

The importance of a product champion has also been highlighted by many authors. This person may or may not be the team leader. The role of the product champion is viewed as guiding and managing the entire project and is characterised by total commitment to new product development (Craig and Hart 1991 p.220, Crawford 1987 p.485, Dwyer and Mellor 1991 p.43). Crawford (1987 p.485) suggests that this role is informal but it is becoming increasingly important for innovative projects. Overall it appears that a strong project leader is essential to manage the new product development process and those companies fortunate to have a product champion, may derive further benefits.

3.6.5 Assuring adequate communication, co-ordination and co-operation

It has been advocated that product innovation is a multidisciplinary process requiring integration of all the separate functional inputs (Gupta, Raj and Wileman 1986 p. 7, Johne and Snelson 1988 p. 125). It is suggested that functional integration occurs when ***' the create, make and marketing functions are well interfaced and coordinated' (Maidique and Zirger 1984).*** It has also been recognised that communication, co-ordination and co-operation between departments is vital to new product success (Sands 1983 p.29). Difficulties arise when there are differences in orientation or outlook between the various departments (Lorsch and Lawrence 1968 p.114, Sands 1983 p.29).

Alternative approaches to overcoming this situation have been proposed and include the use of a cross functional team, (Ancona and Caldwell 1990 p. 25, Lorsch and Lawrence 1965 p.115), new product departments, project teams, task force and venture teams and the establishment of informal communication links or the employment of

a formal liaison officer. Essentially these suggestions incorporate a formal approach to improving integration between functions (Lorsch and Lawrence 1965 p. 115, Sands 1983 p. 30. The benefits of functional co-ordination and integration are faster development time, cost savings and closer communication, ensuring that problems may be solved earlier in the process (Craig and Hart 1991 p. 29).

Integration between marketing and research and development has received special attention in the literature. It has been insinuated that this is due to the importance of attaining a fusion between technology and market led innovations (Craig and Hart 1991 p.219, Mansfield 1981, Gupta and Rogers 1991 p.55). The biggest barrier to achieving this integration stems from a lack of communication (Johne and Snelson 1988 p.126). Therefore improving communications and the flow of information between research and development and marketing could improve the situation (Craig and Hart 1991 p.219). Finally, Hise et al (1990 p.154) note that whilst marketing and research and development should be integrated, it should be done selectively. Conducive to this is the efficient selection of personnel and top management support.

3.6.6 Strategy Orientation

There are two basic strategies a firm may develop; a corporate strategy and a strategy for each product or market (Hisrich and Peters 1984 p.47). In recognition of the importance of new product development, many authors also stress the inclusion of a new product development strategy in the overall corporate strategy (Hart and Steenkamp 1991 p.1100, Goold and Campbell 1989 p.132, Barclay and Benson 1990 p.14). Booz Allen and Hamilton (1982 p.22) advocate that ***'the purpose of developing a new product strategy is to identify the strategic roles new products will play to fulfil corporate objectives'.*** They suggest that the formulation of a new product strategy should begin with the setting of corporate objectives, followed by the identification of a corporate growth role for

new products, a scan of the external environment, an analysis of the industry, an assessment of new product experience and internal capabilities and finally an appraisal of the corporate culture and product life cycle.

Furthermore, a growing body of evidence suggests that the creation of a new product strategy, embodied in corporate strategies and objectives, contributes to new product success and overall company success (Dwyer and Mellor 1991 p.39, Barclay and Benson 1990 p.10, Cooper 1984 p.6, 1987 p.184, Johne and Snelson 1985 p.122, Booz et al 1982 p.6). Meanwhile, lack of a new product strategy was found to be an internal obstacle to successful new product development (Booz Allen and Hamilton 1982 p.5). It is apparent that new product development should be guided by a new product strategy, which in turn should be derived from the overall corporate strategy.

3.6.7 New Product Development Strategy

A variety of alternatives exist by which the company may pursue a product development strategy. For example, a company may obtain new products either through acquisition or new product development. Acquisition involves the purchase of a company, patent or license of someonelse's product(s). New product development may stem from an internal research and development department or a joint venture in which two companies enter into an agreement to develop new products based on specific expertise in the area (Kotler 1986 p.335, West 1992 p. 170, Booz et al 1982 p. 24, Urban, Hauser and Dholakia 1987 p.322). Many companies combine several of these strategies, although some are preferable to others.

Crawford (1987 p.53) introduced the notion of a product innovation charter to guide management in devising a new product strategy. He contends that new product strategy is synonymous with corporate

strategy and should be developed in a similar way. Booz et al (1982) suggest that an integral part of this strategy is the identification of the roles to be played by new products - either market or company driven. For example, their study found that the two most common new product roles were defending a market share position and maintaining a position as a product innovator. In addition, the roles played by new products varied by industry and product type. Coupled with establishing strategic roles for new products, many companies also devise financial criteria as a yardstick to measure their performance. The most commonly used criteria are profit contribution, sales volume and return on investment (Mahajan and Wind 1992 p.131, Booz et al 1982 p. 11).

Common to other authors is the belief that there are a variety of strategic orientations which should be reflected in the new product strategy document (Craig and Hart p.17). One strategic option which has received widespread attention relates to the pursuit of a technological or marketing thrust in innovation (Nystrom 1985 p.25, Roberts and Meyer 1991 p.5, Johne and Snelson 1988 p.122, Moore 1987 p.8, Cooper 1985 p.179, Barclay et al 1990 p.21). The general consensus is that a balanced approach should be followed which combines both marketing and technology strategies into the overall new product strategy. Certain other conclusions were drawn by Cooper (1984 p.154, 1985 p.179-183), namely that firms adopt different types of new product strategies and that each is linked to a specific level of performance. He also surmised that it is imperative to adopt all the elements of the winning strategy, if a high level of success is to be achieved.

Although a new product strategy is advocated by many authors, some reservations have been made in the literature. For example, Hart and Steenkamp (1991 p.1100) question the extent of strategy development in most firms' new product programs and whether a lack of it is necessarily a disadvantage. Furthermore they suggest that many new

product successes do not stem from strategy, but rather from serendipity. This view is supported by Moore (1987 p.8) who found equal evidence that some innovations were not derived from a formal strategic planning system. He even suggests that by employing such a rigid technique, it may actually inhibit the generation of innovative ideas. Thus it is essential to ensure that the strategy is not too restrictive.

More recent research identified that company size was related to the formulation of new product strategies, with smaller companies less likely to have new product development strategies (Fennell et al 1991 p.35, Dwyer and Mellor 1991 p.43). A low level of new product strategy in companies may perhaps be explained by the fact that incorporating the strategy formulation into the development process is only a recent phenomenon (Booz et al 1982 p.10). However, the penalties for not having a new product strategy have also been cited. Basically, this may result in misappropriation of research and development resources, an unfocused search for new product opportunities and ideas and an unbalanced approach to marketing and technological requirements (Cooper 1984 p.50). Conversely, inclusion of strategy development as a step in the new product process results in a convergence of idea generation and screening with strategic objectives (Booz et al 1982 p.10). It has been argued that not only should a company employ a new product development strategy, but it should be reviewed and altered as the company's situation changes (Krubasik 1988 p.46, Goold and Campbell 1989 p.130).

Booz Allen and Hamilton (1982 p.20) summarised the situation and stress that companies most likely to succeed with new product development in the future will ***'implement a company - specific approach, driven by corporate objectives and strategies, with a well defined new product strategy at its core'.***

3.7 CONCLUSION

Every company needs a new product development program in order to keep abreast of changes in tastes, technology and competition. In particular, the marketplace today demands consistently new and improved products. Therefore, a company must actively pursue product development to ensure both growth and survival. However, management must realise that there are various different types of innovation, both process and product, which it may pursue. The choice is dependent on company specific requirements and constraints. Furthermore, the dynamics of the new product process and its underlying influences can affect the level of new product outcomes. Therefore, any analysis of new product development in the Irish food industry must take cognisance of these influences if the insights into new product success are to be gleaned.

Chapter 4

Methodology

4.1 INTRODUCTION

This chapter summarises the background to the research and specifies the research problem and objectives of the study. It also describes in detail the research and sample process, questionnaire design and data collection procedure employed, to carry out the research.

New products are vital to the growth and prosperity of most firms (Littler 1984, Booz Allen and Hamilton 1982, Skinner 1984, Barclay, Benson and Lunt 1990). Yet the importance attributed to new product development is not reflected in the level of success achieved by companies and the risk of failure remains high (Craig and Hart 1991).

In an attempt to provide guidelines for improving the success rates, many authors (Rothwell et al 1974, Rubenstein et al 1976, Maidique and Zirger 1990) identified that certain groups of factors facilitate a successful outcome, such as market, product and organisational factors, while Link (1987) also stressed the importance of variables relating to synergy. The numerous phases in the Project NewProd research (Cooper 1979, 1980, 1982, Cooper and Kleinschmidt 1987) concluded that the single most important criteria was having a superior product that delivered unique benefits to the user, which was similar to Cowan's (1989) findings. Therefore the main objective of this research is to determine whether differences exist in the development and launch of new food products onto the Irish market which ultimately affect the success or failure of the new product.

Although many studies such as the above have been conducted abroad, there is an insufficient amount of information relating to new product development in the Irish market and specifically to the food sector. It was thought best to focus this new product development research on a single industry, rather than across several industries, each with varying characteristics. Furthermore, past studies have been criticised

for investigating a broad array of industries in the research because it resulted in averages across industries, rather than specific findings to any one industry. It was implied that this has led to attenuated, and possibly misleading conclusions (Cooper and Kleinschmidt 1993). Thus by concentrating on one industry - such as the food industry, inter-industry differences and effects are eliminated, and the identification of critical success and failure factors, common in the industry, is facilitated. The food industry was chosen primarily because it has been recently recommended that Ireland can attain a significant competitive advantage in this sector, especially if it concentrates on new product development (IDA 1987, PA Consulting Group 1992, Expert Group 1993). In addition, the relative importance of the industry, coupled with its neglect in the literature, especially in terms of new product development, render it a vital area to be researched.

4.2 RESEARCH PROBLEM

Craig and Hart (1991 p.5) conducted an extensive review of previous new product development research and raised certain issues which must be addressed, before deciding the precise problem to be researched.

1. GENERALIST VERSUS SPECIALIST APPROACH

Over the last thirty years there have been a number of studies investigating the determinants of new product success. They may be divided into two categories:-

* **Generalist Approach** - studies here seek to identify the factors which determine the outcome of new product development, either success or failure. These studies investigate different 'sets' of variables in an attempt to evaluate their impact on new product projects and programmes.

*** Specialist Approach** - seek here seek to investigate one particular area of new product development with respect to its impact on success. For example, the best strategic approach for new product development success.

It was decided that for the purpose of this research, the generalist approach would be more beneficial, because the investigation was examining an area which has received little attention in the Irish market and literature.

2. LEVEL OF ANALYSIS

The question raised here is, whether to examine the outcomes of individual new product projects, or to focus on the distinguishing features of successfully innovative organisations. It was decided to opt for the former, as huge growth is evidenced in a particular segment of the Irish food market, whereas the organisations themselves appear to have remained fairly static. In addition, the nature of firms operating in Ireland tend to be small in comparison with the size of firms investigated in previous new product development research. This would hinder any comparison of results with the past studies and coupled with this, obtaining information about the organisations is not readily available or accessible.

3. SUCCESS, FAILURE OR BOTH

Based on the information obtained in the literature review, it was deemed necessary to evaluate both the success and failure of new products. (see Chapter 2, Section 2.6)

4.3 RESEARCH OBJECTIVES

According to Chisnall (1986 p.22) ***'the setting of research objectives is critical because they will decide the nature and direction of the entire research activities'.*** The drawing up of research objectives helps to determine the sampling

procedure, the data collection method and the method of analysis to be employed. Failure to properly determine the research objectives is a significant source of research error. Prior to formulating the research objectives, an analysis of the reported key success factors was undertaken in an attempt to reduce the vast amount of factors into more meaningful groups, consisting of common themes.

MAIN OBJECTIVE

Flowing from the research already summarised, the main objective of this research is to ascertain whether

' differences exist in the development and launch of new food products onto the Irish market which ultimately affect the success or failure of the new product'.

In order to determine this overall objective, a number of factors were examined which can be classified under two broad headings:-

1. Patterns Of Performance and Management Practices
2. New Product Success and Failure Factors

The first relates to general practices employed by companies in the development and launch of new products on the marketplace and the second refers to specific factors which may influence the new product outcomes and are directly related to the conceptual framework in Figure 4.1.

The issues arising in each of the two groups of factors are dealt with differently. Patterns of performance and management practices, although prominent in the literature, have not been given concentrated attention in previous empirical research. The approach to these factors therefore is less definitive, with the intention of

ascertaining whether they are factors which require more attention in the future. The key success and failure factors, on the other hand, have been drawn from items commonly tested in reported empirical studies. The approach here is more definitive, with the intention of confirming whether or not they are operative in this situation. These two areas of examination are formulated as two key objectives feeding into the overall objective.

OBJECTIVE 1 - PATTERNS OF PERFORMANCE AND MANAGEMENT PRACTICES

The objective here is to identify a profile of companies launching new food products on the Irish market and to determine if

'differences exist in the management practices of companies developing and launching new food products on the Irish market which results in their success or failure'

This objective was subdivided into eight parts. The following is a list of the sub-objectives which aim to provide the necessary information to support this key objective. They relate to the patterns of performance and management practices and are drawn directly from the literature. In order to identify the origin of each objective and sub-objective, the key sources in each section are outlined again from the literature. These topics were previously dealt with in greater detail in chapters one to three.

Sub-objective 1A - Amount Launched, Successful and Planned

Many authors advocate the importance of new product development especially as a strategy for future corporate growth and survival (Littler 1984, Booz Allen and Hamilton 1982, Skinner 1984, Barclay Benson and Lunt 1990). It is argued that successful companies continuously

develop and launch new products (Kraushar 1972, Rothberg 1981, Drucker 1985). Whilst the notion that there are different types of innovation is well supported in the literature (Ansoff 1965, Craig and Hart 1992, Tushman and Nadler 1986, Booz Allen and Hamilton 1982, Crawford 1987). In addition, some studies have acknowledged that the type of product innovation being developed by a company has an effect on their overall success (Johne 1985, Johne and Snelson 1987).

Most firms tend to have a mixed variety of new products. Additions to existing product lines and improvements/revisions to existing products are the most common. New product managers tend to be reluctant to introduce innovative new products, such as new to the world products and new product lines, because their variability of return is greater (Booz Allen and Hamilton 1982). In addition, the number of major new product introductions varies enormously from one company to another (Hopkins 1980).

The high incidence of new product failure has long been acknowledged, with estimates ranging from twenty percent to as high as ninety percent (Johne 1985, Craig and Hart 1992, Hisrich and Peters 1984, Cooper 1986, Crawford 1987, Tomlin and O'Sullivan 1985). Irrespective of the exact level of new product success and failure, some authors contend that it is high enough to warrant attention (Crawford 1979, Cooper 1987). However an investigation into firms new product results concluded that most reported values in the literature were inaccurate and that the failure rate was approximately thirty-nine percent for consumer products and thirty-one percent for industrial products. Nevertheless, it is envisaged that new product development will become even more important in the future as the estimated number of new products introduced is forecast to substantially increase (Booz Allen and Hamilton 1982, Hopkins 1980).

Therefore the first sub-objective of the research is to determine if

'the type of new product developed and launched by companies operating on the Irish market is related to the success or failure of the product'.

This will be achieved by examining the amount of different types of new food products launched by companies on the Irish market over the past five years and to gauge the level of success and failure achieved. Coupled with this, is the requirement to identify the amount of planned introductions in the future.

Sub-objective 1B - Strategic Business Requirements

In recognition of the importance of new product development, many authors advocate the inclusion of a new product development strategy in the overall company strategy (Hart and Steenkamp 1991, Goold and Campbell 1989, Barclay and Benson 1990). Booz Allen and Hamilton (1982) contend that an integral part of the new product development strategy is the identification of the roles to be played by new products, either market or company driven. For example, their study found that the two most common new product roles were defending a market share position and maintaining a position as a product innovator. In addition, the role played by new products varied by industry and product type.

Furthermore, Goold and Campbell (1989) argue that in an increasingly competitive environment, a company's survival is dependant on creating new products that fulfil a distinctive role. Whereas Cooper (1984) concludes that different types of new product strategies are linked to specific levels of performance. Thus, coupled with establishing strategic roles for new products, many companies devise financial criteria as a yardstick to measure their performance. The most commonly used criteria are profit contribution, sales volume and

return on investment (Mahajan and Wind 1992, Booz Allen and Hamilton 1982). Whilst a growing body of evidence suggests that the creation of a new product strategy, embodied in corporate strategies and objectives, contributes to new product development success and overall company success (Dwyer and Mellor 1991, Barclay and Benson 1990, Cooper 1984, Johne and Snelson 1985).

Therefore, the success of many firms hinges on their ability to introduce new products which will assume an increasingly important role in most firms' new product strategies. This is evidenced in the findings of a study which suggested that new product development will become even more important as new products are expected to account for 40% of corporate sales and profits.

Thus, this sub- objective is to examine whether

'establishing a strategic role for new food products is related to the success or failure of the product on the Irish market'.

This will require an investigation of the strategic business requirements expected of new food products to see if they are related to new product success or failure. In addition, it is intended to identify the criteria used to measure new product performance on the Irish market.

Sub-objective 1C - Internal and External Factors

The need for product development is born out of environmental forces operating on the marketplace. Rothberg (1981) identified two separate trends which have impacted on new product development. The first relates to a demand for products necessitated by changing consumer preferences, whereas the second stems from an increased aggressiveness and sophistication of competition. Booz Allen and Hamilton (1982) support this view and suggest that technical advances,

changing market requirements and world market competition have all contributed to increasing new product development. However they recognise that certain internal factors, such as a short term orientation by management, may become obstacles to successful new product development.

Urban, Hauser and Dholakia (1987) also view competition as a strong motivational force but in relation to changing consumer preferences, they specify demographic and lifestyle changes as the main contributory factors. In addition, governmental policy has been conducive to product innovation by implementing regulations and/or deregulations necessitating changes in existing products on the market (Rothberg 1981, Urban et al 1987).

Therefore, this sub-objective is to investigate if

'both internal and external factors could have an impact on the future development and launch of new food products by companies on the Irish market'.

Sub-objective 1D - The New Product Process

The new product development process is believed to be a significant factor in the success or failure of new products (Cooper 1988, Rothwell 1974, Maidique and Zirger 1984, Cooper and Kleinschmidt 1987). The process of new product development typically includes a series of activities, stages and decisions to be taken, which ultimately result in the launch of a new product on the market (Cooper 1983a, Craig and Hart 1991).

Boag and Rinholm (1989) contend that new product success is closely linked to the use of a formal process. This formal process should begin when developing the new product strategy and continue throughout

the entire process (Moore 1987, Boag and Rinholm 1989). However, some authors identified that the use of formal methods was seriously lacking in many companies across different industries (Boag and Rinholm 1989, Cooper and DeBrentani 1988, Johne 1993).

It is suggested though, that the utilisation of a more sophisticated new product process has led to a dramatic reduction in the amount of ideas considered for every successful product launched, from an average of fifty-eight to seven. Whilst considering fewer ideas was also found to be a distinctive trait of companies with more successful products (Booz Allen and Hamilton 1982).

The underlying notion behind many of the traditional new product development models is that the stages should be undertaken sequentially (Heany and Vinson 1984, Kotler 1986, Booz Allen and Hamilton 1982, Johne and Snelson 1987, Cooper 1988). An alternative process is parallel or simultaneous processing which involves the simultaneous development of a product by various groups or teams (Cooper 1988, Takeuchi and Nonaka 1986, Johne and Snelson 1987). This approach is reported to be typically used with great success by Japanese companies (Takeuchi and Nonaka 1986, Kennard 1991).

In addition, the result of one study was the finding that the up-front or predevelopment activities were pivotal to success (Cooper and Kleinschmidt 1986). In addition, Booz Allen and Hamilton (1982) discovered that more management attention and financial resources were devoted to these early steps in the process.

This sub-objective is to ascertain whether

' the use of a new product development process in companies developing and launching new food products on the Irish market is related to the success or failure of the new product '.

This includes an examination of the number of new product ideas actually considered and their ultimate success or failure in the market.

Sub-objective 1E - Strategic Orientation

There are two basic strategies a firm may develop; a corporate strategy and a strategy for each product or market (Hisrich and Peters 1984). Corporate strategy is basically viewed as encompassing major objectives or goals coupled with policies and plans for achieving those goals (Baker 1975, Rothberg 1981). Furthermore, it has been suggested that the overall strategy should include a company's approach to growth, which may stem from an efficient management of existing products or through new product development (Hisrich and Peters 1984). Specifically, one study identified that the majority of companies established in Ireland planned to grow via new product development (O'Sullivan and Tomlin 1985).

A variety of alternatives exist by which the company may pursue a new product development strategy. For example, a company may obtain new products either through acquisition, such as the purchase of a company, patent or licence, or through new product development (Kotler 1986, West 1992, Booz Allen and Hamilton 1982, Urban, Hauser and Dholakia 1987). However, many authors advocate new product development due to its role in achieving success for companies (Booz Allen and Hamilton 1982, Johne and Snelson 1989, 1990, Kuczmarski 1992, Charles Cooper 1989). It has also been widely suggested in the literature that creating a new product strategy, relating to corporate strategies and objectives, is closely linked to new product performance (Dwyer and Mellor 1991, Barclay and Benson 1990, Cooper 1984, 1987, Johne and Snelson 1985). In addition, a lack of new product strategy was found to be an obstacle to successful new product development (Booz Allen and Hamilton 1982).

Therefore the sub-objective is to determine whether

'the strategic orientation of companies developing and launching new food products on the Irish market is related to the success or failure of the new product'.

Sub-objective 1F - New Product Structure and Style

There is a general concensus in the literature that, although a variety of organisational structures abound for new product development, no perfect method exists for new product organisation (McTavish 1984, Sands 1983, Barclay Benson and Lunt 1990, Francis and Winstanley 1988). Whilst empirical research has identified that some companies use more than one type of structure and that the choice was associated with product specific requirements (Booz Allen and Hamilton 1982, McTavish 1984, Mahajan and Wind 1992). Among the structures commonly used are free standing units; such as new product departments, venture groups and interdisciplinary teams, and functionally based units in existing departments. However, it has been identified that the new product organisational structure is only a minimal factor contributing to the success of new products (Booz Allen and Hamilton 1982, Kuczmarski 1992).

Conversely, the role certain people play in the new product development process have been found to lead to new product success. In particular, top management support is frequently cited as being of critical importance (Johne and Snelson 1988, Sands 1983, Craig and Hart 1991, Barclay, Benson and Lunt 1990, Booz Allen and Hamilton 1982). It has been suggested that senior management should head the development team to ensure that commitment to new products is reinforced (Sowrey 1987). Additionally, the importance of a product champion has been highlighted by many authors (Craig and Hart 1991, Crawford 1987, Dwyer and Mellor 1991). It has even been advocated

that the existence of a product champion discriminates between success and failure (Johne and Snelson 1988).

The sub-objective is to investigate if

'the new product structure and style in companies developing and launching new food products on the Irish market is related to the success or failure of the product'.

Sub-objective 1G - Company Resources and Skills

It has been suggested that the success of a firm's new product program hinges on the resources and skills of the firm. In particular, one study identified that marketing resources were a salient feature of successful new product programs, whilst technological resources and skills had a weaker impact (Cooper 1983). Similarly, Globe, Levy and Schwartz (1973) found that a common characteristic of outstanding innovation studies related to having sufficient development resources throughout the entire development process. Voss (1985) suggested that success accrues from having adequate resources.

In addition, having a good fit between the needs of the project and the existing resources and skills of the firm, has frequently been cited as a key influence on new product performance (Kulvik 1977, Cooper and Kleinschmidt 1987a,b, Maidique and Zirger 1990, Craig and Hart 1991). Whilst the importance of having sufficient resources, to ensure the new product process activities are undertaken proficiently, has been stressed (Cooper 1990). Similarly, Link (1987) identified that a possible factor discriminating between new product success and failure related to the level of company resources devoted to the project. Whilst Cowan (1989) concluded that more resources devoted to new product development will enhance the opportunity for success.

The sub-objective is to examine whether

' the level of company resources and skills is related to the outcome of new food products developed and launched on the Irish market '.

OBJECTIVE 2 - KEY SUCCESS AND FAILURE FACTORS

The objective here is to determine if

' different controllable and environmental factors exist in relation to companies developing and launching new food products on the Irish market, which ultimately results in their success or failure'

This objective was subdivided into six parts consisting of both controllable and environmental issues. The following is a list of sub-objectives which aim to provide the necessary information to support this second key objective. They relate directly to the common themes identified in the literature and tested in empirical studies, in relation to the key success and failure factors.

Sub-objective 2A - Product Advantage

Empirical research has shown that a product which offers a significant advantage to the consumer is one of the most important dimensions contributing to new product success (Utterback et al 1976, Cooper 1979, 1980, 1990, Cooper and Kleinschmidt 1987a,b). There is no clear recipe for achieving a product advantage, rather various elements have been identified in the literature. For example, Maidique and Zirger (1984, 1990) found that success stems from offering significant customer value, from introducing the product into the market early and from offering a higher performance to cost ratio.

Similarly, Link (1987) cites the importance of product quality and of offering significant user benefits. He also advocates that success accrues by gaining acceptance of the new product in export or other markets and by developing a product which requires little change in the attitude and behaviour of users. Cowan (1989) contends that having a product with a distinct advantage is crucial to success. He specifically found that quality, attractive packaging and a competitive price were all conducive to a positive outcome. Booz Allen and Hamilton (1982) stress the importance of technological superiority in the product.

Conversely, a lack of product uniqueness and product defects have also been identified as some of the main causes of failure (Crawford 1977, National Industrial Conference Board 1964, Hopkins and Bailey 1971). In addition, Lilien and Yoon (1989), Craig and Hart (1991) and Barclay (1992) all found that product advantage was a recurrent factor cited in the literature as a major determinant of new product success.

The sub-objective is to determine if

'product advantage is directly related to the success or failure of new food products launched onto the Irish market'.

Sub-objective 2B - Proficiency of Process Activities

The basis of the new product development process is contingent on certain activities being carried out. Cooper (1990) discovered that a well defined product and project prior to the development phase enhanced the likelihood of new product success. Several other authors specifically referred to the importance of recognising/defining a market need, and incorporating it early into the development process, as a key success factor (Globe et al 1973, Roberts and Burke 1974, Townsend 1976, Rothwell et al 1972, 1974, Utterback et al 1976, Rubenstein et al 1976, Cowan 1989, Myers and Marquis 1969, Booz et al 1982).

Booz et al (1982) and Craig and Hart (1991) advocated the use of a complete new product process. Some studies singled out certain activities as being more important; such as screening and testing (Townsend 1976), market research (Link 1987), attention to marketing (Rothwell et al 1972, 1974), project evaluation and positioning (National Industrial Conference Board 1964), market launch (Constandse 1971, Crawford 1977, Lilien and Yoon 1989), market knowledge and strategy (Barclay 1992) and development and technological activities (Rothwell et al 1972, 1974, Link 1987, Voss 1985).

Furthermore, it has been recognised that the way in which the activities are undertaken/executed, contribute to a positive outcome. For example proficiency in conducting the predevelopment, market related and technological activities (Cooper 1987, 1990), proficient research and development management (Globe et al 1973, Maidique and Zirger 1984, 1990), superior data collection and analysis (Rubenstein et al 1976), marketing proficiency, (Utterback et al 1976, Maidique and Zirger 1984, 1990), proficiency of technological activities (Rothwell et al 1976, Link 1987, Voss 1985, Barclay 1992) have frequently been cited as major determinants of new product success.

The sub-objective is to investigate if

'proficiency in conducting new product process activities is directly related to the success or failure of new food products launched onto the Irish market'.

Sub-objective 2C - Synergy

It has been suggested that success is more likely to occur if a firm builds on its existing resources, skills and strengths, rather than seeking new opportunities far removed from its experience and resource base. Both marketing and technological synergy have been strongly

recommended within the literature (Maidique and Zirger 1984, 1990, Cooper 1987a,b, 1990, Craig and Hart 1991, Kulvik 1977, Booz Allen and Hamilton 1982). For example, in relation to marketing synergy, Link (1987), Lilien and Yoon (1989), Baker et al (1986) and Barclay (1992) stressed its importance as a key success factor. Whilst Cooper (1990) found that the success rate was nearly 2-3 times greater, with profitability and market share higher, for products which were developed, based on marketing synergy. In relation to technological synergy, products which featured a strong fit with the firm's research and development, engineering and production resources and skills, also achieved a high rate of success (Cooper 1990, Cooper and Kleinschmidt 1987, Link 1987, Maidique and Zirger 1984, 1990, Lilien and Yoon 1989, Baker et al 1986).

Therefore, the sub-objective is to examine if

' marketing, technological and product range synergy are directly related to the success or failure of new food products launched onto the Irish market'.

Sub-objective 2D - Organisational Structure And Style

Numerous research studies have identified different aspects of organisational structure and style as facilitators to a successful product outcome. The role of key individuals, such as technical and product champions, have been repeatedly stressed as important factors (Globe et al 1973, Townsend 1976, Rothwell et al 1972, 1974, Rubenstein et al 1976, Link 1989, Lilien and Yoon 1989, Craig and Hart 1991, Johne and Snelson 1988, Voss 1985). Conversely, Crawford (1977) noted that one of the reasons attributed to product failure stemmed from the lack of a product champion.

Another significant finding relates to the necessity of good communication and co-ordination, specifically in relation to the research and development and marketing department (Roberts and Burke 1974, Townsend 1976, Rothwell et al 1972, 1974, Rubenstein et al 1976, Maidique and Zirger 1984, 1990, Lilien and Yoon 1989, Voss 1985, Baker et al 1986, Myers and Marquis 1969, Barclay 1992, Craig and Hart 1991, Johne and Snelson 1989). In addition, it has widely been agreed that clearly planning the project and establishing well defined project goals and objectives is a key factor in successful new product development (Lilien and Yoon 1989, Baker et al 1986, Craig and Hart 1991, Johne and Snelson 1988). Similarly, another study found that poor planning contributed to failure (Crawford 1977). The same study also concluded that failure was caused by company politics and too much enthusiasm crowded on facts throughout the process.

Top management support has also been frequently cited as a significant factor, although various theorists appear to have different opinions regarding the actual importance of it. Rubenstein et al (1976), Maidique and Zirger (1984, 1990), Baker et al (1986), and Booz et al (1982) identified in their research that top management support and involvement was a necessary requirement for success. Johne and Snelson (1988), Lilien and Yoon (1989) and Craig and Hart (1991) found that it was a recurrent theme in new product development literature. In addition Constandse (1971) discovered that lack of good management was a primary cause of failure. However, Cooper and Kleinschmidt (1987) and Cooper (1990) stressed that top managers supported failures almost as frequently as successes - and therefore concluded that management support only had a marginal impact on success. Nevertheless, some authors identified other areas in which management contributed to a positive outcome. For example, Utterback et al (1976) discovered that top management initiation of a new project was an important criteria, whilst Rothwell et al (1972, 1974) stressed the quality and flair of management and the seniority and

authority of the management team was a major determinant of success. Maidique and Zirger (1984, 1990) emphasised the importance of managerial excellence. Voss (1985) advocated that management's risk taking attitude was an essential element influencing the new product outcome.

Therefore, the sub-objective is to ascertain if

'organisational structure and style, including top management and distributor support, is directly related to the success or failure of new food products launched onto the Irish market.'

Sub-objective 2E - Firm Characteristics

The notion that characteristics of the firm are a major determinant of new product outcome has been widely supported in the literature. Several studies have shown that both the elements of the marketing mix and financial resources influence new product success. It is generally regarded that attention to marketing is a key factor (Utterback et al 1976, Rothwell et al 1972, 1974, Voss 1985, Maidique and Zirger 1984, 1990). Advertising support and efficient distribution (Cowan 1989), selling and promotion (Maidique and Zirger 1984, 1990), sales force targeting and effort, advertising targeting and effort (Cooper 1980), and publicity (Rothwell et al 1972, 1974), have all been individually highlighted in several studies. Link (1987) concluded that a combination of distribution channel support, good stock cover, adequate sales force, promotion/advertising and appropriate pricing strategies, were conducive to success. The National Industrial Conference Board (1964) found that failure stemmed from an inadequate sales force and weakness in distribution.

Successful new products were also characterised by the level of company resources devoted to the new product project. Those

companies who allocated adequate financial resources to the development of the new product, attained higher levels of success (Cooper and Kleinschmidt 1987a,b, Globe et al 1973, Maidique and Zirger 1984, 1990, Link 1987, Voss 1985, Baker et al 1986). However Cooper (1979, 1980) identified that relative magnitude of investment in the project was only a weakly related success factor. It has also been observed that a positive outcome accrues from developing products which yield a high contribution margin (Maidique and Zirger 1984, 1990), whilst high product costs may contribute to failure (Crawford 1977, National Industrial Conference Board 1964, Hopkins 1971).

The sub-objective is to identify if

'a firm's characteristics, in relation to finance and the marketing mix, are directly related to the success or failure of new food products launched onto the Irish market'.

Sub-objective 2F - Market Characteristics

The interaction of the new product within the market environment appears to affect new product performance, although there has been some debate as to the exact nature of this relationship. Maidique and Zirger (1984, 1990) contend that the market environment is an influencing factor. Similarly, Cowan (1989), Link (1987) and Lilien and Yoon (1989) believe that market size and growth rate will determine success. Although Cooper and Kleinschmidt (1987a,b) acknowledge that market potential is a positive success factor, they found that in comparison with other variables, its importance was much less significant.

Nevertheless, market attractiveness, in terms of growth rate, customer's need for products, and importance of purchase, contributed to a higher success rate, profitability and likelihood of achieving sales

and profit objectives (Cooper 1990). It is important to note though, that one element of the marketing environment, namely government policies, actions and regulations, only had a minor impact on success (Cooper 1979, 1980, Rubenstein et al 1976). There is also some controversy as to the effect that market competitiveness has on new product outcomes. Lilien and Yoon (1989) identified that the level of competition differentiated between success and failure. Link (1987) found that the main cause of new product failure resulted from launching a product onto a very competitive market. Conversely, a weak competitive market was considered a success factor (although it was ranked last in terms of importance to success). Similarly, two of the Conference Board studies (1964, 1971) concluded that the competitive element was related to failure. Moreover, Cooper (1990) and Cooper and Kleinschmidt (1987a,b) advocate that market competitiveness is not a decisive determinant of project outcomes. In their opinion, products targeted at highly competitive markets are no less successful than products aimed at less competitive markets. However, rather than dismiss it entirely, Cooper (1990) concludes that the competitive situation is thought to have a low impact on success.

The sub-objective is to examine

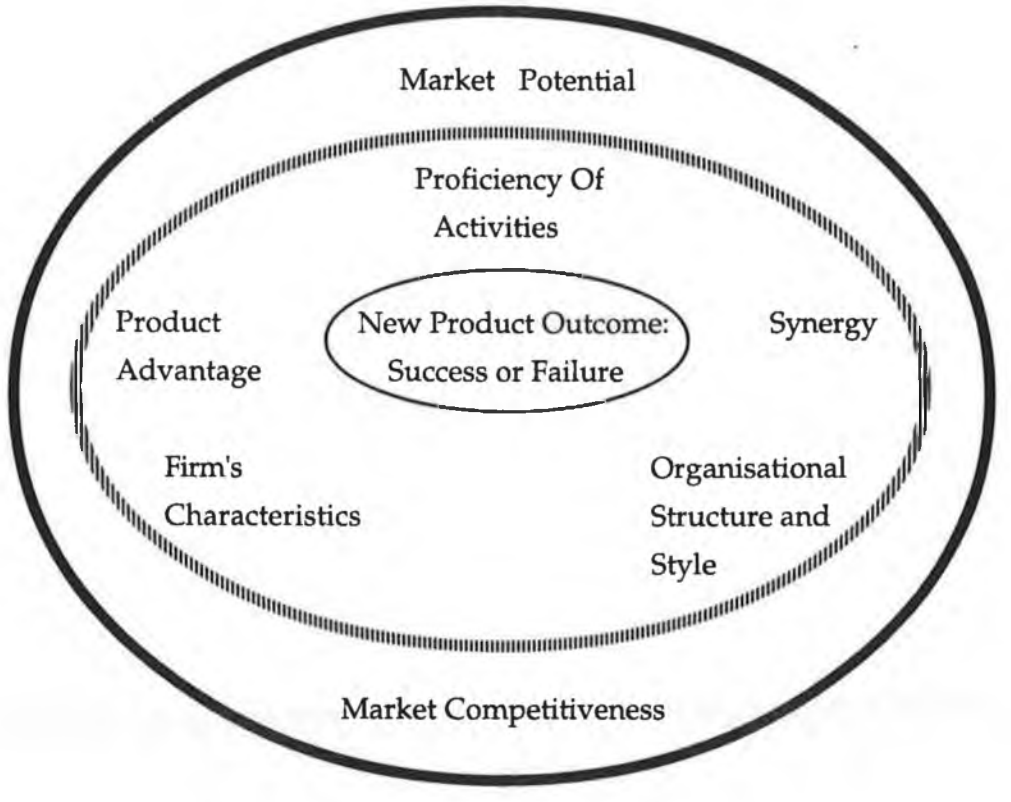
'market potential and market competitiveness are directly related to the success or failure of new food products launched onto the Irish market'.

CONCEPTUAL FRAMEWORK OF NEW PRODUCT OUTCOMES

The relationship between the variables are depicted in the following conceptual framework of new product outcomes. The framework is based on previously proposed models and past research results, as well as on other literature that proposes the factors that should be pertinent

to success. It identifies sets of variables that could influence new product outcomes.

Figure 4.1 : A Framework Of New Product Outcomes



The framework postulates that new product outcomes (success or failure) are determined from a synthesis of both controllable and environmental variables. The controllable variables describe characteristics of the firm, the new product process and its output, whereas the environmental variables relate to the setting in which the new product is launched.

It is proposed that product advantage will stem from proficiently completing the new product process, which involves a series of activities that move the product from the idea stage through to the launch. In addition, it is more likely to accrue if the firm builds on its existing strengths, resources and skills (synergy) rather than seeking new opportunities far removed from its experience. How these activities are undertaken and the level of synergy involved are two sets of variables that manifest themselves in the corporate environment. The organisational structure and style will ensure that the necessary management support, key individuals, communication and co-ordination exist, in order that the new product process is carried out efficiently. The firm's characteristics should guarantee that the required financial resources are devoted to the project and enable the marketing mix to be optimised. When the new product is developed and launched, the interaction of these variables within the market environment will influence its eventual outcome. The market environment is determined by the level of competitiveness and potential in the market. Thus, the combination of both controllable and environmental variables will dictate the outcome of the new product - either success or failure.

It must be noted, that the framework does not serve to identify all those possible variables which could influence new product performance. Rather, it concentrates on the salient features commonly cited within the literature, in an attempt to discover the key factors that differentiate between success and failure.

4.4 RESEARCH DESIGN

'Research design is the specification of procedures for collecting and analysing the data necessary to help identify or react to a problem or opportunity' (Tull and Hawkins 1987 p.26). It forms the framework of the entire research process and therefore it is essential that it is devised appropriately. According to

Kinnear and Taylor (1991 p.135) *'a good design will make sure that the information gathered is consistent with the study objectives and that the data are collected by accurate and economical procedures'.* It is apparent from the literature, that of the various studies conducted, both quantitative and qualitative research methods have been employed. In the case of quantitative surveys, researchers tended to measure a variety of variables relating to some of the factors expected to influence new product development performance, isolating those factors specifically associated with success. The qualitative studies apologists argue that there is still not enough knowledge concerning the validity of the quantitative methods and, therefore, encourage the adoption of fundamental, grounded research to understand the dynamics properly. Some studies incorporated a mixture of both techniques in an attempt to overcome the limitations inherent in the quantitative approach. For the purpose of this research, both methods were employed. The rationale for choosing the methodology for this research and the limits of the various techniques are discussed as the issues arise in the various sections of this chapter (see Section 4.2 and 4.4).

4.4.1 The Exploratory Study

The first stage of the research involved conducting an exploratory study into the topic to be examined. Exploratory designs are concerned with identifying the real nature of research problems and of formulating relevant hypotheses for later tests (Green and Tull 1986 p.21). The exploratory study was executed in the following manner incorporating both secondary and primary research:

1. Literature Review
2. Industry Review
3. Consultation with Experts in the Field

1. LITERATURE REVIEW

The objective of the literature review was to obtain a basic understanding of the patterns of performance and management practices that result in successful new product development. Research into this area concentrated on literature dealing with definitions, characteristics and concepts of product innovation (Chapter 2), and an in-depth investigation into the key factors essential to new product success (Chapter 4). The nature of new product development was then examined in greater detail (Chapter 3), in order to fully comprehend those elements conducive to an efficient new product development process. This review of the literature resulted in a clarification of the problem being researched and an outline of the objectives relevant to the research.

2. INDUSTRY REVIEW

The purpose of the industry review was to aid the comprehension of the characteristics of, and future trends within, the industry so that any results, conclusions and recommendations made, could be considered in a realistic manner. This was achieved through the study of secondary information sources, such as trade journals and publications from semi-state industrial bodies, and in-depth interviews with industry experts.

In-depth interviews were held with *Michael Campbell* (RGDATA), *Collette O'Connor* (Checkout) and *Gary Mulhall* (Food Ireland). The interviews were informal and unstructured and investigated many important points to be examined in the research.

3. CONSULTATION WITH EXPERTS IN THE FIELD

Introductory Phase

This involved direct consultation with recognised experts in the field. *Professor John Saunders* (Loughborough University) and *Professor Susan Hart* (Strathclyde University), who have conducted extensive research in the area of product management and new product development, generously offered advice and expertise. In particular, guidance was sought pertaining to the nature of the products (FMCG's) and industry (Food) being examined, as these have rarely been the specific focus of any research investigation. In addition, consultation was sought with a representative from Booz Allen and Hamilton Inc., because the experience the company has gained from conducting in-depth surveys in this area; *Karen Eastly* provided insight and recommendations for undertaking this research. The outcome of this stage resulted in many important issues being raised, which were considered in the research.

Phase 1

Qualitative research techniques may be used to conduct a preliminary exploration of an under-researched area, to sort and screen ideas as the project progresses or to explore complex behaviour (O'Shaughnessy 1983 p.1-4). It was chosen for the purpose of this study because it is a very valuable method of conducting research, as it allows for speed, flexibility and economy when gathering data. Furthermore, although it is subjective, it enables unique insights to be gained which direct questioning is unable to obtain (Chisnall 1986 p.168).

Tull and Hawkins (1987 p.310-312) suggest three types of qualitative research one can choose from in order to obtain the desired information :-

* Individual Depth Interviews
* Mini Group Interviews and
* Focus Group Interviews

In this research, individual depth interviewing was considered the most appropriate method to use, taking into consideration the nature of the information required, the amount of time needed to examine the necessary information and the nature of the respondents (professional people). Individual depth interviews may be defined as ***'an unstructured personal interview which uses extensive probing to get a single respondent to talk freely and to express detailed beliefs and feelings on a topic' (Kinnear and Taylor 1991 p.315)***

The first step in conducting qualitative research is to discover ***'what information is being sought and how insights derived will be used' (Axelrod 1975 p.10/11).*** Thus, the purpose of the individual depth interviews was to generate information regarding :

1. The extent of new product development being undertaken by food companies and the level of new product performance being achieved on the Irish market. This also included the management practices, new product processes, strategic orientation, new product structure and style employed by the companies for the purpose of developing and launching new products.

2. The key factors thought to influence new product success and failure in the Irish food industry.

Three individual depth interviews were conducted with product managers/buyers in wholesale companies. The purpose was to obtain an objective view of the level of success or failure achieved by new products, from people/companies not directly involved in their development. This would eliminate the possibility of bias and over

exaggeration of performance levels. The role of these companies as distribution outlets for manufacturers ensured that insights could be gained about the different types and amounts of new products being launched onto the market as a whole. The interviews were conducted in a non-directive manner and the respondents discussed the elected topics. The normal length of an individual depth interview is 30-45 minutes, although it may extend to over an hour or more (Tull and Hawkins 1987 p.310, Kinnear and Taylor 1991 p.315). Each interview conducted lasted approximately one hour.

The wholesale companies were chosen from a list of relevant companies from the trade literature. They were selected to represent a reasonable cross-section of food products on the Irish market. The interviews were held in the offices of the respective companies where informal and spontaneous comments could be encouraged. The interviewer followed a guide/list of points representing the themes of interest to the research. The discussions were taped to preserve in full the interview responses and a transcript was made. Analysis of the content was conducted by examining comments made by respondents. The individual depth interviews elicited the information required. They also provided specific information regarding the most popular types of new food products recently launched and the areas within the food sector which have witnessed extensive growth, mainly fuelled by new product development. An interesting point arose from the discussion in relation to the level of success achieved by new food products.

The general consensus was, that distributors have an equally important role to play in ensuring the level of performance attained by new products. Furthermore, the nature of the Irish market dictates that many food products are developed by companies abroad and then launched onto the Irish market. Therefore, the Irish products must compete with imports in an attempt to achieve high levels of success.

It was stressed that there has been major growth in new product imports primarily because few Irish manufacturers have the necessary economies of scale to invest in new product development. In addition, Irish subsidiaries of multinational food companies depend on new product development in the foreign subsidiaries and then tend to import and adapt the products for the Irish market. Any evaluation of new product success or failure in the Irish food market, must therefore include an examination of those products developed both domestically and abroad. For these reasons, it was felt that imported food products must be included in the final research and thus the sample should consist of both manufacturers and distributors.

Another important issue was raised, namely, that some food companies are not actively involved in the development and launching of new products particularly due to the decline or static nature of certain sectors in the industry. Conversely, other sectors are characterised by the level of growth over the past decade, which has mainly been precipitated by new product development. Examples include the convenience, ready meal, chilled and frozen food sectors. Thus, it was felt important that a screening criteria be employed at the sample selection stage, to ensure that respondent companies were (actively) engaged in new product development and/or launching new products on the Irish market. Partially as a result of the information gathered from these individual depth interviews, it was considered necessary to conduct another phase of qualitative research, to examine further some of the issues raised by the interviews.

Phase 2

The next phase consisted of two individual depth interviews with product managers in manufacturing and distribution food companies. The companies were chosen from published lists in the trade literature on the same basis as previously. The format of the interviews was

conducted in the same manner as in Phase 1 and they were also held in the offices of the respective companies.

The interviews served to verify the information obtained in the initial phase of the research. In particular, it was noted that the new product development process in some companies is frequently an informal one, where certain activities are carried out in a casual manner with no adherence to strict procedures or guidelines. Furthermore, some activities are omitted altogether. This is also consistent with an informal approach to the setting of new product strategy and organisation structure and style in the company. However, where a formal process was in operation, the activities completed were similar to the stages outlined in the Booz Allen and Hamilton (1982) taxonomy (see Section 4.4.2c).

In addition, the respondents reinforced the issue relating to the role distributor companies play in influencing the outcome of new food products on the Irish market. Also, it was suggested that over the past decade, there has been a proliferation of Italian-style new food products launched onto the Irish market, to take advantage of changes in consumer trends. Products such as pizza, pasta and pasta sauce are popular because they are convenient ready meals which are manufactured in the form of ambient, frozen or chilled food products. This has resulted in major growth for this sector of the market. It was therefore considered that these types of products should be used as screening criteria for selecting the sample, as it should guarantee that respondent companies have been involved in the development and launch of new food products.

Both phases of the qualitative research elicited perceived factors that contributed to the outcome of new food products and which had to be considered when designing the questionnaire. It was deemed necessary, based on the information gathered at both phases, that two

separate questionnaires would have to be formulated for the manufacturers and distributors respectively. This is because certain issues which were relevant to one group were found to be inappropriate to the other, although many common themes were identified. Thus, the information gathered from the individual depth interviews provided an extremely useful basis on which to construct the sample and develop the questionnaire.

4.4.2 Conclusive Research

Quantitative research techniques attempt to obtain answers to relatively structured questions from a reasonably representative set of respondents. Questionnaires form the basis of quantitative research. Although they have practical limitations as they are expensive, time-consuming and restrictive in the depth and number of questions which may be asked, they nevertheless provide factual information which may be easily analysed by computerised techniques. This results in speed and efficiency (Marketing Success 1990 p.2).

Three alternative quantitative research techniques exist in order to gather the required data - namely personal, telephone and mail interviews. After careful consideration of the advantages and disadvantages of each method and bearing in mind the research objectives, it was concluded that the most appropriate method for conducting this part of the research would be through personal interviews by means of a structured direct questionnaire. This type of questionnaire format was used in keeping with the majority of new product success and failure studies, in order to facilitate comparison of results. Mail interviews are favoured in the literature, although not exclusively. The size of the industry in Ireland, coupled with the level of non response rate inherent in mail surveys, rendered it impractical for this research. Therefore, personal interviews were chosen.

A. PERSONAL INTERVIEW

This method was chosen because it allowed for; a degree of versatility in order that explanation and clarification of complex questions could be achieved; the use of a visual presentation of the rating scale, which facilitated the respondents comprehension of the questions asked and; ease in gathering an extensive amount of data which was required for the research. In addition, it was the most cost-efficient and time-saving method of interviewing respondents and it was felt that more accurate responses could be obtained. Furthermore, personal interviews require less effort from the respondent and this was conducive to the quantity of information needed. Finally, it was anticipated that each interview would take approximately one and a half hours and this method was best suited for interviews of that length.

B. QUESTIONNAIRE DESIGN

'A sound questionnaire requires applying relevant principles, a clear concept of the needed information and thorough pretesting' (Tull and Hawkins 1987 p.236). Two separate questionnaires were devised for the manufacturer and distributor respondents, using the same format. Certain questions which were not commonly applicable to both types of respondents were omitted from the relevant questionnaires. The questionnaires were designed in such a way as to facilitate the achievement of the research objectives. The information obtained from the literature review and the individual depth interviews also formed the basis of the questionnaires. A structured direct format was chosen, as it allowed for a series of formal questions designed to attract answers of a limited response. This, in turn, resulted in ease of administration and ensured a considerable amount of data could be collected within a limited time frame. This type of questionnaire facilitates data processing, thus enabling statistical analysis to be carried out on the data.

Section 1

Two questionnaires were designed in three sections for the data collection. The first part allowed identification of the number of products launched, the level of performance achieved over a given period of time and the number of planned introductions in the future. Respondents were asked to recall the set of new products launched over the past five years and indicate how many succeeded or failed. There are some inherent drawbacks with this survey technique, in particular the research is based on memory subjectively interpreted.

Different company personnel may have various opinions as to whether established goals and objectives were achieved. In addition, a biased weighting may accrue to the earlier products, as they have had a longer time to achieve some degree of success. However, this is a limitation applicable to all the methods available for evaluating performance. It was initially intended that this method would be combined with shelf studies and industry sales tabulations, so that the limitations of the individual methods could be overcome. Shelf studies require examining a listing of new products from a retail audit, trade price-book or company catalogue (Crawford 1979 p.10), to indicate when the new products were placed on the shelf for sale. A review of the same source several years later should determine how many are still evident and therefore successful, or alternatively, how many have disappeared and thus failed. The main drawback of this technique relates to the methodological issue of whether disappearance correlates with failure and if continued presence equates with success. Respondents were requested to supply the necessary listings during the interview.

The use of industry sales tabulations involves investigating all new entries cited in the industry sales data (Crawford 1979 p.10). The results are then measured against a standard, for example one percent of

industry sales, and success is determined. However, this method proved difficult to employ as it relies on publicly available data which was insufficient in relation to the Irish food industry. Therefore, the other two measurement techniques were chosen instead. By using a combination of both approaches, it would ensure that where the company deemed a product to be a success/failure, it could be verified against the results of the shelf studies.

Section 2

The second part of the questionnaires investigated management practices. In addition, the respondent was asked to select a new product pair, one success and one failure, from within the firm and observing the following criteria:-

* *they were developed for the same or related markets*
* *they were developed no more than five years apart*

The new product pair were then examined in relation to certain management practices, in an attempt to determine if the same or different approaches were used for both products.

Section 3

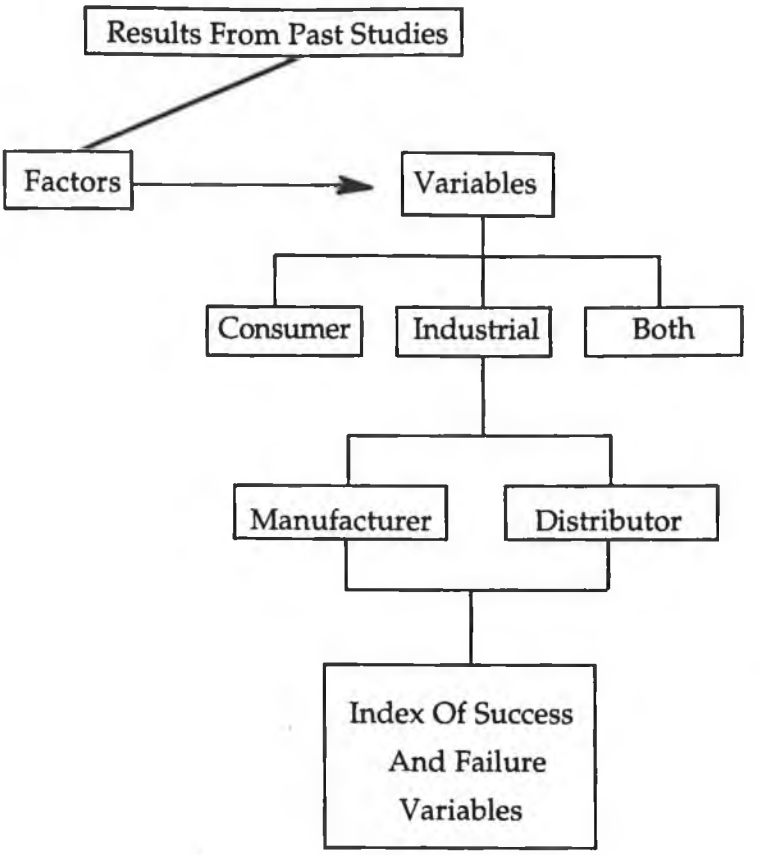
The final section of the questionnaires involved a comparison of the new product pair against a list of key variables identified in the literature as determinants of success and failure. The variables used to describe the characterisation of each new product pair were derived from studies of different industries, markets, firm locations and time periods. They also incorporated the common themes identified in the literature review and which were used to formulate the objectives and design the framework of new product outcomes. It was anticipated that some of the factors cited in past studies would not be relevant taking into consideration the nature of the industry (Food) and the specific market (Irish) being researched. Therefore the list of variables had to be

refined, to ensure that they were relevant to the research.

The procedure employed involved detailing all the results of the various studies, isolating variables from the list of identified factors, identifying those pertinent to industrial research and the addition of other variables relating to manufacturer and distributor companies. In addition, some variables described in the various studies were essentially the same or aspects of the same variable although different labels may have been used. In order to overcome repetition, only one main variable was used in the questionnaire with the others being cited as examples for ease of interpretation and clarification. For example, the variable *'product offered unique benefits'* was frequently cited as a key success factor. Other authors identified that uniqueness may stem from quality, price advantage, superiority, technology and new/unique task. Therefore, these descriptions were provided as examples of the way in which uniqueness may occur, while the respondent was only asked to rate the main variable. This resulted in a composite index of success and failure variables. Variables were measured by presenting a phrase or sentence and requesting the manager to indicate whether the description applied to the product project (agree/disagree 0 to 10 scales). The diagram on the next page shows the refining procedure which was undertaken when designing the questionnaire.

The respondents were also asked to rate new product performance in terms of whether objectives were achieved and to identify any additional variables they considered important which were not contained within the list.

Figure 4.2 : Questionnaire Design



C. DEFINITIONS EMPLOYED IN THE RESEARCH

As noted by Cooper (1979), many of the studies carried out on the topic of new product development have been characterised by a lack of operational definitions. Therefore, in the design of the questionnaire, it is imperative to devise operational definitions of the concepts used in order to ensure clarity for the respondent. Each definition was discussed in detail with the respondent to facilitate comprehension.

WHAT IS A NEW PRODUCT?

Based on the information obtained from the individual depth interviews, definitions of the different types of new products were presented in accordance with the Booz Allen and Hamilton (1982)

taxonomy. The respondent was provided with a card detailing the following definitions and a brief discussion followed.

New to the World Products - these are typically the first of their kind and create an entirely new market.

New Product Lines - these products are new to a particular firm, although they may not be new to the marketplace. They enable a company to enter an established market for the first time.

Additions to Existing Product Lines - these are new products that supplement a company's established product lines.

Improvements and Revisions To Existing Products - these are new products that provide improved performance or greater perceived value and replace existing products in a firm's product line.

Repositionings - essentially new applications for existing products which are targeted to new markets or market segments.

Cost Reductions - new products that provide similar performance and benefits at a lower cost.

WHEN IS A NEW PRODUCT BORN ?

According to Crawford (1987 p.21), until an innovation is complete, any assessment of success or failure only measures part of the overall innovation process. Thus, products that have been launched onto the market in order to test their viability, cannot be considered. In addition, ideas in the process of development are not finished products. If one wants to evaluate a firm's product innovation performance, one should evaluate finished output; that is products

which have been launched and marketed. If management considers test marketing part of the development process, then failure should be assessed after test marketing. Therefore, respondents were asked to evaluate a new product pair which had completed the test marketing stage and had been launched onto the market.

WHAT CONSTITUTES SUCCESS OR FAILURE?

In order for the research to be carried out in a consistent manner, a standard definition of success and failure must be presented to the respondent so that each product may be measured in the same way. As this will have a significant effect on the overall results, two definitions were provided. There is no commonly agreed definition of success or failure within the literature. Based on available suggestions a general measure was chosen which allowed the respondent freedom to evaluate the products from the firm's point of view. A new product was considered a success if it *'met management's original expectations for it in all important respects'*. Conversely, a new product was taken to have been a failure if *'in some important respect, it failed to meet managements original expectations for it'*. Managers were asked to select products that were clear-cut successes and failures.

D. PILOT SURVEY

A pilot survey was undertaken to pre-test the questionnaires and the composite index of success and failure variables, in order to discover any problems which may have been overlooked. Chisnall (1986 p.115) observes that it is *'vitally important to make sure that the questionnaire is pilot-tested through all the stages of its development. This calls for patient attention to detail, so that the questionnaire used in the final survey contains questions which are specific, clearly understandable, capable of being answered by the particular population and free from bias'*.

It was decided that the questionnaire should be reviewed by two industry experts who have extensive experience and worked closely with companies in the Irish food industry. *Mr Barry Egan* (Irish Trade Board) was chosen for his expertise and involvement with food companies who export their products abroad. He also co-ordinates the Annual Irish food Exhibition and works in close association with the many exhibitor companies. *Mr Cathal Cowan* (National Food Centre, Teagasc) is a consultant in the food marketing department of the National Food Centre. His role is to assist with the marketing of new food products developed at the centre. Coupled with this, he has also conducted research on new product development in the industry and it was felt that his knowledge and expertise would be beneficial. In addition, two firms were selected for the pilot study, to represent both a manufacturer and distributor company. The respondents were chosen from the two companies who had participated in the individual depth studies in phase two. They were selected from the product departments in the respective companies, although neither were previously involved in the depth-interviews, nor were they included in the final survey.

A number of salient points were raised during the pilot survey. Respondents were asked to choose both a successful and failed product and answer questions in relation to each. It was found that they were loth to discuss the failed product because of the negative connotations it implied. However, describing the product 'unsuccessful' as opposed to 'failed', alleviated the problem somewhat, and responses were more forthcoming. In addition, respondents were reluctant to divulge specific financial information, especially in relation to the quantifiable measures of success and failure. This was primarily due to the sensitive nature of the information and also because in some cases, the information was neither readily accessible or available. Thus, respondents were requested to rate the degree of commercial success (or failure) of the product, using a scale of agreement.

It was also discovered that employing a ten point anchored scale for rating the new product pair resulted in confusion, because respondents found it difficult to differentiate along such an extensive range. Instead, the scale was reduced to five points. Coupled with this, to facilitate ease of response, it was found more appropriate to allow the respondent to hold the first two sections of the questionnaire, whilst the final section was not shown to the respondent but simply read out. In addition, the respondent was shown a rate card from which to choose their reply. Furthermore, a few of the variables used in the final part of the questionnaire were further refined because they were deemed irrelevant.

Problems were experienced in relation to the shelf study, namely, that the information was unavailable or insufficient. Failure to receive the necessary information from just one respondent would result in measurement and comparison difficulties with the rest of the sample. It was therefore decided to omit this procedure from the study and to gather the information using the survey approach. The drawback of this technique, in relation to problems of memory, were overcome where possible by requesting documented evidence from management information systems in the company. It was also found that respondents could not specify the amount of new product introductions over the next five years, because, very often, plans were only devised for the following year. Therefore, the question was adapted accordingly. The amount of time required to complete the questionnaire was approximately one and a half hours and taking into consideration the length of the questionnaire, it was decided to allow for a short break between the second and third sections. This was to ensure that respondent fatigue did not occur. Finally, minor wording and sequence flaws were also rectified at this stage. Another small pre-test was carried out on the new draft and proved satisfactory. It should be noted that the questionnaires in Appendix B are revised from the original draft.

E. FINAL QUESTIONNAIRES

The final questionnaires consisted of three parts. Pre-coded questions were used to facilitate ease of coding, recording and analysis of results. However, in some questions there was a category labelled 'other, please specify'. This was included to allow for the recording of a response that was not already pre-coded. A brief summation is given of the questions asked, relevant to each objective. The complete questionnaires are included in Appendix B.

MAIN OBJECTIVE

The main objective relates to the identification of differences in the development and launch of new food products, which affects their outcome on the market.

OBJECTIVE 1

Key objective 1 of the research was to identify a profile of companies launching new food products on the Irish market and to determine if differences exist in the management practices of companies developing and launching new food products on the Irish market which results in their success or failure. This objective was subdivided into eight parts and therefore different questions were asked in relation to different sub-objectives.

SECTION 1

Sub-objective 1a

Questions 1 and 2 examined the level of performance achieved by new products in the marketplace. Specifically, they determined how many different types of new products the company had launched over the past five years, how many succeeded and failed, and the number of

planned introductions over the next year.

SECTION 2

Sub-objective 1b

Questions 3 and 4 were included to ascertain the strategic business requirements expected of the new products. The former question investigated the most important strategic role the successful and unsuccessful products were expected to play, while the latter examined the percentage of total company sales and profits generated by new products. In addition, question 5 examined whether the cost of introducing new products has increased or decreased over the past five years. Question 6 asked respondents what criteria were used to measure new product performance.

Sub-objective 1c

Questions 7 and 8 were designed to investigate the impact both internal and external factors could have on the future introduction of new products by the companies. In relation to the external factors, the respondents were asked in question 7 to indicate whether certain factors would cause them to introduce more, the same amount or fewer new products. Question 8 required the respondents to rate the likelihood of specific internal obstacles impeding the development and introduction of new products in the future. Thus, a four point scale was included, from very likely to very unlikely to impede.

Sub-objective 1d

Questions 9, 10, 11 and 12 examined the general new product processes employed in the company. Questions 9 and 10 investigated the type of processes in operation to determine if it was a formal or informal one and whether the stages were carried out sequentially or simultaneously. Question 11 was included to determine whether the level of expenditure varied at different stages for the successful and

unsuccessful product. In relation to the manufacturers, question 12 ascertained whether there was any change in top management support during the process. For the distributors, question 12 identified whether they had been involved in the development of new products with the manufacturers. Specific information was then sought, in relation to the amount of new product ideas the respondents considered when developing or distributing new products. In particular, question 13 examined how many new product ideas are generally considered and the amount which were considered for the most successful and failed product. Question 14 aimed to determine whether there has been any increase or decrease in the number of new product ideas considered over the past five years and, more specifically, the reasons for this. In addition, respondents were asked whether they expect the number of new product ideas to increase or decrease in the future.

Sub-objective 1e

In order to ascertain the strategic orientation of the food companies, question 15 examined if the company has a strategic plan which takes cognisance of new products. In relation to this topic, two questions were specifically included for the manufacturers, but were omitted on the distributors' questionnaire. The purpose of question 16 and 17 was to determine whether manufacturers were committed to growth through the development of new products and what approach was employed to achieve this. Finally, questions 16 and 17 (distributors), 18 and 19 (manufacturers), sought to identify if specific strategic new product objectives were established by the company and the stages completed in the formulation of new product strategy, for the particular product projects (successful and failed).

Sub-objective 1f

The next few questions were designed to investigate the new product structure and style within the company. However taking into consideration differences in the nature of respondents - namely

manufacturers and distributors, individual questions were formulated. In relation to the manufacturers, questions 20, 21 and 22 examined the type of new product structure existing in the company, the presence of a product champion and senior new product manager.

In the distributor questionnaire, questions 18, 19, 20 and 21 investigated whether any increased emphasis is placed on distributing new products, whether any particular person distributes only new products, whether joint advertising and promotion is conducted with the manufacturer, and the degree of product exclusiveness in the company.

Sub-objective 1g

In order to determine the level of resources and skills within the company, the final questions required respondents to rate the company in relation to domestic competition, on a scale of +5 to -5 where +5 was extremely good and -5 extremely bad. Another purpose of this question, was to identify its effect on new product success and failure.

OBJECTIVE 2

Key objective 2 of the research was to determine if different controllable and environmental factors exist in relation to companies developing and launching new food products on the Irish market, which ultimately results in their success or failure. This objective was subdivided into six sub-objectives and encapsulates all the variables relating to the key success and failure factors. It consists of thirteen parts for the manufacturers and twelve parts for the distributors, each relating to a set of statements which measure the influence of certain variables, on the outcome of new products. Respondents were asked to indicate their level of agreement in relation to a successful and failed product, on a five point scale ranging from strongly disagree to strongly agree. Success was operationally defined as the new product met

managements' original expectations for it, in all important respects. Conversely a product was considered a failure if, in some important respect, it failed to meet management's original expectations for it. It is important to note that some variables were specifically related to manufacturers and thus omitted from the distributors questionnaire, whilst the reverse also occurred. The following list denotes those sections of the questionnaires pertinent to the research objectives and is specified in relation to both the manufacturers and distributors.

SECTION 3

Sub-objective 2A - Product Advantage

Sub-objective 2B - Proficiency of activities;
Protocol
Proficiency of predevelopment activities
Proficiency of market related activities
Proficiency of technological activities

Sub-objective 2C - Synergy;
Marketing synergy
Technological Synergy
Product range synergy

Sub-objective 2D - Organisational structure and style;
Organisational structure and style
Top management support
Distributor support

Sub-objective 2E - Firm characteristics;
Finance
Marketing Mix

Sub-objective 2F - Market Characteristics
Market Potential
Market competitiveness

F. SAMPLING PROCEDURE

According to Chisnall (1986 p.85) *'sample design is an integral part of the total research design and contributes significantly to its integrity. The success of research surveys rests largely on the quality of the sampling, and great care is needed at every stage in the development of suitable samples'.* The following is an explanation of the way in which the sample was chosen for the purpose of this research.

DEFINITION OF THE POPULATION

The population to be investigated consisted of both manufacturer and distributor food companies, developing and launching new products on the Irish market. There were numerous reasons for incorporating distributors in the research.

Firstly, most studies concentrating on successful new product development have traditionally focused on manufacturers, with minor or no attention being paid to the role played by distributors in new product outcomes. Link (1987 p.114/5) in his recent study, identified additional reasons for success given by respondents, which highlighted the importance of the supplier and distribution channels. Secondly, the very size and nature of the Irish food industry dictates that a large portion of food products are imported from abroad. In addition, most Irish manufacturers lack the necessary economies of scale to develop new products and therefore it is implied that the industry is dependant on imports for new products. Finally, results from the individual depth studies (Phase 1 and 2) confirmed the importance of distributors in the Irish food market and thus it was

deemed essential that they be included in the sample population.

Overall, this population was chosen because there have been relatively few studies concentrating on new product development in the Irish food industry. Many recent reports (IDA 1987, PA Consulting Group 1992, Expert Group 1993) have outlined the importance of this industry to the Irish economy, and specifically the necessity of future new product development, if Ireland is to attain a sustainable competitive advantage. Therefore, it was decided to examine manufacturers and distributors in the food industry, in an attempt to discover if key factors existed, relating to the success and failure of new products. This would enable the compilation of prescriptive guidelines for companies wishing to develop and launch new food products in the future.

SPECIFICATION OF THE SAMPLING FRAME

The sampling frame is a means of representing elements of the population (Tull and Hawkins 1987 p.372). It generally consists of a list of population members from which a sample can be selected. In order to select a sample for this research, the sample frame chosen consisted of a combination of lists detailing food companies in operation in Ireland. It was necessary to consult a number of lists due to the lack of availability of one comprehensive list of all manufacturers and distributors in the industry. A list was compiled from the following directories and lists:- Kompass Directory, Dun and Bradstreet, I.D.A., The Golden Pages, Retail News Directory, Today's Grocer and Checkout.

THE SAMPLING UNIT

This is the basic unit containing the elements of the population to be sampled. The sampling unit selected is often dependant on the sampling frame. In this study, the sampling frame consisted of a list of

all food companies operating in the Irish market. The sampling unit comprised of only those companies who had manufactured or distributed pasta, pasta sauce or pizza products. The rationale for choosing this specific sampling unit is as follows: Most of the previous authors investigating new product development compiled their samples based on firms known to be active in product development, and were able to obtain this information from existing lists. There is a noticeable lack of such information pertaining to the Irish food industry and therefore, an alternative approach had to be taken. Based on consultation with industry experts and the information gathered from the individual depth interviews, it was suggested that firms could be deemed active in product development if they manufactured or distributed pasta, pasta sauce or pizza products. This was primarily due to the fact that those types of products are recent additions on the food market and, therefore, any company involved in their manufacture or distribution would at a recent time/stage, have launched them as new products.

In addition, various reports on the food industry have highlighted the importance of secondary processing/consumer food products as a viable potential for future growth. Coupled with this, new product development was stressed as a necessary requirement, specifically in relation to those types of food products. Thus, it was considered that it would be beneficial to examine the key success and failure factors experienced by firms presently developing and launching those type of products. This would enable any weaknesses to be identified, while simultaneously providing guidelines for companies who wish to develop similar products in the future.

The author recognises that the key factors identified, based on this screening criteria, may not be the same for other types of food products. It must be noted though, that specifying companies involved with pasta, pasta sauce and pizza products was only used as a screening

criteria in order to identify firms active in product development. The respondent was allowed the freedom to choose any product that was deemed an unmistakable success or failure for the purpose of the research. The sampling unit was identified from the sample frame previously mentioned, using the following lists:

1. Kompass Directory 1992, Kompass Food and Packaging 1991.

The Kompass Directories provide company listings based on product line (pasta, pizza and sauce), nature of the business (manufacturer, agent or distributor) and number employed. The most recent accessible Kompass food and packaging directory (1991) was initially consulted and a number of food companies were identified. In addition the overall Kompass Directory was reviewed in order to ascertain any new companies not specified in the earlier directory. This reference point resulted in a list of fifty food companies.

2. Dun and Bradstreet - The Million Dollar Directory 1991/1992.

Dun and Bradstreet provide a directory of companies operating in Ireland and detail similar information to that provided by Kompass. An examination of this directory also identified a list of fifty companies, although most were found on the original Kompass list. Only an additional ten new companies were identified.

3. An Bord Trachtala:- Food Ireland - Food and Drink Products Export Directory 1992, Food Ireland - Market Opportunities 1988 - 1992, IFEX Trade Catalogue - Buyers, Distributors and Manufacturers 1992.

An Bord Trachtala supply a list of Irish food and drink (Export) companies on the basis of product type, uses, brand names, contact names and numbers employed. Furthermore, they recently compiled a report on market opportunities in the Irish food industry and provided a list of those companies serving specific areas within the industry. In addition, they compile a trade catalogue of those firms represented in

the annual Irish Food Exhibition. An examination of these lists resulted in an additional thirteen companies, which had not previously been identified.

4. IDA Alphabetical list of food processing companies in Ireland - Consumer food and drink.

The IDA provides a list of consumer food and drink processing companies in Ireland, coupled with contact names, addresses, product type and employment indication. A review of this list failed to elicit any additional firms that had not previously been identified.

5. The Golden Pages Telephone Directory 1991-1992.

This was used as a checklist to examine any remainder qualifying firms that had not been discovered from the other sources. It involved a compilation of the different area telephone directories and focused on food processing and food product firms. An inherent drawback of this reference point lies in the fact that the information does not provide a list of product types. Originally, ninety-four food firms were identified, of whom seventeen were not on other lists.

6. Trade Literature - Retail News Directory 1992, Today's Grocer Retail Directory 1992, Checkout Year Book and Buyer's Guide 1992.

On an annual basis, certain trade publications provide a list of food manufacturer and distributor companies, detailing their names, addresses, contact personnel and brand index. However, no new food firms were identified.

SAMPLING METHOD

A variety of alternative methods exist for devising a sample, although it is usually only undertaken when time and financial constraints prohibit a census being taken. However, because the final list of firms obtained was relatively small, it was possible to construct a census of all

firms manufacturing and distributing pasta, pasta sauce and pizza products. Thus, every company on the list was included in the research.

Wentz (1985 p.357) states that such a survey, whereby the whole population is sampled, is frequently employed where the population is relatively small and can be easily identified and located. These two characteristics were present in this case. The final list was obtained by telephoning all those companies cited in the lists previously mentioned and identifying if they were manufacturers or distributors, whether they supplied any of the relevant products and the name of the brand or product manager. Thus, the initial amount of companies was reduced to a list consisting of forty six firms, 21 manufacturers and 25 distributors. In order to verify that no potential companies were omitted from the final list, certain experts within the industry were contacted and asked to review the list to ensure it was comprehensive. These experts were chosen based on their acquired knowledge and experience obtained through close work in the industry. A number of experts were identified and the following chose to participate:-

Mr Cathal Cowan - National Food Centre, Teagasc
Mr Barry Egan - Irish Trade Board
Mr. Michael Campbell - RGDATA
Mr. Tony Coleman - Food Ireland, Retail News
Ms. Carmel Murphy - Food Product Development Centre, Cathal Brugha St.

Each of the experts confirmed that to their knowledge, the final list was comprehensive. However, one alteration had to be made, because it was identified that during the last year, two of the firms had amalgamated and thus the final number of firms included in the census was forty five. The formulation of the census was conducted in various stages.

STAGE 1 All lists pertaining to companies within the Irish food industry were obtained.

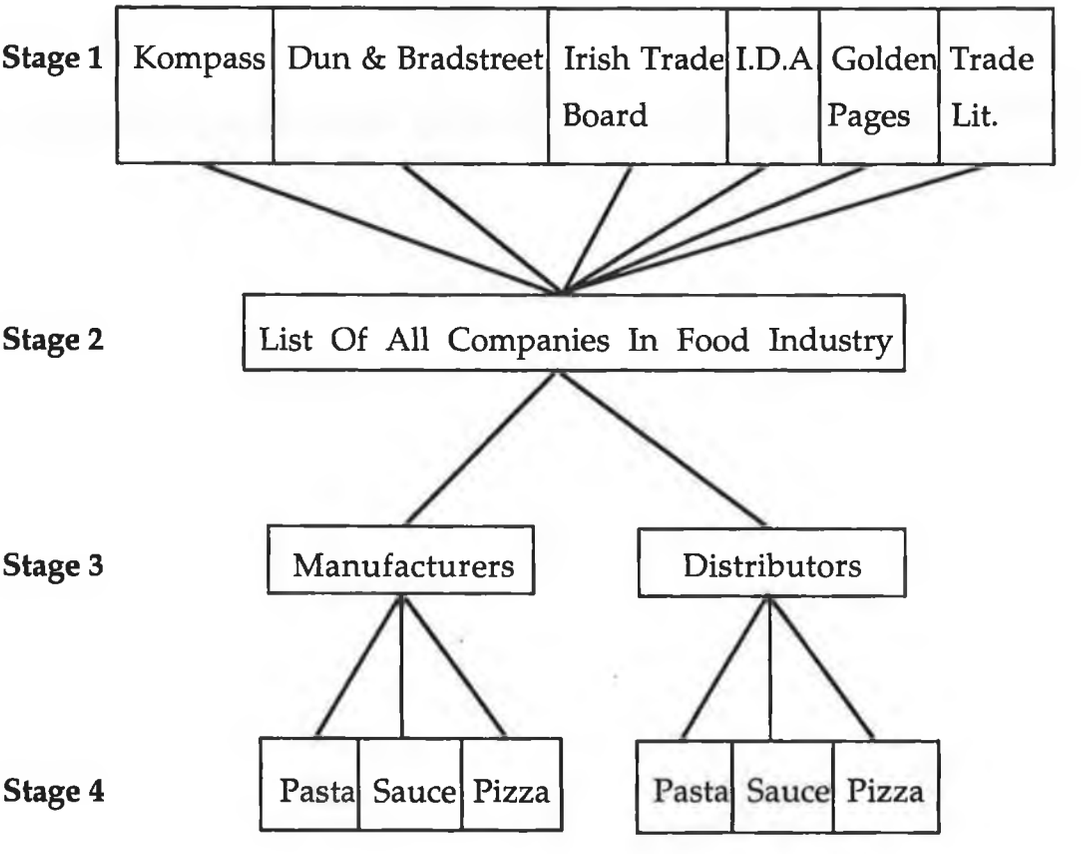
STAGE 2 The lists were refined so that duplication did not occur and one list was devised of the food companies.

STAGE 3 The list was further refined to identify manufacturers and distributors.

STAGE 4 A screening procedure was undertaken to elicit a census containing only those companies developing and supplying pasta, pasta sauce and pizza products.

The following is an illustration of the method employed to obtain the final census.

Figure 4.3 : Construction of the Census



4.5 FIELD WORK IMPLEMENTATION

A preliminary letter of notification was dispatched to the product/brand managers of the forty-five firms in the census. In some cases, due to the size of the firms, there were no product/brand managers and therefore the letters were sent to the managing directors (see Appendix C). The letter offered a brief description of the study and its objective. In addition, the respondents were informed that the results would be made available on request. This offer was included as an incentive to participate in the research. Finally, promises of safeguards of anonymity were made stating that results obtained from the research would remain in the strictest confidence. It has generally been regarded for mail surveys that offering safeguards of this nature encourages higher levels of response, as respondents are less likely to fear potential repercussions (Will and Linda 1975 p.250 - 254). It was thought appropriate for this research (even though it was conducted by personal interview), because of the size of the industry, respondents would be reluctant to divulge certain information.

One week after the preliminary notification, the respondents were contacted by telephone to arrange a date for conducting the interview. Eleven firms were unable to participate due to time constraints and an additional five firms, citing the same reason, requested that the questionnaire be posted to them. However, it was decided not to do this to ensure that the responses remained free from bias of this nature. Thus, twenty-nine questionnaires were administered by personal interview and this ensured that any queries respondents had, could be answered immediately. If one takes into consideration the fact that the total census consisted of forty-five firms, then a response rate of twenty-nine firms ensured that a high proportion (65%) of the relevant population participated in the research. Table 4.1 denotes the composition of the final sample of respondents.

Table 4.1 Sample Grid

Type Of Company	Number Of Respondents	% Of Sample
Manufacturer	12	41
Distributor	17	59
Total	29	100

Chapter 5

Analysis of Patterns of Performance and Management Practices

5.1 INTRODUCTION

The overall objective of this research is to ascertain whether differences exist in the development of new food products launched onto the Irish market, which ultimately result in their success or failure. In order to determine this, two key objectives were formulated, each of which had several sub-objectives :-

Objective 1: Patterns of performance and management practices

Objective 2: Key success and failure factors

This chapter presents the findings in relation to patterns of performance and management practices. The objective is to identify a profile of companies launching new food products on the Irish market and to determine if differences exist in the management practices of companies developing and launching new food products on the Irish market which results in their success or failure.

This area has a number of sub-objectives which are examined under the following categories:

*amount of new products launched, successful and planned,
*strategic business requirements,
*impact of internal and external factors,
*the new product process,
*strategic orientation,
*new product structure and style and,
*the level of company resources and skills.

In addition, it investigates whether differences in relation to company ownership, type of company and company size affect the outcome of new food products. The separate findings under each sub-objective are first presented and then considered in light of the first key objective.

The analysed data is presented in graphic and narrative form. The data collected was coded and then analysed using an SPSSX package. This system was chosen because of its package quality. In presenting the data, tests of statistical significance are not included because the size of the industry precludes statistical tests on many sub-categories. In particular, the sample size of this research (twenty-nine companies) severely limits the type of analysis that may be conducted. A more intuitive approach, examining the absolute differences in frequency observations was therefore adopted. Again, notwithstanding the small population size and following recognised acceptable practice, percentages are used throughout to facilitate comparisons when identifying numbers of companies.

However, the reader should note that the perspective you get in relation to percentages might appear to be misleading given the small size of the sector. Therefore it is important to remember that any analysis relating to the number of companies in the research is based on a sample size of twenty-nine companies and thus only tentative observations are drawn. Furthermore, where there are multi-category breakdowns, the percentages may appear to accenuate the differences. At any stage where this occurs, the reader will be reminded of the small sample size. However, as the majority of the analysis relates to the number of products launched over the past five years, which is substantially higher (3440 products), it was thought best to use percentages. Irrespective of this, the author believes this analysis will show salient factors in new product development in the Irish food industry.

5.2 PROFILE OF RESPONDENTS

The results of twenty-nine valid questionnaires were analysed. The breakdown of respondents was as follows :

Table 5.1 Profile of Respondents

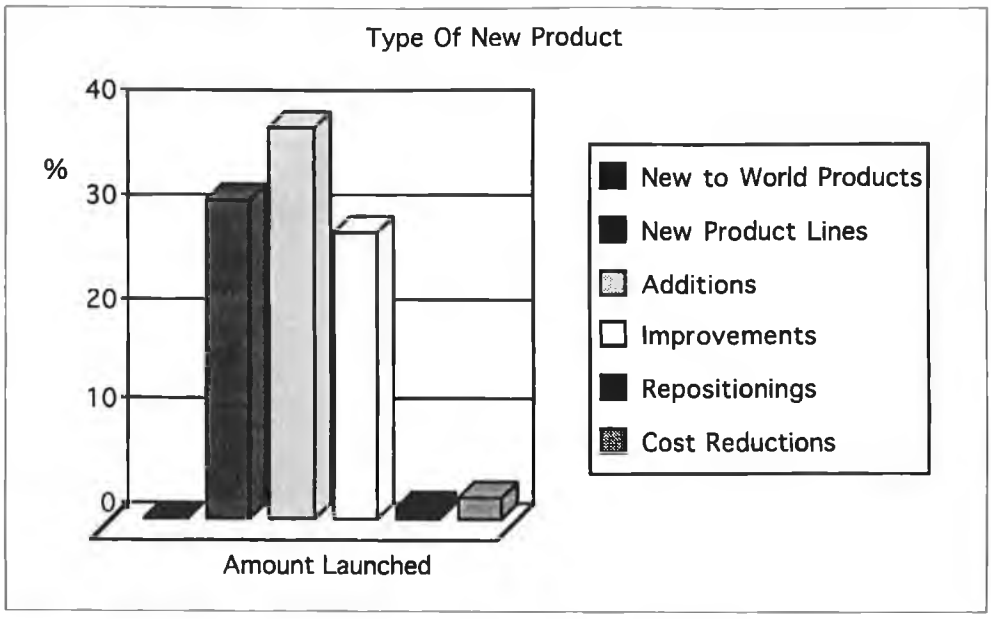
Main Line of Business	Manufacturer	Distributor	
N=	12	17	
	41%	59%	
Company Ownership	Domestic	Foreign	
N=	21	8	
	72.4%	27.6%	
Number of Employees	Small (1-50)	Medium (51-100)	Large (101+)
N=	16	5	8
	55.2%	17.2%	27.6%

5.3 AMOUNT OF NEW PRODUCTS LAUNCHED, SUCCESSFUL AND PLANNED - Sub-objective 1A

Sub-objective 1A is to determine the amount of different types of new food products launched by companies on the Irish market over the past five years and to guage the level of success and failure achieved. Coupled with this, to identify the amount of planned introductions in the future.

5.3.1 AMOUNT OF NEW PRODUCTS LAUNCHED

Figure 5.1 Amount of New Products Launched over the past Five Years

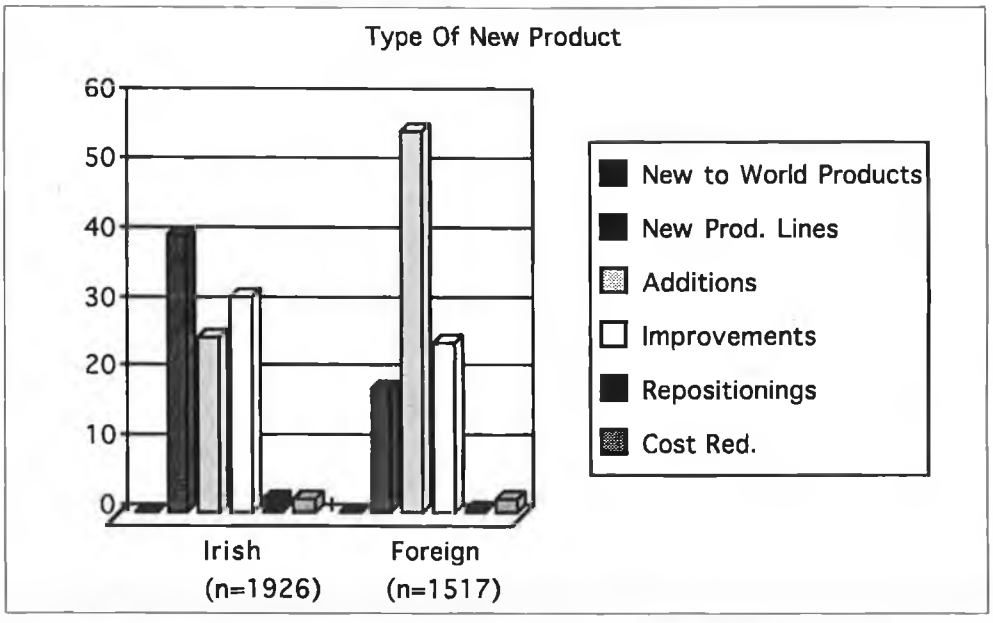


The results of the research indicate that a company's typical new product program includes a mixture of different types of new products. On average, 688 new products were launched per annum over the past five years, which is approximately twenty-four per company. Additions to existing product lines and improvements or revisions to existing products have accounted for 66% of all new products introduced. Furthermore, almost one-third of all new product introductions stem from new product lines. It is evident that companies preferred to develop and launch less innovative new products over the past five years and thus concentrated on additions and improvements.

All of the respondents had launched at least three new product lines over the past five years while none of them had launched any new to the world products. In addition, 75% of respondents did not launch cost reductions, 55% did not launch repositionings, 14% did not launch improvements and 3% did not launch any additions. It appears that the majority of companies are reluctant to launch repositionings and

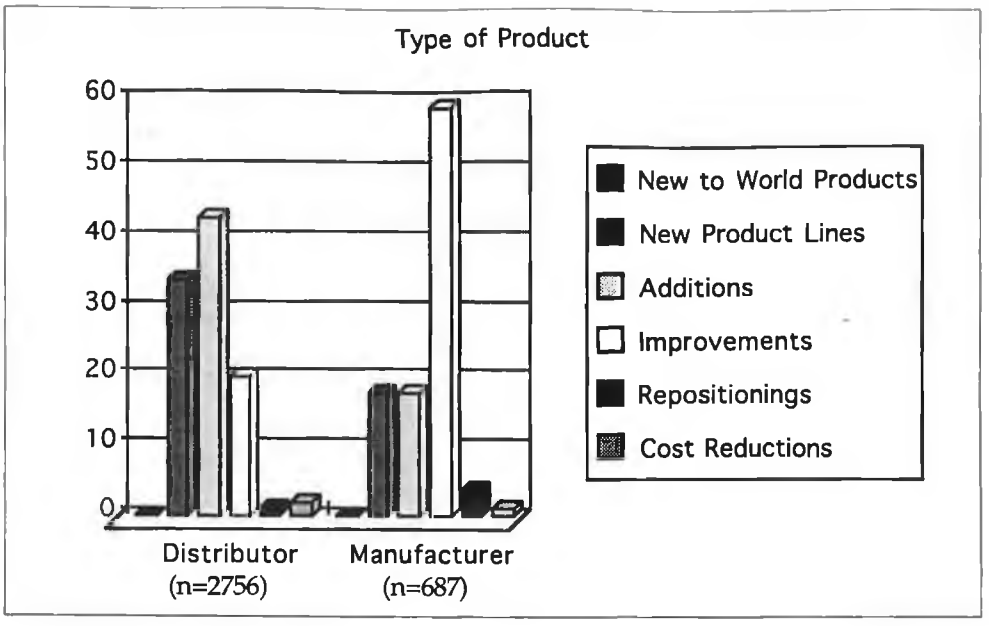
cost reductions, which require little or no innovation and also refrain from launching truly innovative products, such as 'new to the world' products. Instead, they appear to balance the level of innovation by concentrating on new product lines, additions and improvements/revisions to existing product lines.

Figure 5.2 Amount of New Products Launched by Company Ownership



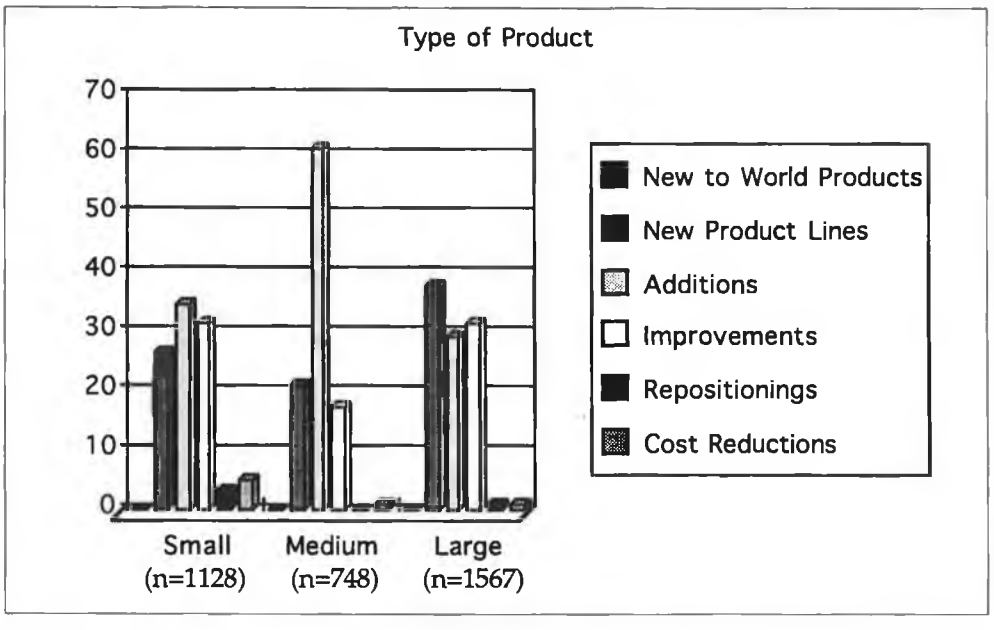
The above figure shows that Irish companies launch substantially more new product lines than foreign owned companies, whereas foreign companies launch more additions to existing product lines. This may well indicate that Irish companies are somewhat more innovative than their foreign counterparts. Overall, though, 96% of all products launched by domestic companies consist of new product lines, additions and improvements. This is very similar to foreign companies, where 97.5% of all products launched consist of these types of products.

Figure 5.3 Amount of New Products Launched by Type of Company



The results indicate that 77% of all products launched by distributors are new product lines and additions to existing product lines, compared with 36% for manufacturers. This would suggest that while distributors launch more innovative products than manufacturers, the majority of products launched by manufacturers are improvements to existing products (59%).

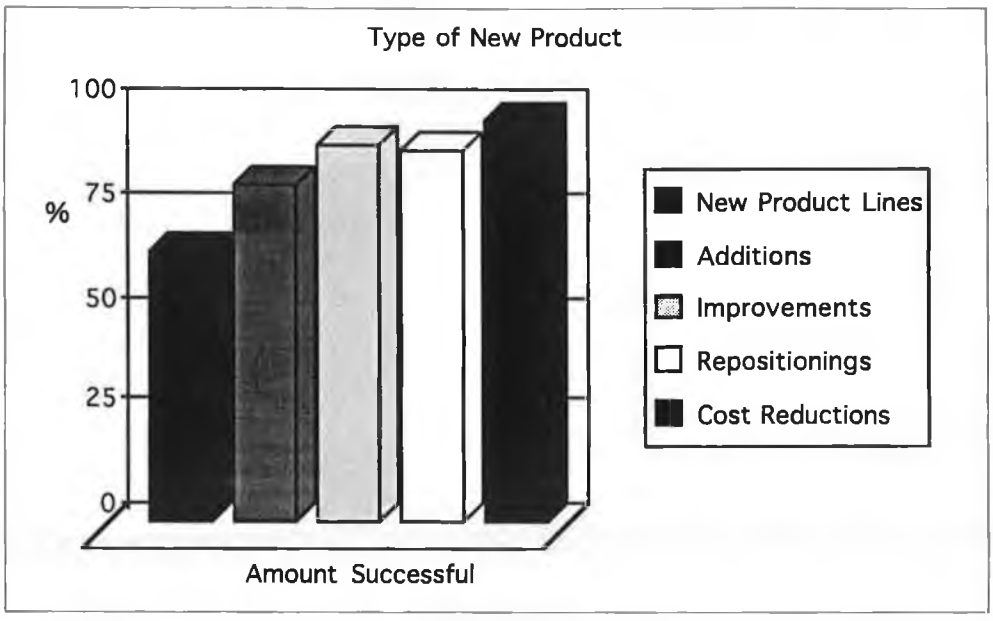
Figure 5.4 Amount of New Products Launched by Size of Company



The findings show that large companies launch a greater proportion of more innovative new products, such as new product lines than small and medium sized companies, whilst medium companies launch a substantially greater proportion of additions and small companies launch more repositionings and cost reductions.

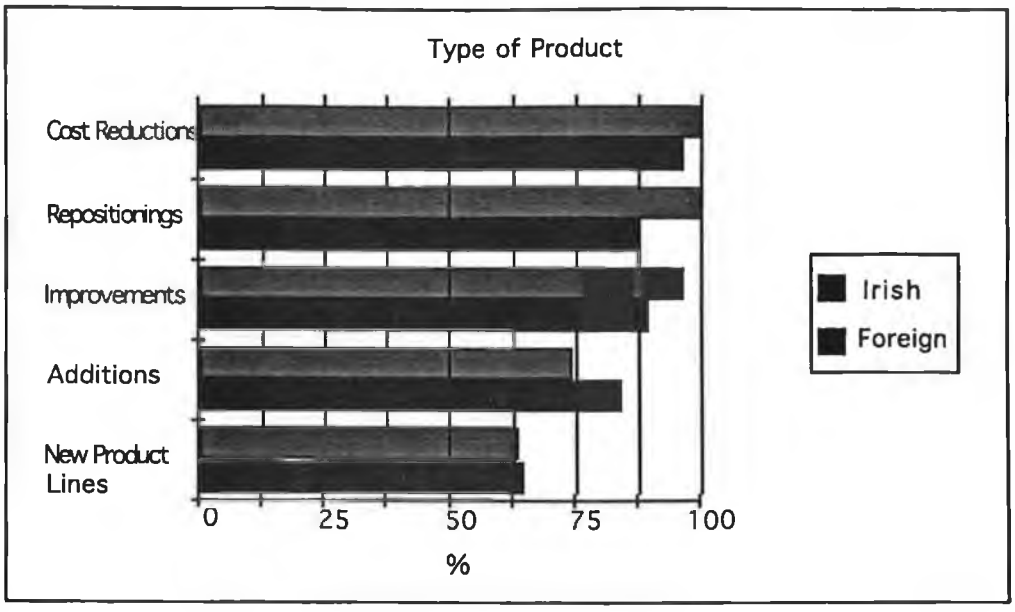
5.3.2 AMOUNT OF NEW PRODUCTS SUCCESSFUL

Figure 5.5 Amount Of New Products Successful



The results indicate that overall, companies achieved the greatest level of success with cost reductions, improvements/revisions to existing product lines and repositionings, closely followed by additions to existing product lines. It appears from the above figure that the less innovative the new product, the higher level of success attained. For example, improvements, repositionings and cost reductions require little change in the development of new products, compared with new product lines and additions to existing lines, yet they achieved the highest levels of success. However, it is surprising to note that these three types of new products consisted of the lowest amount of new products launched over the past five years (Figure 5.1). On average though, 85% of all new products were successful.

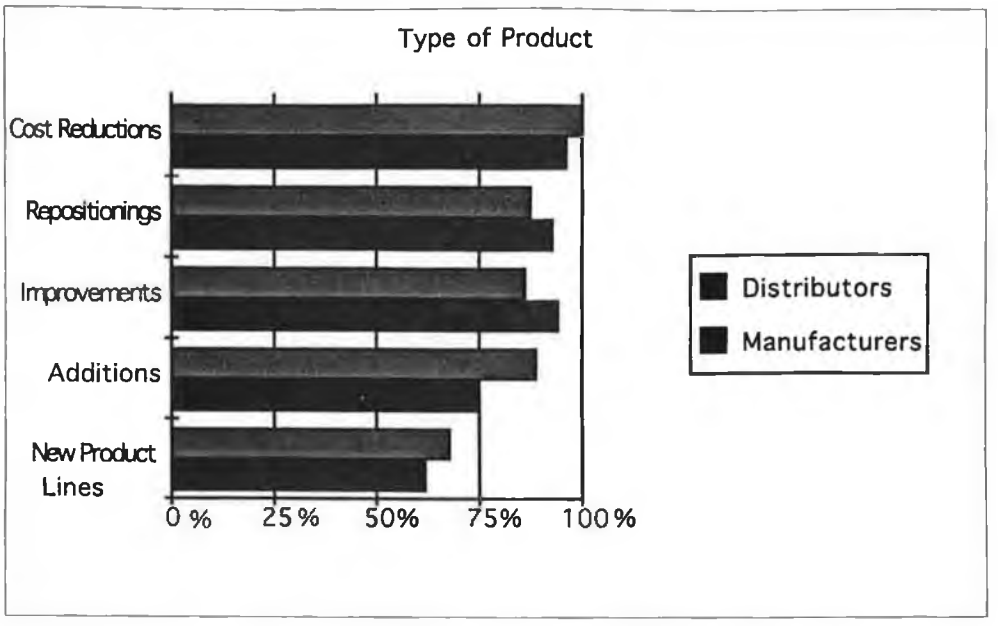
Figure 5.6 Amount of New Products Successful by Company Ownership



On average, the level of success achieved overall by Irish companies (84%) is very similar to that of foreign companies (87%). The above figure shows that Irish companies achieve a higher success rate with additions to existing product lines and new product lines than foreign companies, which account for 65% of all new products launched by them. Foreign companies have a better success rate with improvements, repositionings and cost reductions and these account for 27% of all new product introductions. Therefore, on a competitive level, Irish companies appear to capitalise more on their strengths compared with their foreign counterparts.

It can be noted that although improvements, repositionings and cost reductions constitute the highest level of success for both types of companies, they only account for 35% of all new products launched by Irish companies and 27% of all new products launched by foreign companies.

Figure 5.7 Amount of New Products Successful by Type of Company



It is evident from the above figure that manufacturers achieve a substantially higher level of success with additions to existing product lines than distributors, while they also achieve a slightly higher level of performance with new product lines and cost reductions. These three types of products account for 79% of all new products launched by manufacturers. Conversely, distributors attain higher levels of success with improvements and repositionings and these constitute 21% of all new products launched by them. This suggests that manufacturers appear to capitalise more on their competitive strengths in contrast to the distributors. Overall though, their average success level is very similar with distributors achieving 84% success and manufacturers 86% success.

A comparison of this figure with figure 5.3 shows that manufacturers launched a substantially higher amount of those products (82%) in which they achieved the greatest level of success, compared to distributors who only launched 23% of those products, in which they achieved the greatest level of success.

Table 5.2 Amount of New Products Successful by Company Size

Type Of Product	Small	Medium	Large
New Product Lines	67%	52%	68%
Additions to Existing Product Lines	86%	72%	78%
Improvements/Revisions	87%	96%	95%
Repositionings	91%	50%	100%
Cost Reductions	100%	80%	100%

The findings show that, on average, large companies achieve the highest overall rate of new product success (88%) closely followed by small companies (86%). However, medium sized companies achieve a much lower overall rate of new product success (70%).

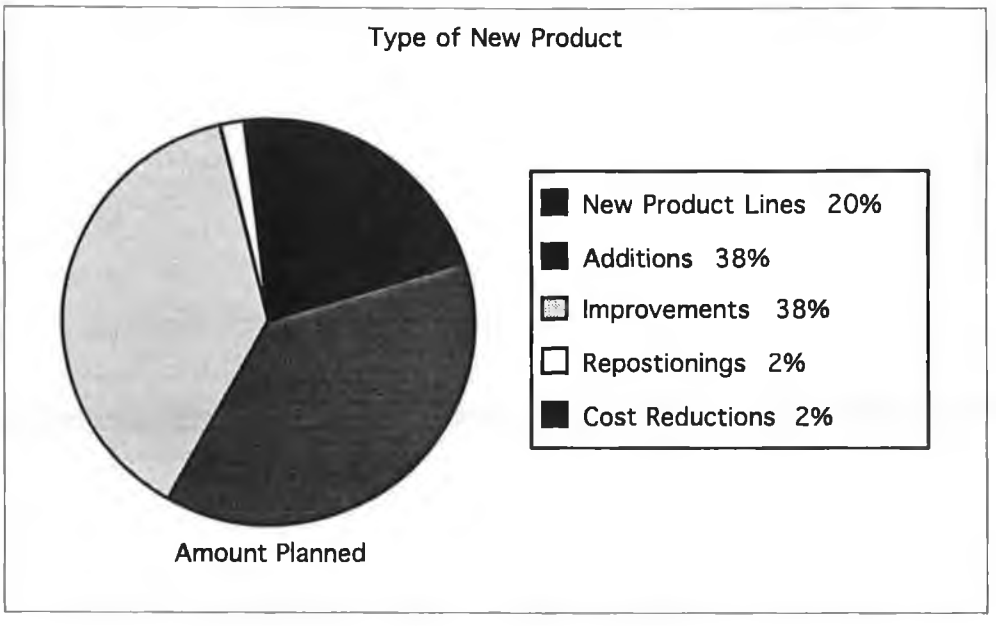
On a competitive level, small companies achieve a higher success rate with additions and one of the highest success rates with new product lines and cost reductions, which account for 66% of all their new product launches. On the other hand, medium sized companies perform better with improvements and these constitute only 17% of new products launched by them. Large companies have a better success rate with repositionings and one of the highest levels of success with cost reductions, improvements and new product lines. In addition, these account for 71% of all their new product launches. Therefore, it is evident that both large and small companies capitalise more on their competitive strengths, than medium sized companies.

On an individual basis, small companies achieve the greatest level of new product success with cost reductions, repositionings, improvements and additions, which account for 74% of all new products launched by them. Similarly, cost reductions and additions constitute the highest levels of success for medium sized companies, yet they consisted of only 18% of all their new product launches.

Whilst large companies attain the highest level of performance with improvements, repositionings and cost reductions and these accounted for 33% of all their new product launches. Thus smaller companies launched a much greater number of those products in which they achieved the highest individual levels of success compared to medium and large companies.

5.3.3 AMOUNT OF PLANNED INTRODUCTIONS

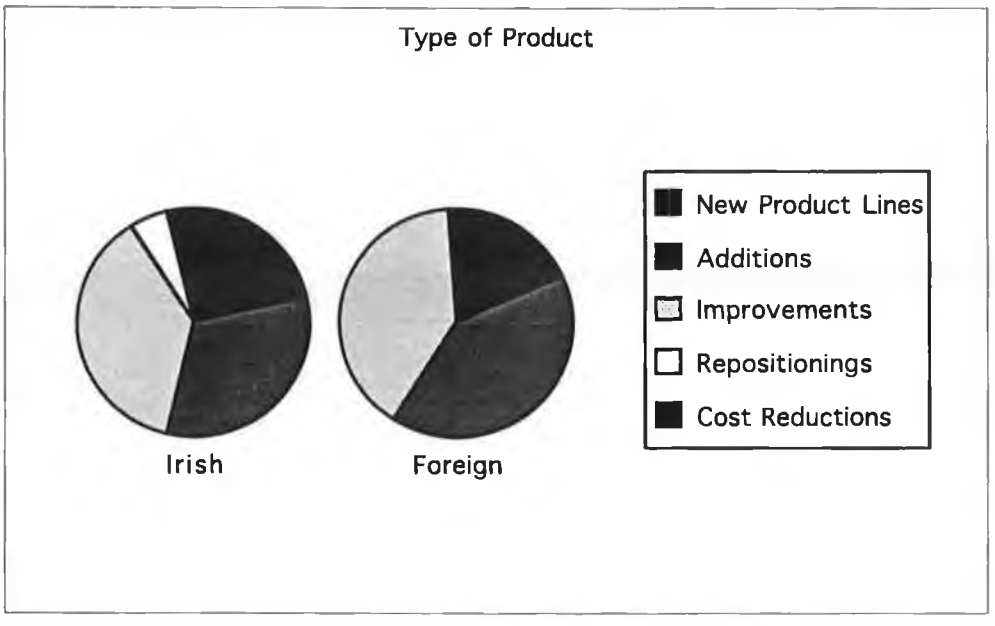
Figure 5.8 Amount of Planned Introductions of New Products over the Next Year



A comparison of this figure with the amount of products previously launched (Figure 5.1) shows that companies are planning to increase the amount of new products introduced next year. On average, 688 new products were previously launched on the Irish market annually and this is forecast to increase to 848 next year. This equals approximately twenty-nine new products by each company next year, which is an increase of 20% or five new products per company. The majority of new product introductions planned for next year consist mainly of new additions and improvements to existing products (76%), while it is forecast that one-fifth of all introductions will be new product lines.

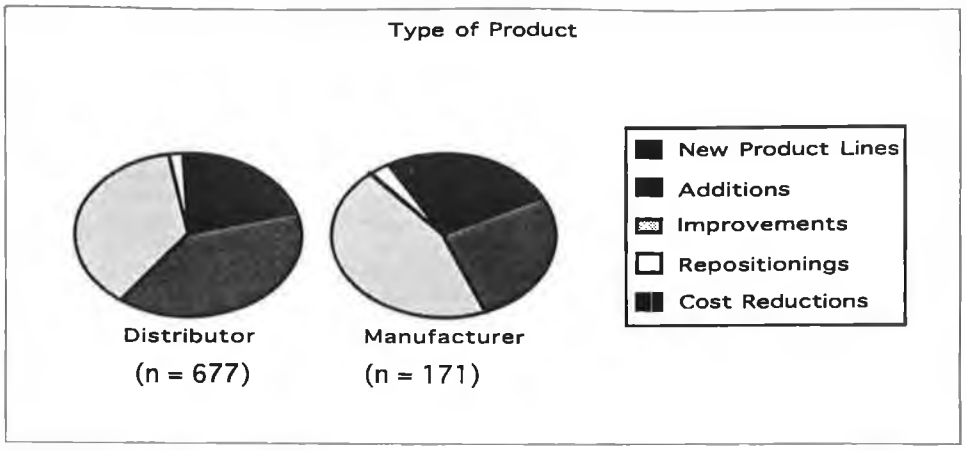
However, 17.2% of respondents (5 companies) do not plan to launch any new product lines or additions, 41.4% (12 companies) do not plan any improvements, 76% (22 companies) have no plans for repositionings, whilst 90% (26 companies) do not intend to introduce any cost reductions over the next year. This again shows the reluctance by companies to launch truly innovative new products and products requiring little or no innovation. It is surprising that only 4% of all new products planned consist of repositionings and cost reductions when one takes into consideration that they achieved the highest levels of success overall (Figure 5.5), although they are the least innovative of all new products.

Figure 5.9 Amount of Planned Introductions over the next Year by Company Ownership



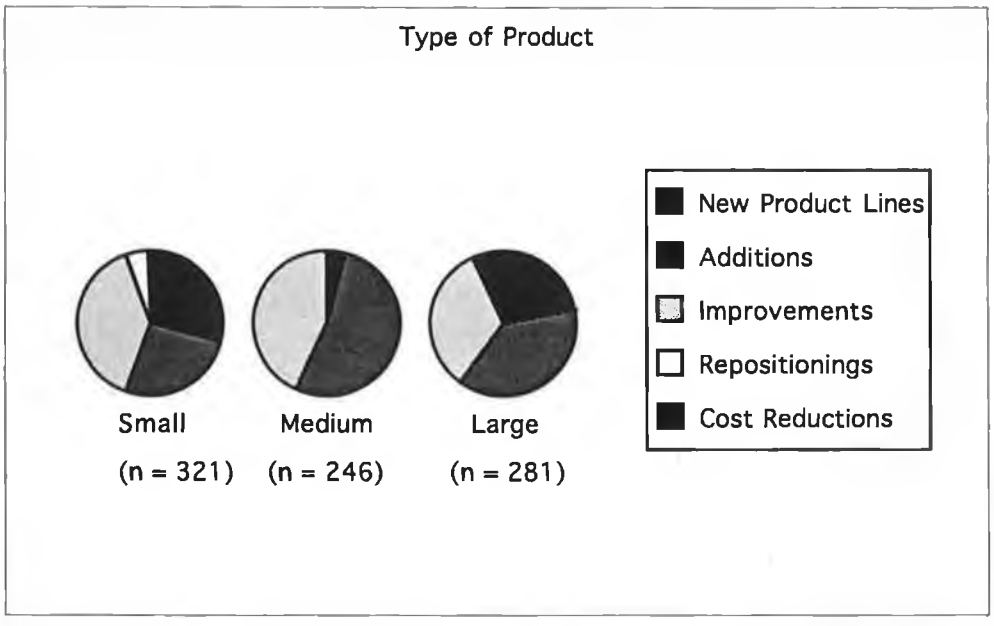
The only major differences evidenced from the above results is that foreign companies plan to launch a greater proportion of product additions (41%) than Irish companies (33%), although there are slight differences in relation to the other types of products. This suggests that foreign companies are concentrating on their new product strengths as they achieve a higher success rate with additions than Irish companies (Figure 5.6).

Figure 5.10 Amount of Planned Introductions over the next Year by Type Of Company



The results indicate that next year, manufacturers plan to introduce a greater proportion of product improvements and cost reductions than distributors, whilst the latter plan to launch a greater amount of additions to existing product lines.

Figure 5.11 Amount of Planned Introductions over The Next Year By Size of Company



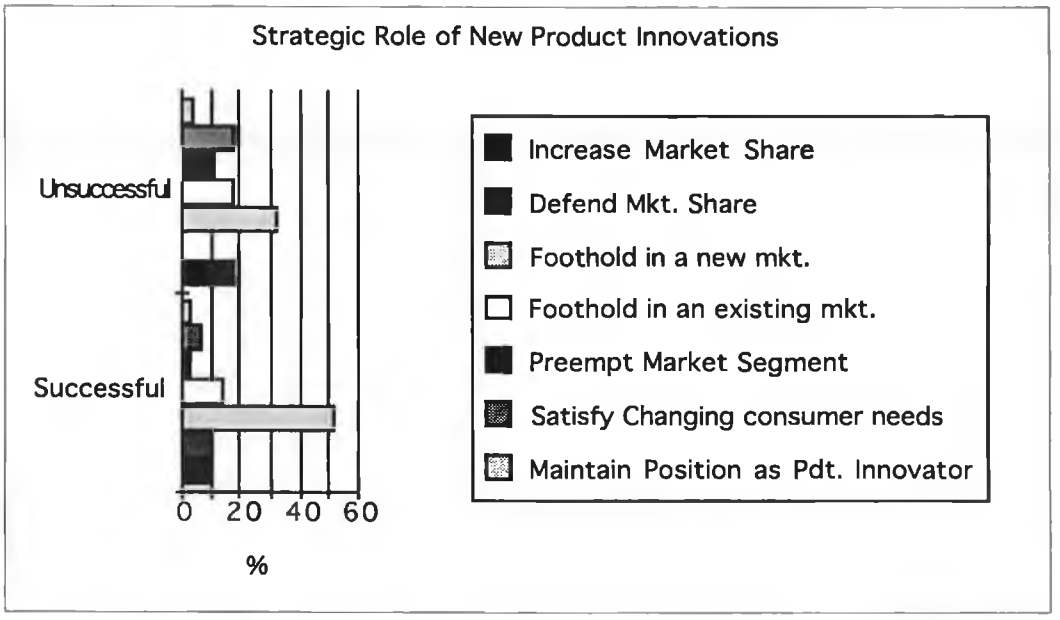
Major differences are evident in the above figure which shows that next year medium sized companies plan to launch a greater proportion of additions and a much lower proportion of new product lines than

small and large companies, whilst small companies plan to introduce a lower amount of additions than the other two.

5.4 STRATEGIC BUSINESS REQUIREMENTS - Sub-objective 1B

Sub-objective 1B investigates the strategic business requirements expected of new products to see if they are related to new product success or failure. The requirements determine the roles to be played by new products and can be both market and company driven. They are examined in light of the most successful and least successful product. Included in this question was a category labelled 'other' where the respondent had the option of stating other strategic roles established for new products. This resulted in two new categories - *'establish a foothold in an existing market'* and *'satisfy changing consumer needs'*.

Figure 5.12 Strategic Role of Most Successful and Unsuccessful Product



Over the last five years, establishing a foothold in a new market has been the most common new product role for both the successful and unsuccessful new products. Approximately 96% of all new products were expected to fulfil a market driven as opposed to company driven strategic role and suggests that respondents are very market-led.

Overall, there are no real differences in relation to company ownership, type of company and size of company, with the most common strategic role being to establish a foothold in a new market.

Table 5.3 Average Contribution of New Products to Total Company Sales and Profits

	Sales	**Profits**
Overall	22.8%	22.5%
Irish Companies	25.4%	25.8%
Foreign Companies	16%	13.8%
Distributors	15.3%	13.4%
Manufacturers	33.4%	35.5%
Small	20%	21%
Medium	33%	31%
Large	21%	21%

Table 5.4 Cost of Introducing New Products

	Increased	Stayed Same	Decreased
Overall	76%	7%	17%
Irish Companies	76.2%	14.3%	9.5%
Foreign Companies	75%	25%	0
Distributors	70.6%	23.5%	5.9%
Manufacturers	83.3%	8.3%	8.3%
Small	81%	6%	12%
Medium	40%	20%	40%
Large	87.5%	0	12.5%

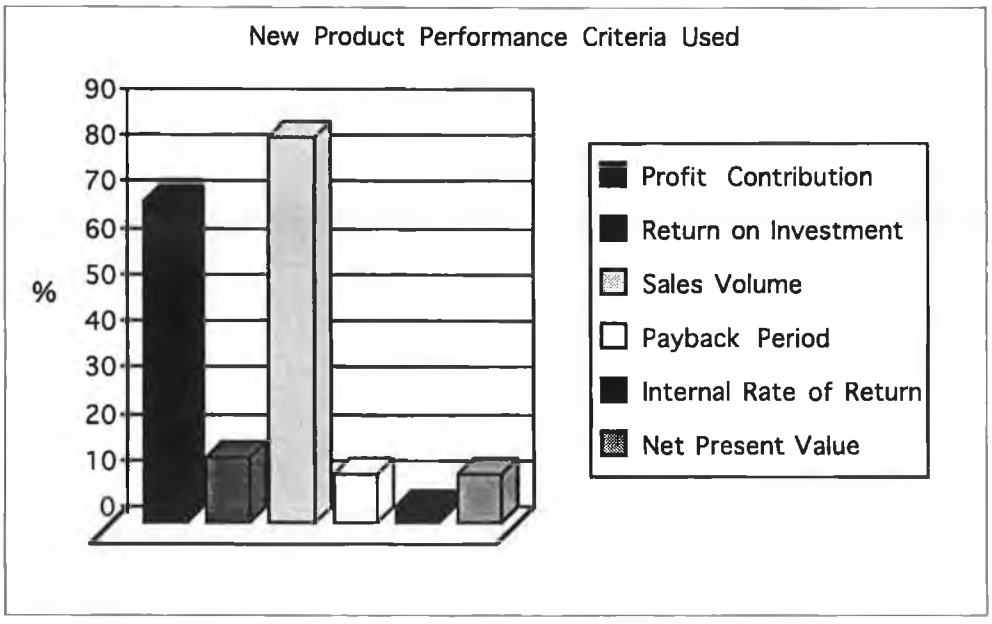
The average contribution of new products to total company sales is approximately 23%, while the average percentage of total company profits generated by new products is 22.5%. Furthermore, the cost of introducing new products over the past five years has increased, according to 76% of respondents, and if this trend continues it could have a direct effect on the future contribution of new products to total company profits.

Differences exist between Irish and foreign owned companies in relation to the contribution by new products to total company sales and profits, although at least 75% of both types of companies have witnessed an increase in the cost of introducing products over the past five years. In relation to Irish companies, on average approximately one-quarter of total company sales and profits were generated by new products. However, the average results for foreign companies were much lower with only 16% of total sales and 13.8% of total profits being generated by new products. Therefore, it is evident that new products play a far greater role in Irish companies compared with foreign owned

companies. Similarly, the average contribution of new products to sales and profits is far greater for manufacturers at 33.4% and 35.5% respectively compared to distributors where new products account for 15.3% of total company sales and only 13.4% of total company profits. Thus, new products contribute much more to sales and profits in manufacturer as opposed to distributor companies.

In relation to size of company, new products contribute approximately one-third to total company sales and profits in medium sized companies compared to one-fifth in small and large companies. Therefore new products appear to play a greater role in medium sized companies than in small and large companies.

Figure 5.13 New Product Performance Criteria used by Companies



In general, the results of the research indicates that approximately one-third of all companies surveyed formally measure new product performance, using on average two performance criteria. However, care must be taken in interpreting these results due to the small sample size (29 companies). Thus, while not statistically significant, it is important to note that the two most commonly used measurement

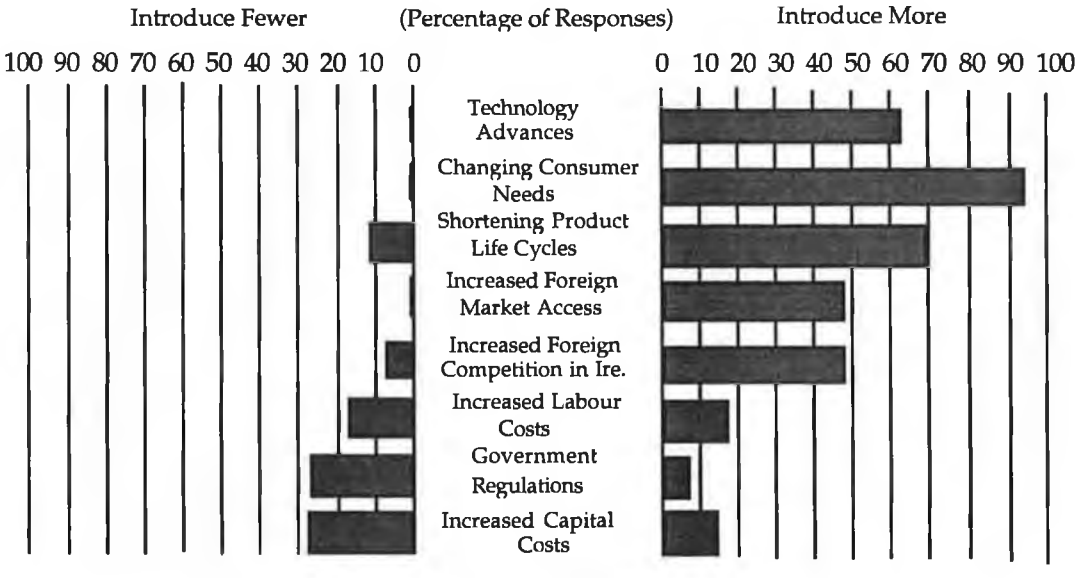
criteria are sales volume and profit contribution and these account for 80% of all criteria used. Furthermore, these same two criteria are favoured by all companies irrespective of company ownership, type of company and size of company.

5.5 IMPACT OF INTERNAL AND EXTERNAL FACTORS

- Sub-objective 1C

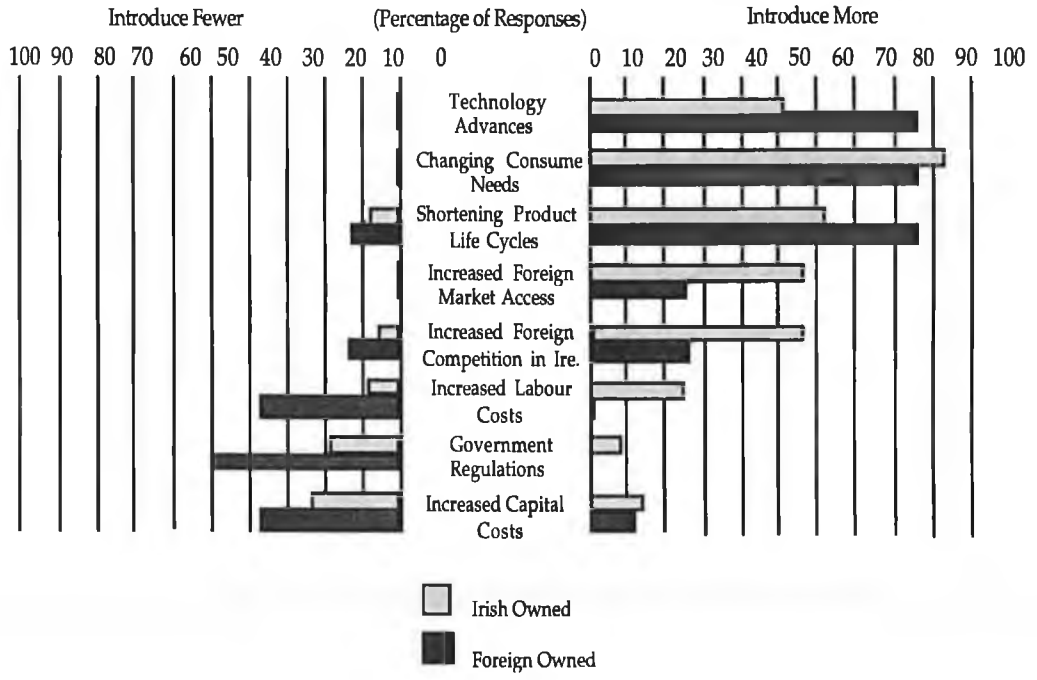
Sub-objective 1C investigates the likely impact of both internal and external factors on the future development and launch of new food products on the Irish market. In order to determine the likely impact of external factors, respondents were asked to indicate whether certain factors would cause them to introduce more, the same amount or fewer new products over the next five years. Figure 5.14 shows that the trend towards increased development and introduction of new products (figure 5.8) is supported by a number of factors. However it is important to note that the observations made are tentative due to the small base employed in the research.

Figure 5.14 Impact of External Factors on Future New Product Development and Introduction



The key external factors likely to enhance new product development in the future are technology advances, changing market requirements, shortening product life cycle's and world market competition.

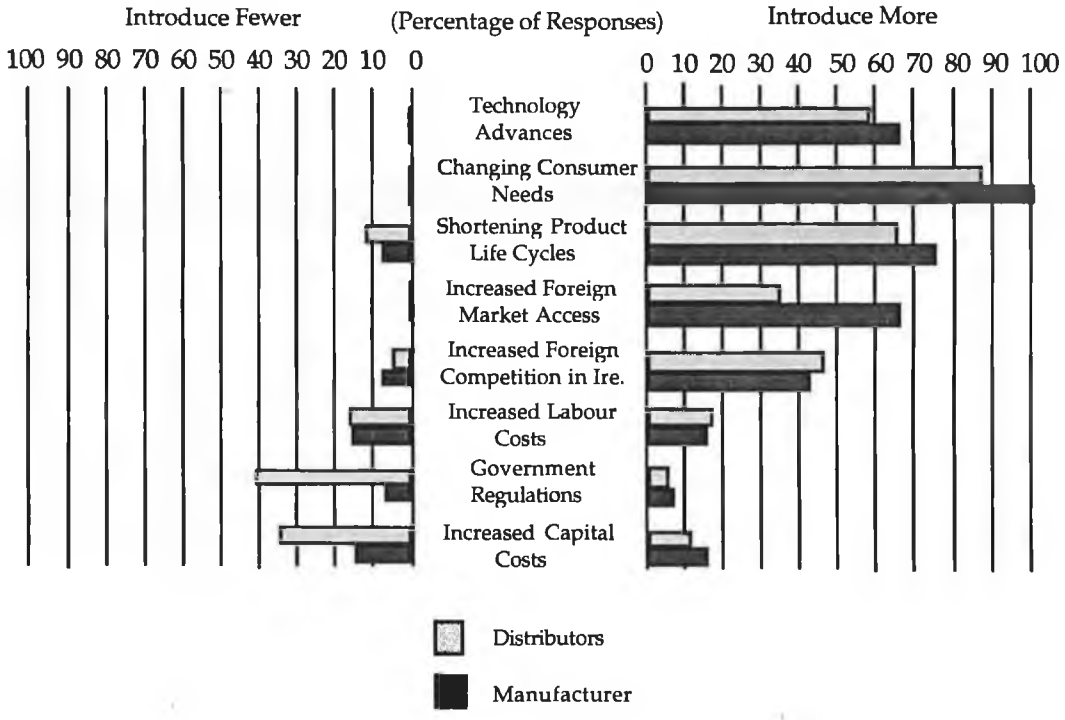
Figure 5.15 Impact of External Factors on Irish and Foreign Owned Companies



In relation to Irish companies, changing consumer needs would be the principal factor likely to cause them to introduce more new products in the future, followed by shortening product life cycle's and world market competition, whereas, technology advances, shortening product life cycles and changing consumer needs would lead to increased new product introductions by foreign companies. In addition, more government regulations on food would lead foreign companies to reduce the amount of new product introductions. The impact of external factors on the introduction of new products is envisaged to have different effects on foreign companies than Irish companies. For example, the effect of increased foreign market access

and increased foreign competition in Ireland would cause a greater amount of Irish companies to launch more new products than their foreign counterparts. Conversely, the impact of technology advances and shortening product life cycles would cause a greater amount of foreign to launch more new products than Irish companies. In addition, the negative effect of more government regulations and increasing capital costs is likely to be greater for foreign companies. Again, it is important to remember that while the differences are not statistically significant, nevertheless the research is based on a complete census of the industry and therefore the results should be interpreted accordingly.

Figure 5.16 Impact of External Factors on Distributor and Manufacturer Companies

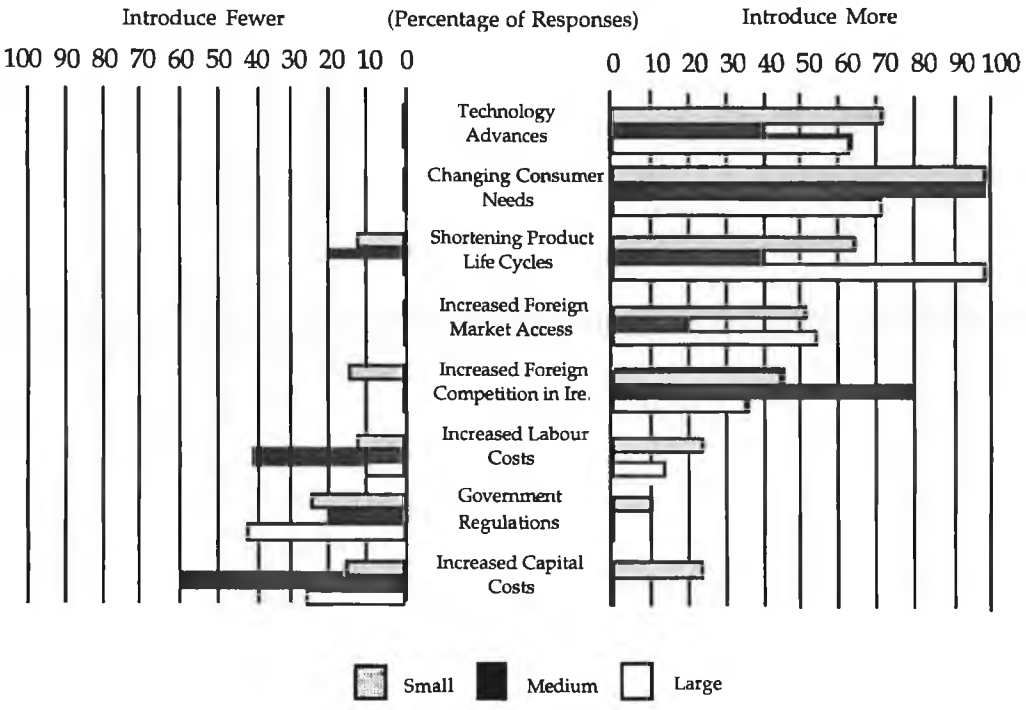


In relation to type of company, changing consumer needs is the principal factor likely to cause both distributors and manufacturers to launch more new products, although it would have a greater affect on manufacturers. However, the main cause of reduced new product

introductions for distributors would be more government regulations.

The positive effect of technology advances, changing consumer needs, shortening product life cycles and increased foreign market access are likely to have a stronger impact on manufacturers rather than distributors, with the exception of increased foreign competition in Ireland. In addition, the negative impact of more government regulations and increased capital costs are likely have a much greater effect on distributors. Once again caution must be stressed in interpreting these results due to the nature of the sample size.

Figure 5.17 Impact of External Factors by Company Size



The above figure shows that changing consumer needs would have a substantial effect across all the companies, although it would have the least impact on large companies. The other main factor, likely to cause small companies to increase the amount of new product introductions, is technology advances and shortening product life cycle's. In relation to medium sized companies, it would be increased foreign competition in Ireland, while for large companies it would be shortening product

life cycles. However a reduction in new product launches would primarily stem from increased capital costs in medium sized companies. Furthermore, the effect of increased foreign competition in Ireland and shortening product life cycles would have a stronger impact on medium and large sized companies respectively. Conversely, the negative impact of increased labour and capital costs would be more substantial for medium sized companies.

Table 5.5 Impact of Internal Factors on Future New Product Development and Introduction

Internal Factors	Likely	Unlikely
Management Orientation		
Lack Of Attention To New Products	13.7%	86.3%
Emphasis On Short-Term Profitability	31%	69%
Management Practices		
Inadequate Market Research	48.2%	51.8%
Lack Of New Product Strategy	48.2%	51.8%
Lack Of Measurement Criteria	27.6%	72.4%
Lack Of Proven Analytical Techniques	41.4%	58.6%
Organisation		
Delay In Making Decisions	34.5%	65.5%
Ineffective Communication Between Functions And Departments	10.3%	89.7%
Current Organisational Structure	17.2%	82.8%
Unclear Assignment Of Ultimate New Product Responsibility	27.5%	72.5%
Excessive Top Management Involvement In Process Details	3.4%	96.6%
Lack Of General Business Skills Among New Product Managers	10.3%	89.7%
Ineffective Communication Between Manufacturer And Distributor	17.2%	82.8%
Loyalty To Established Manufacturers	13.7%	86.3%

Table 5.5 shows that management practices are the most likely internal obstacles to successful new product development with inadequate market research, a lack of new product strategy and a lack of proven

analytical techniques being the most critical. It is important to note though that the majority of internal obstacles would be unlikely to have an impact on the future new product development and launch by most companies.

Table 5.6 Likely Impact of Internal Factors on Future New Product Development and Introduction by Irish and Foreign Companies

Internal Factors	**Irish**	**Foreign**
N=	21	8
Management Orientation		
Lack Of Attention To New Products	14.3%	12.5%
Emphasis On Short-Term Profitability	28.6%	37.5%
Management Practices		
Inadequate Market Research	52.4%	37.5%
Lack Of New Product Strategy	57.2%	52.5%
Lack Of Measurement Criteria	33.3%	12.5%
Lack Of Proven Analytical Techniques	47.6%	25%
Organisation		
Delay In Making Decisions	28.6%	50%
Ineffective Communication Between Functions And Departments	14.3%	0%
Current Organisational Structure	14.3%	25%
Unclear Assignment Of Ultimate New Product Responsibility	28.6%	25%
Excessive Top Management Involvement In Process Details	4.8%	0%
Lack Of General Business Skills Among New Product Managers	14.3%	0%
Ineffective Communication Between Manufacturer And Distributor	9.5%	37.5%
Loyalty To Established Manufacturers	19.1%	0%

A comparison of Irish and foreign owned companies illustrates that the principal internal obstacle most likely to impede the successful introduction of new products in Irish and foreign companies relates to management practices such as a lack of new product strategy. In

addition, inadequate market research and a lack of proven analytical techniques is a salient factor for Irish companies, whereas a delay in making decisions is an important factor likely to impede the successful introduction of new products by foreign owned companies. However, it is important to stress that the majority of internal factors would be unlikely to have an impact on most Irish and foreign owned companies.

Table 5.7 Likely Impact of Internal Factors on Future New Product Development and Introduction by Distributors and Manufacturers

Internal Factors	**Distributors**	**Manufacturers**
N=	17	12
Management Orientation		
Lack Of Attention To New Products	11.8%	16.7%
Emphasis On Short-Term Profitability	29.4%	33.3%
Management Practices		
Inadequate Market Research	47.1%	50%
Lack Of New Product Strategy	47.1%	50%
Lack Of Measurement Criteria	50%	66.7%
Lack Of Proven Analytical Techniques	41.2%	41.7%
Organisation		
Delay In Making Decisions	41.2%	25%
Ineffective Communication Between Functions And Departs.	0%	25%
Current Organisational Structure	17.7%	16.7%
Unclear Assignment Of Ultimate New Product Responsibility	23.5%	33.3%
Excessive Top Management Involvement In Process Details	0%	8.3%
Lack Of General Business Skills Among New Product Managers	5.9%	16.7%
Ineffective Communication Between Manufacturer & Distrib.	29.4%	0%
Loyalty To Established Manufacturers	23.5%	0%

In relation to both distributors and manufacturers, there are no real differences concerning the top three obstacles likely to impede new product introductions with lack of measurement criteria, lack of new product strategy and inadequate market research being most frequently cited. It should be noted that most of the factors are not envisaged to have any effect on the future development and introduction of new products by most distributors and manufacturers.

Table 5.8 Likely Impact of Internal Factors on Future New Product Development and Introduction by Company Size

Internal Factors	**Small**	**Medium**	**Large**
N=	16	5	8
Management Orientation			
Lack Of Attention To New Products	13.9%	0	20%
Emphasis On Short-Term Profitability	25%	20%	53.3%
Management Practices			
Inadequate Market Research	63.9%	40%	20%
Lack Of New Product Strategy	50%	40%	53.3%
Lack Of Measurement Criteria	38.9%	20%	10%
Lack Of Proven Analytical Techniques	41.7%	40%	36.6%
Organisation			
Delay In Making Decisions	27.8%	0	80%
Ineffective Communication Between Functions And Departs.	11.1%	0	10%
Current Organisational Structure	25%	0	10%
Unclear Assignment Of Ultimate New Product Responsibility	38.8%	0	20%
Excessive Top Management Involvement In Process Details	0	0	10%
Lack Of General Business Skills Among New Product Mgrs	19.4%	0	0
Ineffective Communication Between Manufacturer & Distrib.	19.4%	20%	10%
Loyalty To Established Manufacturers	11.1%	20%	16.6%

The results in the previous table must be interpreted with caution when one takes into consideration the small sample size. It is apparent that inadequate market research in small companies and a delay in making decisions in large companies are key obstacles to new product development in the future.

5.6 THE NEW PRODUCT PROCESS - Sub-objective 1D

The purpose of this sub-objective is to ascertain the type of new product processes in operation in companies developing and launching new food products on the Irish market and to see if they are related to new product success or failure. Once again, the small number of companies included in the research means that the results are not significant. However as the research is based on a complete census, the relevance of the findings must not be undermined. Therefore the reader is reminded that any observations are tentative.

The findings show that only 34.5% of companies employ a formal new product development process based on strict guidelines and procedures, whereas the majority of respondents (65.5%) use an informal process. In addition, approximately three-quarters of the sample (75.9%) carry out the stages sequentially, while approximately one-quarter (24.1%) conduct the stages simultaneously. However, the companies operating a formal process achieve an average success rate of 87%, whilst those operating an informal process achieve a slightly lower success rate of 81%. Similarly, a higher level of performance was achieved with a sequential process (87%) as compared to a simultaneous process (80%). Thus, a formal process, where the steps are carried out sequentially appears to be more conducive to a higher rate of success.

Figure 5.18 Type of New Product Process and Method Employed by Company Ownership

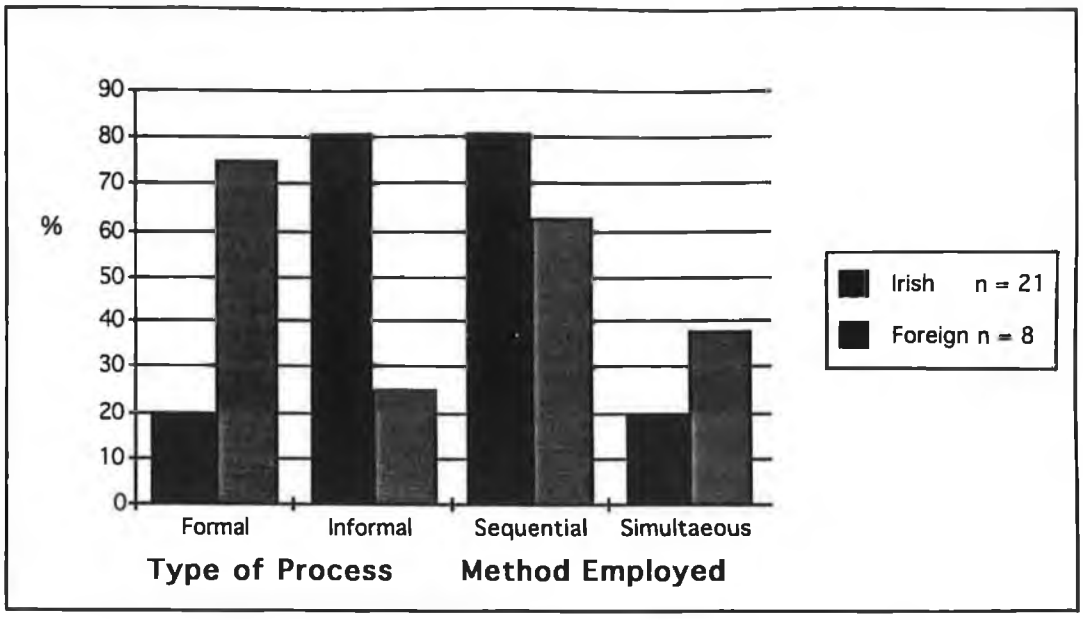
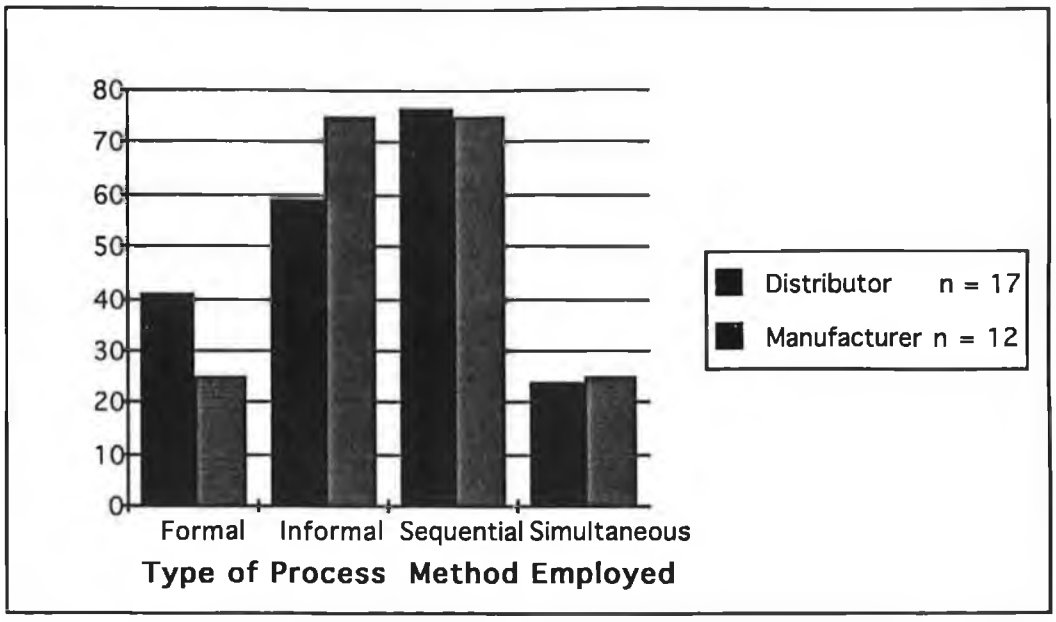


Figure 5.18 denotes the type of processes and the method by which the stages are carried out in Irish and foreign owned companies. It is evident that 75% of foreign companies employ a formal process compared with only 19% of Irish companies. Furthermore, 37.5% of foreign companies use the simultaneous approach as opposed to 19% of Irish companies. This suggests that foreign companies are much more progressive in their approach to the development and launch of new products and adhere more to formal procedures than their Irish counterparts.

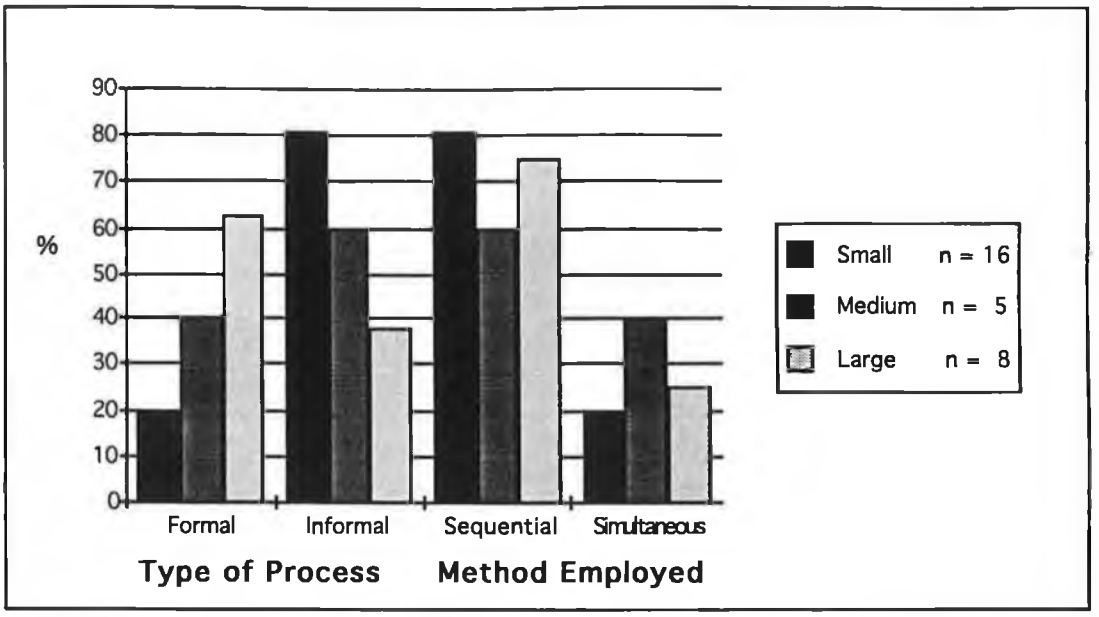
However, whilst the greater use of a formal process results in the attainment of higher success rates for foreign companies, it is offset by the more frequent use of simultaneous processing which contributes to a lower level of new product performance. Conversely, Irish companies benefit from a greater use of the sequential method, while they may experience a lower rate of success due to a higher use of informal processes.

Figure 5.19 Type of New Product Process and Method Employed by Type of Company



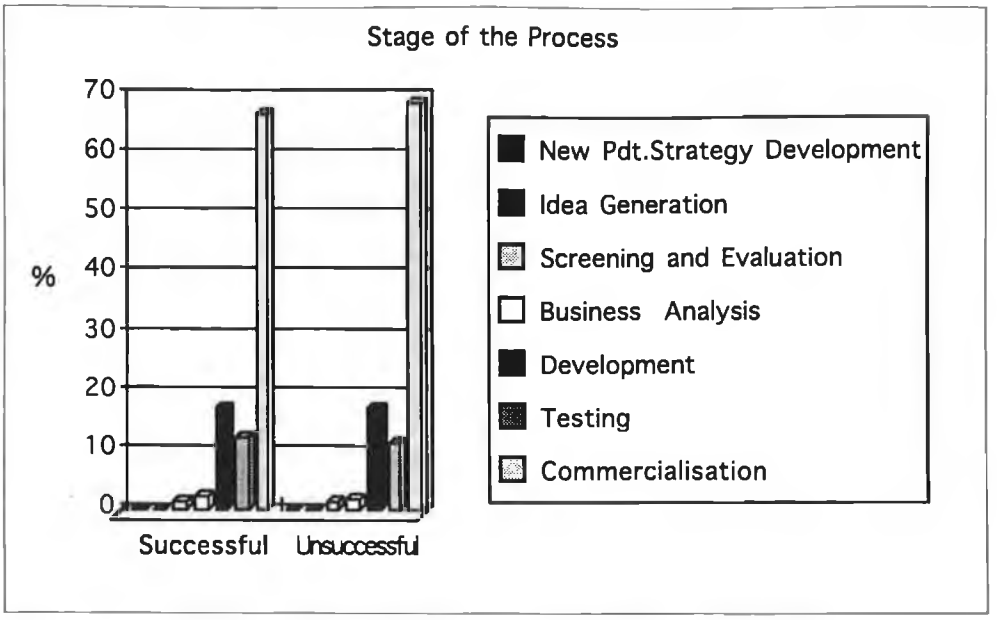
The results indicate that 41% of distributors use a formal process when launching new products compared with 25% of manufacturers who employ a similar approach. If one takes into consideration the fact that the use of a formal process results in a higher level of performance, this suggests that more manufacturers need to formalise their development processes if they are to remain competitive with distributors. Approximately three-quarters of both types of companies enjoy the opportunity to achieve higher levels of new product performance through the use of sequential processing.

Figure 5.20 Type of New Product Process and Method Employed by Company Size



It is evident from the above figure that as companies increase in size, they employ a more formal approach to the new product process. This results in a higher rate of success and suggests that more small to medium sized companies should formalise their development processes, if they are to compete effectively with larger companies. However, a greater amount of smaller and larger companies tend to carry out the process sequentially and this is also more conducive to a higher level of performance. Thus, on a competitive basis, more medium sized companies need to use sequential processing when developing and launching new products.

Figure 5.21 Percentage of Total Expenditures at each Stage of the Process for the Successful and Unsuccessful Product



The breakdown of expenditure at each stage of the process shows that there are no major differences between the successful and unsuccessful products. This suggests that the percentage of overall expenditure at each stage is not a major factor in determining success. This is consistent in relation to Irish and foreign owned companies, manufacturers and distributors and small, medium and large sized companies. Furthermore, in relation to the manufacturers, the level of top management support at each stage of the process was identical for both types of product, with 83% of respondents stating that it did not vary at any stage for either product.

The results indicate that distributors are quite active with manufacturers throughout the various stages of the new product development process. Overall, 41% were involved at the idea generation stage, 65% were involved with the screening and evaluation of new product ideas, 65% were involved at the business analysis stage, 41% were involved with the development of the new product and 47% were involved with testing the new product.

Table 5.9 Average Number of New Product Ideas Considered

	Amount Usually Considered	Successful Product	Unsuccessful Product
Overall	16	5.3	3.8
Irish Companies	14	5	4
Foreign Companies	20	6	2
Distributors	17	4	3
Manufacturers	14	7	5
Small	12	8	5
Medium	21	4	1
Large	19	1	3

Table 5.9 shows that, on average, 16 new product ideas are considered for every new product introduced. In addition, foreign companies, distributors and medium and large size companies usually consider a greater amount of new product ideas overall. This is not surprising when one takes into account that foreign companies would have the opportunity to seek new ideas from more than one market, distributors are likely to be offered new products from a variety of manufacturers and medium to large size companies would have greater resources to seek new ideas than smaller companies.

The results also indicate that more new product ideas were considered overall for the successful (5.3) as opposed to the unsuccessful product (3.8), although the differences are slight. This implies that it may be of greater benefit to consider more rather than fewer new product ideas when planning to develop and launch new products. The most noticeable differences between the two types of products are evident in relation to foreign companies, small and medium sized companies, while it is apparent that more new product ideas are considered as companies increase in size. However, in relation to larger companies,

slightly more new product ideas were considered for the unsuccessful product as compared to the successful product.

It is interesting to note that, in all cases, the average amount of new product ideas usually considered is far greater than the actual amount considered for both the successful and unsuccessful products. This may be partially due to differences in the type of product selected by respondents as most successful and unsuccessful and also changes in the amount of ideas considered by companies over the past five years. For example, 90% of respondents stated that the amount of new product ideas considered had increased over the past five years. In addition 83% stated that they expect the number of new product ideas considered to increase in the future.

5.7 STRATEGIC ORIENTATION - Sub-objective 1E

Objective 1E is to determine the strategic orientation of the food companies and the procedure used to formulate the new product strategy, in an attempt to ascertain if they resulted in either the success or failure of the new products on the Irish market. Again, the small sample size precludes statistical analysis and, thus, only where major differences are evident, can the results be deemed to be important.

Table 5.10 Strategic Planning in Food Companies

	Per Cent	(n)
Overall	72.5%	29
Irish Companies	66.6%	21
Foreign Companies	87.5%	8
Distributors	70.6%	17
Manufacturers	75%	12
Small	56%	16
Medium	80%	5
Large	100%	8

The findings show that overall a very high proportion of companies (72.5%) had a strategic plan which incorporated the development and distribution of new products. In addition, those companies who had a strategic plan achieved a somewhat higher level of success (87%), than those who lacked one (80%). Major differences exist in relation to company ownership and the results show that foreign companies carry out more strategic planning than their Irish counterparts. However, a comparison of distributor and manufacturer companies shows that a slightly greater amount of manufacturers have a strategic plan. Furthermore, all of the manufacturers stated that they are committed to growth through internal new product development as a strategic objective. Size also appears to be a major factor in relation to the level of strategic planning in companies, with strategic plans present in all of the large companies. This compares to 80% in medium size companies and only 56% in small companies. Therefore, the greater presence of strategic plans in foreign companies, manufacturers and larger companies provides those companies with an opportunity to achieve

higher rates of new product success than their counterparts.

The next step is to examine whether specific strategic objectives are set for new products. The findings show that overall more than two-thirds of respondents (69%) set strategic objectives for new products. However, a closer examination of the results show that while 100% of foreign companies set specific new product objectives, only 57% of Irish companies set them. Similarly differences emerged between distributors and manufacturers, with 58% of manufacturers in contrast to 76.5% of distributors, setting specific new product objectives. In addition setting strategic objectives for new products also relates to the size of companies, with 100% of large companies compared to 60% of medium and only 56% of small companies setting them. However, those companies who set specific strategic objectives achieved a slightly lower level of success (84%) than those companies who did not set them (87%). This would suggest that setting strategic objectives is not a major factor in determining the outcome of new products on the marketplace.

5.8 NEW PRODUCT STRUCTURE AND STYLE - Sub-objective 1F

Objective 1F is to investigate the current new product structure and style employed within the food companies to see if it is related to new product success or failure. It must be noted that due to differences in the type of companies (manufacturers and distributors) involved in the research, questions relating to the new product structure and style were adapted accordingly, and therefore the results will be discussed separately.

MANUFACTURERS - (All Irish Owned, n=12)

Table 5.11 Type of New Product Structure and Style and Level Of Success Achieved in Manufacturer Companies

New Product Structure	Frequency	Level Of Success
Venture Team	17%	77%
New Product Department	17%	93%
Marketing/R&D Department	66%	87%
Product Champion Encouraged		
Yes	50%	80%
No	50%	92%
Senior New Product Manager		
Yes	17%	69%
No	83%	91%

The results indicate that the organisational structure for new product development most frequently used in manufacturer companies consists of a functionally based unit in an existing marketing/research and development department. It is important to note that the results indicate that different types of organisational structures are more conducive to higher levels of success. For example, it is apparent from the above table that those companies who had a new product department achieved an average 93% new product success rate compared to 87% for marketing/R&D department and 77% for venture teams. However, only 17% of respondents use this type of structure and the findings suggest that perhaps manufacturers should establish new product departments if the level of new product performance is to improve.

The above table also shows that 50% of manufacturers encourage a product champion in the company and only 17% of them have a

senior new product manager. However, it is evident that the presence of a product champion and senior new product manager appears to be more conducive to lower levels of performance. A possible explanation for this is that these people become too involved in the process and pursue an idea even if it is likely to be a failure. This has serious implications for the role these people play in the new product process.

5.9 LEVEL OF COMPANY RESOURCES AND SKILLS - Sub-objective 1G

The purpose of this sub-objective (1G) is to examine the level of resources and skills in companies developing and launching new products on the Irish market, with a view to ascertaining if there is a relationship between the level of resources and skills and the success or failure rates subsequently achieved. Respondents were asked to rate the company relative to domestic competition on a scale of +5 (extremely good) to -5 (extremely bad). Only the manufacturers were asked to rate the level of R&D, engineering and production resources and skills as they were deemed inappropriate for distributors.

Table 5.12 Average Level of Company Resources and Skills

Type Of Resources And Skills	N=29	Average Rating
Financial		+3
Research & Development		+2
Engineering		+2
Market Research		+2
Management		+4
Production		+3
Salesforce/Distribution		+4
Advertising/Promotion		+2

The above table shows that companies developing and launching new products in Ireland, claim to have on average a good level of company resources and skills. Overall management and salesforce/distribution resources and skills appear to be very strong, closely followed by financial and production resources and skills. An examination of the results by company ownership highlights some interesting differences.

Table 5.13 Average Level of Resources and Skills by Company Ownership

Type Of Resources And Skills N =	Irish 21	Foreign 8
Financial	+2	+4
Research & Development	+2	-
Engineering	+2	-
Market Research	+2	+2
Management	+4	+4
Production	+2	-
Salesforce/Distribution	+4	+4
Advertising/Promotion	+1	+3

Irish companies claim to have a strong level of management and salesforce/distribution resources and skills whilst advertising/promotion was rated the lowest. In relation to foreign companies, their perceived strengths seem to lie in finance, management and salesforce/distribution resources and skills, closely followed by advertising and promotion. This indicates that foreign companies claim to have more financial and advertising/promotion resources and skills than Irish companies.

Table 5.14 Average Level of Resources and Skills by Type of Company

Type Of Resources And Skills	Distributor	Manufacturer
N =	12	17
Financial	+4	+1
Research & Development	-	+2
Engineering	-	+2
Market Research	+1	+3
Management	+4	+4
Production	-	+2
Salesforce/Distribution	+4	+3
Advertising/Promotion	+3	+1

It is evident from the above table that distributors claim to have a strong level of financial, management and salesforce/distribution resources and skills. Similarly, the manufacturers also perceive themselves to have a strong level of management and salesforce/distribution resources and skills. However, it is surprising to note that in relation to R&D, engineering and production which are very important in the manufacture of new products, they are only rated as +2.

Furthermore, a comparison of the two types of companies shows that distributors claim to be much stronger in relation to financial and advertising/promotion resources and skills compared with manufacturers. The distributors also rate salesforce/distribution higher, which is not surprising considering it is the main focus of their business, whilst manufacturers claim to be stronger in relation to market research resources and skills.

Table 5.15 Average Level of Resources and Skills by Size of Company

Type Of Resources And Skills	Small	Medium	Large
N =	16	5	8
Financial	+2	+4	+4
Research & Development	+2	-3	+5
Engineering	+1	+5	+5
Market Research	+1	+1	+3
Management	+4	+4	+4
Production	+2	+5	+5
Salesforce/Distribution	+3	+4	+4
Advertising/Promotion	+1	+4	+3

It is evident that the (reported) level of resources and skills tends to improve as companies increase in size. Large companies claim to have a good level of resources and skills in most areas with the exception of market research and advertising/promotion which are rated slightly lower. This is also similar to medium sized companies, where market research is rated lower, whilst the main difference is that R&D resources and skills are rated as quite poor. Smaller companies on the other hand only rated management and salesforce/distribution as quite strong compared with the other resources and skills.

A comparison of the companies by size denotes that larger companies claim to be somewhat stronger in relation to R&D and market research, whilst financial, engineering, production and salesforce/distribution are all rated higher in medium and large companies compared to small companies.

In order to examine the level of company resources and skills and how these influence the level of new product performance attained, an overall score was calculated for each of the respondents based on their individual rating of the company's resources and skills and the results

crosstabulated by the level of new product success achieved. It was evident that companies could be classified into two categories, those whose overall level of resources and skills were higher than +3 (fourteen companies) and those less than +3 (fifteen companies).

Table 5.16 Overall Level of Resources by Level of Success achieved, Company Ownership and Type of Company

	Greater Than +3	Less Than +3
Frequency	48%	52%
Level Of New Product Success Achieved	86%	76%
Company Ownership		
Irish	38%	62%
Foreign	75%	25%
Type Of Company		
Distributor	59%	41%
Manufacturer	33%	67%
Size Of Company		
Small	31%	69%
Medium	40%	60%
Large	87.5%	12.5%

The above table denotes that there is a relationship between the perceived level of company resources and skills and the level of new product success achieved. Specifically, those companies whose overall level of resources and skills are rated +3 or better attained an 86% success rate with new products compared to those companies with a less than +3 level of resources and skills who achieved a 76% level of new product success.

In terms of company ownership, 75% of foreign companies belong to the first category compared with 38% of Irish companies and this suggests that foreign companies have a much greater opportunity for new product success than their Irish counterparts. This situation is somewhat similar in relation to distributors and manufacturers, with the former being in a much stronger position than the latter, while a substantially higher amount of larger companies (87.5%) have greater than +3 resources and skills compared to medium (40%) and smaller (31%) companies. This in turn provides the larger companies with a greater opportunity for new product success than their counterparts.

5.10 TEST OF OBJECTIVES

The first key objective suggests that differences exist in the management practices of companies developing and launching new food products on the Irish market which ultimately affect the success or failure of the new product.

In order to satisfy key objective 1, it is necessary to examine whether certain factors influence the outcome of new products. Two formats were used to determine the support of this objective. In some questions, respondents were asked to denote the differences existing in relation to the most successful and least successful products. In other cases, the responses to questions were crosstabulated by the level of success achieved by companies. The results indicated important differences as well as similarities between new food products which ultimately succeeded or failed on the Irish market.

Once again, it is important to note that due to the small sample size, the research precludes statistical tests on many sub-categories and therefore observations are only tentative. Nevertheless, as the research is based on a complete census, the author believes this analysis indicates saleient factors in new product development.

5.10.1 Amount Launched, Successful, Planned

The findings indicated that there is a relationship between the type of new product introduced and the level of performance achieved. More specifically, certain products are more conducive to higher success rates. For example, the greatest level of success was achieved with cost reductions, repositionings and improvements, closely followed by additions, whilst new product lines resulted in the lowest level of new product performance. This suggests that the less innovative the new product, the higher the level of success attained. Therefore, the type of new product developed and launched by companies operating on the Irish market is related to the success or failure of the product.

5.10.2 Strategic Business Requirements

Similarities were evident in relation to the strategic role for both the successful and unsuccessful new products, which suggests that establishing a strategic role for the new product does not influence its outcome on the market.

5.10.3 Internal and External Factors

The results of the research found that both internal and external factors could have an impact on the future development and launch of new food products by companies on the Irish market. The findings indicated that technology advances, changing market requirements, shortening product life cycle's and world market competition are expected to increase the number of new products introduced in the future. However, management practices are viewed as the most likely internal obstacles to future new product development.

5.10.4 The New Product Process

Differences emerged in relation to the type of new product process used and method employed which ultimately affect the level of new product performance achieved. Specifically, higher rates of success accrue from the use of a formal process where the stages are carried out sequentially. The results also indicated that considering more rather than fewer new product ideas are conducive to higher levels of performance. However, the breakdown of expenditure at each stage of the new product process does not appear to discriminate between the most successful and unsuccessful product. This suggests that the percentage of overall expenditure at each stage is not a major factor in determining success.

5.10.5 Strategic Orientation

Success is more likely to occur in companies that have a strategic plan and are more strategically oriented. Whilst setting specific new product objectives does not appear to be a major factor in determining the outcome of new products on the marketplace. Therefore, the strategic orientation of companies developing and launching new food products on the Irish market is related to the success or failure of the new product, whilst the setting of specific new product objectives is not a decisive determinant of new product outcomes.

5.10.6 New Product Structure and Style

The type of new product structure and style affects the level of performance achieved. The presence of a new product department was found to relate more strongly to higher levels of success, while a functionally based unit in an existing marketing/R&D department also resulted in a high success rate. In addition, lower levels of success were experienced in companies who used venture teams for new product

purposes. Moreover, the results indicated that the role certain people play in the new product process may actually hinder rather than help improve the level of performance achieved. For example, the presence of a product champion and senior new product manager in manufacturer companies, resulted in lower levels of performance than those companies who lacked them.

5.10.7 Company Resources and Skills

The results implied that there is a relationship between the perceived level of company resources and skills and the level of new product success achieved. Specifically, those companies whose overall level of resources and skills were rated +3 or better, attained a substantially higher success rate with new products compared to those companies with a less than +3 level of resources and skills. Therefore, the level of company resources and skills is related to the outcome of new food products developed and launched on the Irish market.

Overall, the evidence shows that the type of new product being developed and launched, the new product process employed, the strategic orientation of companies, the new product structure and style and the level of company resources and skills are factors which influence the outcome of new products. Specifically, the presence of these factors in companies developing and launching new food products on the Irish market will contribute to the ultimate success levels achieved. Conversely, their absence is likely to result in higher levels of failure for the new product. The strategic role established, the setting of new product objectives and the breakdown of expenditure at each stage of the process will not have a direct effect on the level of new product performance achieved. Furthermore, the results indicate that differences exist in relation to company ownership, type of company and company size which affects the outcome of the new food products on an individual and competitive level. Although, these

factors in relation to management practices have received less attention in previous empirical research, the results of this study determine that they should be considered as key success factors, specifically in relation to new food products developed and launched on the Irish market.

Test Of Objectives By Company Ownership

An examination of the findings in relation to Irish owned companies suggests that higher levels of success stem from the development and launch of cost reductions, improvements, repositionings and additions. Furthermore, the frequent use of sequential processing, the high number of new product ideas usually considered, the presence of strategic plans and the (claimed/perceived) good level of overall resources and skills in Irish companies all contribute to the overall high level of performance achieved. However, it is suggested that the level of failure present in Irish companies may be influenced by the high proportion of companies using an informal new product process.

Similarly, in relation to foreign owned companies, the results indicate that the development and introduction of cost reductions, repositionings and improvements leads to higher rates of success. In addition, the high proportion of companies using a formal process, carrying out the stages sequentially, the high amount of new product ideas usually considered, the high number of companies who have strategic plans and the (claimed/perceived) strong level of overall resources and skills, influences the high level of success attained.

On a competitive level, a comparison of Irish and foreign owned companies suggests that the outcome of new products launched by Irish companies may perform better because they launch a substantially greater proportion of those products in which they achieve higher success rates. In addition a far greater amount of Irish companies carry

out the stages in the new product process sequentially. However, foreign companies have an opportunity to achieve greater levels of success through the more frequent use of formal processing, the greater amount of new product ideas usually considered, the higher presence of strategic plans and the greater proportion of companies with strong levels of resources and skills. Overall, these findings have implications for the future development and introduction of new products by Irish and foreign owned companies.

Test Of Objectives By Type Of Company

The findings show that distributors achieve the highest success rates with cost reductions, improvements and repositionings. Furthermore it is suggested that the high level of new product performance achieved by distributors stems from the more frequent use of sequential processing, the high number of new product ideas usually considered, the high level of strategic planning and the (claimed) strong level of overall resources and skills. Conversely, the failure of some new products may be partially explained by the low level of companies using a formal process.

Similarly, in relation to manufacturers higher rates of new product success accrue from the development of cost reductions, additions, repositionings and improvements. In addition, the high success rates primarily stem from the frequent use of sequential processing, the high amount of new product ideas considered, the presence of strategic plans, the lack of a product champion and senior new product manager and a (claimed) good overall level of resources and skills. However, it is suggested that the level of failure present in manufacturer companies is contributed to by the low level of formal new product processes and the low amount of new product departments.

Finally, a comparison of distributors and manufacturers shows that on a competitive level, manufacturers launched a substantially greater proportion of those new products in which they achieve higher rates of success than distributors. This suggests that the outcome of new products developed and launched by manufacturers may perform better than those introduced by distributors. Coupled with this, a higher amount of manufacturers have strategic plans. However, this is offset by the fact that more distributor companies use a formal new product process and carry out the stages sequentially, they consider on average more new product ideas and there are a greater proportion of them with strong levels of resources and skills. These factors, in turn, provide the distributors with an opportunity to achieve higher levels of success. These findings have implications for the future development and introduction of new products by manufacturers and distributors.

Test Of Objectives By Company Size

An examination of the results in relation to large companies denotes that higher levels of success stem from the development and launch of improvements, repositionings and cost reductions. In addition, the more frequent use of a formal approach and sequential processing, the high number of new product ideas usually considered, the strategic orientation and the (perceived) level of overall resources and skills in large companies, all contribute to the overall high level of new product performance achieved.

The same characteristics are evident in relation to medium sized companies, although to a lesser extent. For example, fewer companies use a formal approach, carry out the stages sequentially, have strategic plans and set strategic objectives. In addition the (perceived) level of overall company resources and skills is much lower. One main exception is evident in relation to the success level of different types of

products. In medium companies, the results indicate that the highest rates of success stem from improvements and cost reductions. All of these differences however may partially explain the fact that medium sized companies achieved a much lower level of success than large companies.

In relation to small companies, higher levels of new product performance accrue from the development and introduction of additions, improvements, repositionings and cost reductions. In addition the more frequent use of sequential processing, the presence of strategic plans and new product objectives influences the high level of success attained. However, it is suggested that the level of failure in small companies may be partially due to the low level of companies using a formal process and the low amount of new product ideas usually considered.

Finally, on a competitive level, large and small companies launch a substantially greater proportion of those products in which they achieve higher rates of success. In addition, they carry out more sequential processing than medium sized companies. This suggests that the outcome of new products developed and launched by small and large companies may perform better than those introduced by medium sized companies. However, more medium and large companies use a formal new product process, usually consider more new product ideas, are more strategically oriented and (claim to) have greater resources and skills than smaller companies. These factors provide medium and large companies with an opportunity to achieve higher levels of success.

Thus, overall, it appears that large companies are in the strongest position to attain higher new product success rates, whilst strengths and weaknesses are evident in relation to both medium and small sized companies. If one takes into consideration that medium sized

companies achieved a substantially lower overall level of new product success compared to large and small companies, then it has implications for the future development and introduction of new products by them.

5.11 CONCLUSION - KEY OBJECTIVE 1

It has been established that differences exist in relation to the management practices of companies developing and launching new food products on the Irish market, which contribute to the level of success and failure achieved. Furthermore, differences are evident in relation to company ownership, type of company and company size which affects the outcome of new products on an individual and competitive level.

Specifically, the type of new product being developed and launched, the type of new product process employed, the strategic orientation of companies, the type of new product structure and style and the level of company resources and skills are factors which influence new product success. In addition, the strategic role established, the setting of new product objectives and the breakdown of expenditure at each stage of the process are not likely to have a direct effect on the level of new product performance achieved.

Chapter 6

Analysis of Key Success and Failure Factors

6.1 INTRODUCTION

The overall objective of this research is to ascertain whether differences exist in the development and launch of new food products on the Irish market, which ultimately result in their success or failure. In order to determine this, two key objectives were formulated, each of which had several sub-objectives :- :-

Objective 1: Patterns of performance and management practices

Objective 2: Key success and failure factors

This chapter presents the findings in relation to key objective 2. The area is divided into a number of sub-objectives which are examined under the following headings: product advantage, proficiency of activities, synergy, organisational structure and style, firm characteristics and market characteristics. Both controllable and environmental variables relating to these six sub-objectives were compared against new product success and failure.

In addition, differences in relation to company ownership, type of company and company size were measured in an attempt to determine if they affect the outcome of the new food products. The separate findings under each sub-objective are first presented and then considered in light of the second key objective. The data relating to company ownership, type of company and company size are presented in Appendix D.

This chapter differs from the previous one as it examines the key success and failure factors, commonly identified in the literature, to see if they relate directly to the outcome of new food products on the Irish market, whereas chapter 6 served to establish if the issues relating to patterns of performance, which have received less attention in the literature, should be considered as key success and failure factors in relation to new food products launched on the Irish market. It also

examined differences due to company ownership, type of company and company size .

6.2 NEW PRODUCT SUCCESS AND FAILURE FACTORS

The results are explained in the context of controllable and environmental variables. The controllable variables consist of product advantage, proficiency of activities, synergy, organisational structure and style and firm characteristics. They relate to variables over which the firm has control throughout the development process. The environmental variables describe both market potential and market competitiveness. In order to determine whether a variable was present in relation to the new product pair, a five point scale of agreement was used, ranging from strongly disagree to strongly agree.

Key objective 2 is to examine if differences exist in relation to companies developing and launching new food products on the Irish market, which ultimately results in their success or failure. This is ascertained by comparing the percentage of respondents who agreed the variable was present in relation to the successful product, against the percentage of respondents who agreed the variable was present in relation to the unsuccessful product. Again, it should be noted that the analysis is based on a small sample size, that is twenty-nine products which succeeded and twenty-nine products which failed and therefore, the results preclude statistical tests. As a result, the analysis focuses on the absolute differences between the new product pair. Attention will only be drawn to those results where the differences are large.

CONTROLLABLE VARIABLES

6.2.1 Product Advantage - Sub-objective 2A

The objective is to determine if product advantage affects the outcome of new food products on launched on the Irish market.

Table 6. 1 Impact of Product Advantage on New Product Success and Failure

Variable	Successful % Agree	Unsuccessful % Agree	Difference
Product Offered Unique Benefits	97	59	38
Product First Of Kind On Market	62	48	14
Product Developed For Worldwide Use	45	38	7
Product Required Little Change In The Attitudes and Behaviours of Users	65.5	55	10.5
High Acceptance Of New Product In Export /Other Markets	62	21	41

The above table indicates that differences are evident in relation to all the variables describing product advantage. A high acceptance of the new product in export or other markets and a product offering unique benefits to the customer are characteristics of the new product which differ substantially between the successful as opposed to the unsuccessful new product. It is suggested that these variables are strongly related to the outcome of new products. The remaining variables appear to play a lesser role in determining the success or failure of the new product. This is evidenced by the fact that they are a feature of both the successful and unsuccessful product and the differences between the two are small. This does not suggest that these variables are unimportant, rather it implies that they may not be as salient to the outcome of new products as gaining a high acceptance in

export/other markets and offering unique benefits to the customer. Overall, the findings suggest that product advantage is an important factor in new product success as it is a main characteristic of the majority of successful new products compared to new products which failed on the marketplace.

6.2.2 Proficiency Of Activities - Sub-objective 2B

The sub-objective is to investigate if proficiency of new product activities is a major determinant of the outcome of new food products launched onto the Irish market. Proficiency of activities relates to how well the new product project was defined prior to development (protocol) and how well the predevelopment, market related and technological activities were undertaken.

Table 6.2 Impact of Proficiency of Activities on New Product Success and Failure

Variable	Successful % Agree	Unsuccessful % Agree	Difference
Protocol-prior to product development			
Target Market Was Well Defined	93	83	10
Customers Needs, Wants And Preferences Were Well Defined	90	59	31
*Product Concept Was Well Defined	100	83	17
*Product Specifications And Requirements Were Well Defined	100	75	25

Variable	Successful % Agree	Unsuccessful % Agree	Difference
Proficiency Of Predevelopment Activities - the following stages were carried out proficiently			
Idea Generation	59	45	14
Initial Screening	62	48	14
Preliminary Market Assessment	62	48	14
Preliminary Technical Assessment	41	31	10
Detailed Market Study/Marketing Research	55	48	7
Business/Financial Analysis	55	45	10
Proficiency Of Market Related Activities- the following stages were carried out proficiently			
Preliminary Market Assessment	62	48	14
Detailed Market Study/Marketing Research	55	48	7
Customer Test Of Prototype Or Sample	76	62	14
Trial Selling/Test Market	34.5	24	10.5
Market Launch	83	62	21
*Proficiency Of Technological Activities- the following stages were carried out proficiently			
Preliminary Technical Assessment	41	31	10
Product Development	100	67	33
In-House Testing Of Product (Prototype)	100	92	8
Trial/Pilot Production	83	75	8
Production Start-Up	83	75	8
Technical Problems In Product And Production Design	8	17	(9)

* Manufactuer only

The above table denotes that the protocol variables, which describe how well the new product project was defined, have a strong impact on new product outcomes. Although it is evident that protocol is a main characteristic of both the successful and unsuccessful products, its presence is substantially greater in relation to new products which are

successful. Defining customers needs, wants and preferences is a critical activity which differentiates successes from failures, whilst defining the target market is the least important of the protocol activities (although it is still related to new product outcomes).

Proficiency of process activities, which relates to how well the process activities are undertaken, appears to differ between the new product pair, although the level of difference varies across activities. In relation to the predevelopment activities, the three most important activities which effect new product outcomes are idea generation, initial screening and preliminary market assessment.

The results indicate that the predevelopment activities are undertaken by far fewer companies (for both types of products) in comparison with the protocol activities. It is also evident that the impact of predevelopment activities are less important to new product outcomes than the protocol activities, as the differences between the product pair are lower. There appears to be a relationship between the proficiency of the market launch and new product success, while the remaining market related activities appear to be weakly related.

Variables describing the proficiency of the technological activities appear to be carried out by the majority of companies for both types of products. The results show that there are no major differences between the new product pair in relation to technology activities, with the exception of how well the development of the new product was carried out. Therefore, it is implied that proficiency of technological activities is not a key factor in determining the outcome of new products on the Irish market.

Overall the results indicate that undertaking certain activities proficiently in the new product process has a positive impact on new product success. Specifically, how well defined the project is (protocol)

influences new product outcomes. However, proficiency of the predevelopment activities and market related activities are partially related to success while the proficiency of technological activities is only a weakly related factor. Overall, the three key activities are carrying out the product development proficiently, defining the customers needs, wants and preferences and defining the product specifications and requirements.

6.2.3 Synergy - Sub-objective 2C

Sub-objective 2C is to examine if success or failure stems from marketing, technological and product range synergy in the development of new food products launched onto the Irish market. Synergy describes having a good fit between the needs of the project and existing skills and resources. It relates to marketing, technological and product range synergy.

Table 6. 3 Impact of Synergy on New Product Success and Failure

Variable	Successful % Agree	Unsuccessful % Agree	Difference
Marketing Synergy - there was a good fit between the needs of the project and the...			
Salesforce/Distribution System Of The Firm	93	90	3
Firm's Advertising/Promotion Resources & Skills	76	72	4
Firm's Market Research Skills And Resources	86	76	10
Firm's Management Skills And Resources	100	93	7
*Technological Synergy - there was a good fit between the needs of the project and the...			
Firm's R&D/Product Development Skills & Resources	75	50	25
Firm's Engineering Skills And Resources	75	67	8
Firm's Production Skills And Resources	92	75	17
**Product Range Synergy - there was a good fit between the needs of the project and the...			
Existing products being distributed by the firm	100	82	18

* Manufacturer only
** Distributor only

The results imply that there is little relationship between marketing synergy and new product outcomes, with only minor differences noticeable between the successful and failed product. Nevertheless, there appears to be a good fit between the needs of the project and the marketing resources and skills of the company in relation to the new product pair. Similarly, technological synergy and product range synergy are also a feature of both the successful and failed products, however they do have an impact on new product success.

In relation to technological synergy, R&D/product development skills and resources and the firms production skills and resources are strongly related to success. Coupled with this, having a good fit between the needs of the project and the existing products being distributed by the firm also results in a positive outcome.

6.2.4 Organisational Structure And Style - Sub-objective 2D

Sub-objective 2D is to ascertain if organisational structure and style, including top management and distributor support, is directly related to the positive or negative performance of new food products on the Irish market.

Table 6. 4 Impact of Organisational Structure and Style on New Product Success and Failure

Variable	Success % Agree	Failure % Agree	Diff.
Organisational Structure And Style			
*A Technical Champion Managed The New Product Very Well	50	50	0
*A Dedicated And Strong Product Advocate Managed The New Product Very Well	50	50	0
*Internal Communication In The Company Was Effective	92	83	9
*R&D Manufacturing-Marketing Functions Were Well Interfaced And Coordinated	75	58	17
A High Level Of Company Resources Were Devoted To The New Product Project	69	45	24
*The Project Was Clearly Planned With Goals And Objectives Established	83	67	16
*Enthusiasm Crowded On Facts Throughout The Entire Development Process	33	50	(17)
*Company Politics Affected The Way The New Product Process Was Carried Out	25	25	0
**The Sales Rep. Placed Strong Emphasis On Distributing The Product	100	94	6
**A Dedicated Sales Rep. Distributed New Products Only	12	6	6
**Communication Between The Company And The Manufacturer Was Effective	88	76.5	11.5
**The Distribution Of The New Product Was Clearly Planned With Goals And Objectives Established	88	88	0

* Manufacturers only
** Distributors only

The results in the above table reveal some interesting findings. Only four variables out of twelve relating to organisational structure and style show large differences between new product success and failure. It appears that having a high level of company resources devoted to the new product project has a substantial impact on new product

outcomes. Other important variables include not allowing enthusiasm to crowd on facts throughout the entire development process and clearly planning the new product project. The results also indicate that effective communication is conducive to success. However, the remaining variables showed little or no difference between the new product pair. They mainly describe the role of certain people within the new product process and the findings do not differentiate noticeably between the successful and failed product. Therefore, the results only partially support the notion that organisation structure and style influences the outcome of new products.

Table 6. 5 Impact of Top Management Support on New Product Success and Failure

Variable	Success	Failure	Diff
*Top Management Support	% Agree	% Agree	
There Was A High Level Of Top Mgt Support For The Project	100	92	8
Top Mgt Were Very Involved In The Day-To-Day Mgt Of The Project	92	75	17
Top Mgt Initiated The Project	83	75	8
Mgt Team Consisted Of Senior Mgrs With High Levels Of Authority	58	50	8
Mgt Had A High Risk Taking Attitude	58	58	0

* Manufacturer only

Top management support has a relatively weak impact on success and failure in manufacturing firms, although it appears to be a feature of the majority of new products launched on the market. However, there is one exception which suggests that top management involvement in the day to day management of the project plays a role in determining success.

Table 6. 6 Impact of Distributor Support on New Product Success and Failure

Variable	Success	Failure	Diff.
**Distributor Support	% Agree	% Agree	
There Was A High Level Of Support For The New Product	88	59	29
The Distributor Initiated The New Product Development	23.5	23.5	0
Company Had A High Risk Taking Attitude To New Products	29.5	41	(11.5)

** Distributor only

In relation to distributors, the above table shows that having a high level of support for the new product differentiates substantially between the new product success and failure and is related to a positive outcome. However, having a high risk taking attitude to new products appears to lead to new product failure, whilst initiation of the new product development by distributors is not only rarely undertaken by most companies, but also does not affect the outcome of new products.

Overall, only certain organisational structure and style variables play an important role in discriminating between success and failure. In relation to manufacturers, top management support only has a relatively weak influence on new product outcomes with the exception of top management involvement in the day to day running of the project. Conversely, having a high level of support for the new product in distributor companies plays a key role in determining success.

6.2.5 Firm's Characteristics - Sub-objective 2E

Sub-objective 2E is to identify the relationship between the firm's characteristics, such as financial resources and marketing mix, and the success or failure of new food products on the Irish market.

Table 6. 7 Impact of Firm's Characteristics on New Product Success and Failure

Variable	Success % Agree	Failure % Agree	Diff.
Firm Characteristics - Finance			
*Firm Had Adequate Financial Resources For The Project	67	58	9
Product Yields A High Contribution Margin To The Firm	93	31	62
*There Was An Unexpected High Product Cost	8	50	(42)
Relative Magnitude Of Investment In The Project Was Large	55	34.5	20.5
Firm Characteristics - Marketing Mix			
*Distribution Channel Gave A Lot Of Support For The New Product	92	67	25
There Was A Good Stock Cover For The Product	96.5	93	3.5
Adequate Salesforce Training And Effort Were Used	90	86	4
Adequate Promotion And Advertising Effort Were Used	69	48	21
Appropriate Pricing Strategies Were Used	93	79	14
**A Lot Of Effort Was Placed On Distributing The New Product	100	94	6

* Manufacturer only
** Distributor only

It is evident that financial characteristics have a decided and strong effect on new product success. Products which yield a high contribution margin to the firm are more conducive to a positive outcome, while products which have an unexpected high product cost tend to result in failure. In addition the level of financial resources devoted to the new product project appears to differentiate substantially between success and failure. In relation to the marketing mix characteristics, certain variables appear to be more important than others. The key role of distribution channel support in differentiating successes from failures is clearly demonstrated. Success is also related to using adequate promotion and advertising effort. It is apparent that most companies launching new products on the Irish market place a lot of effort on distributing the new product, have a good stock cover and use adequate salesforce training and effort. The results suggest that these variables do not discriminate between success and failure and thus do not influence new product outcomes.

Overall it is evident that there is a relationship between certain characteristics of the firm and new product success. Specifically, the financial approach of the firm, the distribution channel support, the level of advertising and promotion are strongly linked to new product performance.

The analysis of tables 6.1 to 6.7 have shown that certain controllable variables effect the outcome of new food products launched on the Irish market. Overall the results indicate that product advantage has a strong and dominant impact on new product success, while proficiency of process activities has a partial impact. The results also imply that marketing synergy has a weak impact on new product outcomes, whereas technological and product range synergy characterise successful new products. In addition the premise that organisational structure and style is a key success factor only gained limited support from the research results. Finally, the financial characteristics of the firm are a decisive determinant of new product outcomes, while only certain elements of the marketing mix discriminate between success and failure. The results imply that the fate of new products may be dependant on certain variables over which the firm has control throughout the new product process.

ENVIRONMENTAL VARIABLES

The environmental variables relate to the setting in which the new product is launched and describe the market potential and level of competitiveness in the marketplace.

6.2.6 Market Characteristics - Sub-objective 2F

Sub-objective 2F is to examine if market potential and market competitiveness are directly related to the outcome of new food products launched onto the Irish market.

Table 6.8 Impact of Market Potential on New Product Success and Failure

Variable	Success % Agree	Failure % Agree	Diff.
Market Potential			
Product Was Very Important To Customer	69	31	38
High Proportion Of Market Was Foreign	52	38	14
Customers Were Extremely Satisfied With Competitive Products	34.5	59	(24.5)
Existence Of Potential Demand Only	86	83	3
Customers Needs And Wants For This Product Category Change Rapidly	65.5	45	20.5
Government Played A Major Role In Marketplace	3	3	0
Buyers Were Very Willing To Try New Products	93	86	7
Customers Were Very Familiar With Products In This Category	59	55	4
Purchase Frequency Was High For This Product Category	86	28	58
Frequency Of New Product Introductions In This Market And Product Category Was High	48	24	24

It is evident that most of the variables relating to market potential have a strong impact on new product success and failure. Five out of the ten market potential descriptors show major differences between the new product pair. The four most important elements of the market, conducive to new product success, include a high purchase frequency for the product category, the level of product importance to the customer, frequency of new product introductions in the market and product category, and the rapidity of change in relation to customers needs and wants. However, a high level of customer satisfaction with competitive products appears to result in new product failure. Overall the level of potential in the marketplace appears to differentiate between success and failure.

Table 6.9 Impact of Market Competitiveness on New Product Success and Failure

Variable	Success	Failure	Diff.
	% Agree	% Agree	
Market Competitiveness			
Competition In The Marketplace Was Intense	55	62	(7)
There Were Many Competitors In The Market	45	48	(3)
A Dominant Competitor Existed In The Marketplace	34.5	72.5	(38)
There Was A High Degree Of Loyalty To Competitor's Product	31	48	(17)

The results indicate that market competitiveness has a partial impact on new product outcomes. Specifically, the presence of a dominant competitor and a high degree of loyalty to competitors products differentiates between success and failure and appears to lead to a negative outcome. Similarly a high level of competitiveness in the marketplace appears to result in new product failure. This is implied by the fact that the failed products were launched in a much more competitive market than the successful products.

Tables 6.8 and 6.9 show that the majority of environmental variables play a critical role in determining new product outcomes. It appears that the fate of new products is dependant on some variables which are external to the firms control.

Table 6. 10 Ten Main Variables Discriminating between New Product Success and Failure

Variable	Success % Agree	Failure % Agree	Diff
Product Yields A High Contribution Margin To The Firm	93	31	62
Purchase Frequency Was High For This Product Category	86	28	58
*There Was An Unexpected High Product Cost	8	50	(42)
High Acceptance Of New Product In Export/Other Markets	62	21	41
Product Offered Unique Benefits To Customer	97	59	38
Product Was Very Important To Customer	69	31	38
A Dominant Competitor Existed In The Marketplace	34.5	72.5	(38)
Proficiency of Product Development	100	67	33
Customer's Needs, Wants And Preferences Were Well Defined	90	59	31
There Was A High Level Of Support For The New Product	88	59	29

* Manufacturer only

The table denotes the main variables which contribute to new product success. It is apparent from the above table that both controllable and environmental variables differentiate substantially between new product success and failure. These findings have important implications for companies who develop and launch new food products in the Irish market.

New Product Success And Failure Factors By Company Ownership

An analysis of the results by company ownership denotes that both similarities and differences exist between Irish and foreign owned companies in relation to the impact of controllable variables on new product success in the Irish market. In particular, product advantage, proficiency of process activities, technological and product range synergy, organisational structure and style and financial characteristics of the firm have a strong influence on new product success in Irish companies. Only certain variables relating to elements of the marketing mix were found to discriminate between new product success and failure. In addition, marketing synergy, top management support and distributor support are only weakly related factors.

In relation to foreign owned companies, the results indicate that product advantage and financial characteristics of the firm exhibited the greatest differences between the new product pair. Only certain process activities, marketing and product range synergy, organisational structure and style characteristics and certain elements of the marketing mix had an impact on new product outcomes.

Environmental variables also play a key role in determining new product success for Irish and foreign companies, although differences are again evident. The results suggest that market potential is a key success factor for both types of companies. However, the level of competitiveness in the marketplace has a strong impact on new product outcomes in foreign companies. Only one variable was found to be of importance for Irish companies. Therefore, there is only a weak relationship between market competitiveness and new product success and failure in Irish companies. The four main variables conducive to new product success in foreign companies are all product related. For example, developing a product which yields a high contribution margin, has unique benefits, has a high acceptance in export/other markets and is in a product category where customers needs and wants change rapidly, substantially differentiates between the new product pair in foreign companies.

Thus it is evident that key factors exist which discriminate between new product success and failure in both Irish and foreign owned companies. The key success factors consist of a mixture of both controllable and environmental variables. In addition, both similarities and differences exist between Irish and foreign owned companies in relation to the impact of the six groups of variables on new product success in the Irish market.

New Product Success And Failure Factors By Type Of Company

An analysis of the results indicates that in general both the environmental and controllable variables have a different impact on new product success in distributor and manufacturer companies. Although the six groups of variables have a different impact, nevertheless a mixture of both controllable and environmental variables influence new product outcomes in the different types of companies.

For example, the greatest differences between new product success and failure in distributor companies stemmed from product advantage, protocol, proficiently carrying out the market related activities, having both marketing and product range synergy, financial characteristics of the firm and the marketplace potential and competitiveness. These variables were all found to have a dominant and strong impact on new product success in distributor companies, while the predevelopment activities, the structure and style of the organisation, distributor support, marketing mix characteristics of the firm and the level of market competitiveness only had a partial impact on new product outcomes.

In relation to manufacturer companies, the results indicate that protocol and financial characteristics of the firm were found to discriminate substantially between new product success and failure. Conversely, weakly related factors include proficiency of the predevelopment and technological activities, marketing synergy and top management support. Only certain elements of product advantage, proficiency of market related activities, technological synergy, marketing mix characteristics of the firm, organisational structure and style and the environmental variables had an impact on new product outcomes.

The three key success variables for distributors are developing a product which yields a high contribution margin and developing a product which is synergistic with the firm's existing advertising/promotion and market research skills and resources. The results suggest that the three main variables conducive to new product success in manufacturer companies are launching a product in a category where the purchase frequency is high, gaining high acceptance of the new product in export/other markets and avoiding markets where a dominant competitor exists.

Key factors then do exist which discriminate between new product success and failure for both distributors and manufacturers. In addition, differences are also evident in relation to the impact of controllable and environmental variables on new product success in both distributor and manufacturer companies.

New Product Success And Failure Factors by Size Of Companies

The results show that a mixture of both environmental and controllable variables influence new product outcomes in small, medium and large size companies, although differences exist due to the size of the company.

Most of the environmental variables were found to discriminate substantially between new product success and failure in small companies. However, only certain controllable variables, such as product advantage, technological and product range synergy and financial characteristics of the firm have the same effect. Proficiency of technological and market related activities had a partial impact on new product outcomes. In addition some factors were only very weakly related to new product success. These include proficiency of predevelopment activities, marketing synergy, organisational structure and style, marketing mix characteristics of the firm, top management

support and distributor support.

In relation to medium sized companies, the results were very strong with the majority of the controllable and environmental variables discriminating between new product success and failure. In particular, product advantage, proficiency of all the process activities, synergy, top management and distributor support and the firms financial and marketing mix characteristics exhibited substantial differences between the new product pair. Only some of the market potential and competitiveness variables and the organisational structure and style variables had a partial impact on new product outcomes.

The environmental variables had a strong influence on new product outcomes in large firm's, while the majority of controllable variables were only partially or weakly related to new product success. For example, product advantage, distributor support and financial characteristics of the firm were the only variables found to have major differences between new product success and failure. However, there was only a weak relationship with proficiency of the protocol activities, marketing synergy and the organisational structure and style. There was no relationship at all with proficiency of technological activities, technological and product range synergy and top management support. Furthermore, proficiency of predevelopment and market related activities and marketing characteristics of the firm only had a partial impact on new product success.

It is, therefore, apparent that differences in company size affects the impact of key success factors on new products. Environmental variables have a strong effect on new product outcomes in medium and large companies but only a partial impact on small companies whereas the majority of controllable variables discriminate substantially between the new product pair in medium sized companies, yet only a few of them have a strong effect in small and

large companies.

The findings indicate that the three main variables conducive to new product success in small companies are launching a product in a category where the purchase frequency is high, developing a product that yields a high contribution margin to the firm and developing a product that has unique benefits. In medium sized companies, it is evident that all of the variables relating to technological synergy, proficiency of technological activities and top management support have a strong and dominant impact on new product success. This would suggest that technology plays a key role on new product outcomes in medium sized companies. The results show that the three main variables which discriminate between new product success in large companies are enthusiasm crowded on facts throughout the entire development process, a high acceptance of the new product in export/other markets and the product yields a high contribution margin to the firm.

Therefore, while a mixture of certain controllable and environmental variables determine new product success in small, medium and large sized companies, their impact differs according to the size of the company.

6.3 TEST OF OBJECTIVES

This information can now be examined in order to determine if the second key objective is correct. The objective suggests that differences exist in the development and launch of new food products on the Irish market which ultimately effect their outcome. These differences will contribute either to the success or failure of the new product. In order to satisfy key objective 2, it is necessary to examine whether the six groups of controllable and environmental variables influence the outcome of new products.

CONTROLLABLE VARIABLES

6.3.1 Product Advantage

The findings indicated that two out of the five variables relating to product advantage differentiated substantially between new product success and failure. The most important variable being to launch a product which has a high acceptance in export/other markets. Therefore the results suggest that product advantage is related to the outcome of new food products launched onto the Irish market.

6.3.2 Proficiency Of Process Activities

Proficiency of all the process activities was found to be linked to new product success. Specifically, the protocol activities (defining the project well) showed the greatest differences between the new product pair, whilst proficiency of technological activities had the least impact on new product success overall. However, proficiently carrying out the product development was found to be the most important process activity in determining new product success. The findings therefore imply that proficiency in conducting the new product process activities is related to the outcome of new food products launched on the Irish market.

6.3.3 Synergy

The evidence suggests that marketing synergy has little influence on new product outcomes with only minor differences evidenced between the successful and failed product. Thus, it is only considered to be a weakly related factor, whereas both technological and product range synergy had a stronger impact on new product success. The findings imply that having a good fit between the needs of the project and the firm's R&D/product development skills and resources is most strongly

linked to new product success. Thus, both technological and product range synergy are directly related to the outcome of new food products launched on the Irish market.

6.3.4 Organisational Structure And Style

There was limited evidence from the research results that organisational structure and style, in general, is key to a successful outcome. Only four out of the twelve variables showed large differences between the new product pair, while the remainder showed little or no differences. Devoting a high level of company resources to the new product project was identified as the most important variable to new product success. In addition, the results indicated that top management support has a relatively weak impact, while only one of the variables relating to distributor support was found to be a determinant of new product outcomes. Overall the results imply that organisational structure and style is not a decisive determinant of the outcomes of new food products launched on the Irish market.

6.3.5 Firm Characteristics

The financial characteristics of the firm were found to be closely linked to new product outcomes, with successful products having a much stronger financial emphasis than failed products. In particular, developing a product which yields a high contribution margin differentiated substantially between the new product pair. There was only partial evidence that marketing mix characteristics influence new product success. The most important variable being the level of support given by the distribution channel. The findings suggest that the financial characteristics of the firm are directly related to the outcome of new food products on the Irish market, while the marketing mix characteristics are only partially related to new product success.

Overall, the evidence shows that most of the variables over which the firm has control during the innovation process are directly related to the outcome of new food products launched on the Irish market. Specifically, product advantage, proficiency of process activities, technological and product range synergy and the financial characteristics of the firm have a strong impact on new product success. In addition, marketing synergy and marketing mix characteristics only have a partial impact, while organisational structure and style was not found to be a decisive determinant of new product outcomes.

ENVIRONMENTAL VARIABLES

6.3.6 Market Characteristics

Major differences were denoted between the new product pair in relation to five out of the ten market potential variables. The main variable found to be conducive to new product success was launching a product in a category where the purchase frequency was high. Similarly, the impact of market competitiveness closely paralleled that of market potential, with two out of the four market competitiveness variables discriminating between new product success and failure. It must be noted that a high level of competitiveness in the marketplace appears to result in new product failure. This is evidenced by the fact that the majority of failed products, as opposed to the successful products, were launched in a market where the level of competition was much higher. The key variable leading to this outcome was the existence of a dominant competitor in the market. Therefore, the findings suggest that market potential and market competitiveness are partially related to the outcome of new food products launched on the Irish market.

Overall the results show that environmental variables play a partial role in determining new product success. The environmental variables consist of fourteen variables relating to market potential and market competitiveness. The research found that only seven out of the fourteen substantially differentiated between new product success and failure. Thus, the environmental variables appear to play a lesser role in deciding the outcome of new products compared to the controllable variables. Nevertheless, some of them do have a strong impact on new product success.

Test Of Objectives By Company Ownership

An analysis of the results by company ownership denotes that key factors exist which determine new product success and failure in Irish and foreign owned companies. The following table shows the relationship between the environmental and controllable variables on new product success by company ownership.

Table 6.11 Relationship between Controllable and Environmental Variables on New Product Success by Company Ownership

Irish Companies	Foreign Companies
Controllable Variables	*Controllable Variables*
Strongly Related	**Strongly Related**
Product Advantage	Product Advantage
Proficiency Of Process Activities	Firm's Characteristics-Finance
Technological And Product Range Synergy	
Organisational Structure And Style	
Firm's Characteristics-Finance	
Partially Related	**Partially Related**
Firm's Characteristics-Marketing Mix	Proficiency Of Process Activities
	Organisational Structure And Style
	Firm's Characteristics-Marketing Mix
Weakly Related	Marketing And Product Range
Top Management Support	Synergy
Marketing Synergy	
Distributor Support	
Environmental Variables	*Environmental Variables*
Strongly Related	**Strongly Related**
Market Potential	Market Potential
	Market Competitiveness
Weakly Related	
Market Competitiveness	

This shows that both similarities and differences exist between Irish and foreign owned companies in relation to the impact of controllable and environmental variables on new product success. The majority of controllable variables are directly related to new product success in Irish companies, while the environmental variables play a lesser role. Conversely, the environmental variables have a dominant impact in foreign companies, although few of the controllable variables are directly related to new product success.

Test Of Objectives By Type Of Company

The findings suggest that differences exist which discriminate between new product success and failure in distributor and manufacturer companies.

Table 6.12 Relationship between Controllable and Environmental Variables on New Product Success by Type of Company

Distributors	Manufacturers
Controllable Variables	*Controllable Variables*
Strongly Related	**Strongly Related**
Product Advantage	Proficiency Of Protocol Activities
Proficiency Of Protocol And Market Related Activities	Firm's Characteristics-Finance
Marketing And Product Range Synergy	
Firm's Characteristics-Finance	
Partially Related	**Partially Related**
Proficiency Of Predevelopment Activities	Product Advantage
Organisational Structure And Style	Proficiency Of Market Related Activities
Distributor Support	Technological Synergy
Firm's Characteristics-Marketing Mix	Firm's Characteristics-Marketing Mix
	Organisational Structure And Style
	Weakly Related
	Marketing Synergy
	Proficiency Of Predevelopment And Technological Activities
	Top Management Support
Environmental Variables	*Environmental Variables*
Strongly Related	**Partially Related**
Market Potential	Market Potential
Market Competitiveness	Market Competitiveness

The results indicate that a mixture of both the environmental and controllable variables influence new product outcomes in the different types of companies. In general, both types of variables have a different impact on new product success in distributor and manufacturer companies. For example, certain controllable and environmental

variables are directly related to the outcome of new products launched by distributor companies on the Irish market, while only some of the controllable variables have the same impact in manufacturing companies.

Test Of Objectives By Size Of Company

The findings imply that there is a relationship between controllable and environmental variables on new product success in small, medium and large sized companies.

Table 6.13 Relationship between Controllable and Environmental Variables on New Product Success by Size of Company

Small	
Controllable Variables	*Environmental Variables*
Strongly Related	**Strongly Related**
Product Advantage	Market Potential
Technological And Product Range Synergy	
Firm's Characteristics-Finance	
Partially Related	**Partially Related**
Proficiency Of Market Related and Technological Activities	Market Competitiveness
Weakly Related	
Proficiency Of Predevelopment Activities	
Marketing Synergy	
Organisational Structure And Style	
Firm's Characteristics-Marketing Mix	
Top Management And Distributor Support	
Medium	
Controllable Variables	*Environmental Variables*
Strongly Related	**Strongly Related**
Product Advantage	Market Potential
Proficiency Of Process Activities	Market Competitiveness
Synergy	
Top Management And Distributor Support	
Firm's Characteristics	
Partially Related	
Organisational Structure And Style	

Large

Controllable Variables	*Environmental Variables*
Strongly Related	**Strongly Related**
Product Advantage	Market Potential
Distributor Support	Market Competitiveness
Firm's Characteristics-Finance	
Partially Related	
Proficiency Of Predevelopment And Market Related Activities	
Firm's Characteristics-Marketing Mix	
Weakly Related	
Marketing Synergy	
Proficiency Of Protocol Activities	
Organisational Structure And Style	
No Relation	
Proficiency Of Technological Activities	
Technological And Product Range Synergy	
Top Management Support	

It is apparent from the above results that a mixture of both environmental and controllable variables determine new product outcomes in small, medium and large sized companies, although differences exist due to the size of the company. For example, environmental variables have a strong impact on new product success in medium and large companies but only a partial effect in small companies. The majority of controllable variables discriminate substantially between the new product pair in medium sized companies, yet only a few have a strong effect in small and large companies.

6.4 CONCLUSION - KEY OBJECTIVE 2

It has thus been established that different controllable and environmental factors exist in relation to companies developing and launching new food products on the Irish market, which ultimately result in their success or failure.

In relation to the controllable variables, product advantage, technological and product range synergy and the financial characteristics of the firm have a strong and dominant impact on new product success. Proficiency of process activities, marketing synergy and the marketing mix characteristics only have a partial effect, whilst organisational structure and style was not found to be a decisive determinant of new product outcomes.

In relation to the environmental variables, both market potential and market competitiveness were found to be partially related to new product outcomes, with certain variables having a dominant impact on new product success. Furthermore, differences are also apparent in relation to company ownership, type of company and company size.

Chapter 7

Conclusions and Recommendations

7.1 INTRODUCTION

The main aim of the research study is to determine if differences exist in the development and launch of new food products on the Irish market which ultimately result in their success or failure. In order to determine this, two key objectives were formulated each of which had several sub-objectives :

Objective 1. Patterns of Performance and Management Practices
Objective 2. New Product Success and Failure Factors

This chapter details the issues relating to the literature and to the overall objective. Conclusions and recommendations for management and for future research are also included.

7.2 PATTERNS OF PERFORMANCE AND MANAGEMENT PRACTICES - ISSUES RELATING TO THE LITERATURE AND CONCLUSIONS - Key Objective 1

The aim of this section of the research is to identify the patterns of performance and management practices employed in companies developing and launching new food products on the Irish market. The purpose of this is to determine if differences exist, which ultimately effect the success or failure of the new products on the marketplace. The sub-objectives are examined in terms of the overall impact, the impact of company ownership, type of company and company size.

7.2.1 Overall Impact

Amount Launched, Successful and Planned - Sub-objective 1A

Booz Allen and Hamilton (1982) found that most firms tend to have a mixed variety of new products. Additions to existing product lines and

improvements/revisions to existing products are the most common. New product managers tend to be reluctant to introduce innovative new products, such as new to the world products and new product lines, because their variability of return is greater. The findings of this research support this view. Specifically, the typical new product program in companies developing and launching new food products on the Irish market consists of a mixture of different types of new products. It appears that the majority of companies are reluctant to launch repositionings and cost reductions which require little or no innovation and also refrain from launching truly innovative products such as new to the world products. Instead they balance the level of innovation by concentrating on new product lines, additions and improvements and this is predicted to remain virtually the same next year.

It has been suggested that new product development will become even more important in the future as the estimated number of new products introduced is forecast to substantially increase (Booz Allen and Hamilton 1982, Hopkins 1980). This is reflected in the research results which found that in the future the average amount of new product introductions by companies is forecast to rise by twenty percent.

The high incidence of new product failure has long been acknowledged in the literature (Johne 1985, Craig and Hart 1992, Hisrich and Peters 1984, Cooper 1986, Crawford 1987). An investigation into firms new product results concluded that a more realistic failure rate was approximately thirty-nine percent for consumer products and thirty-one percent for industrial products. In an Irish context, Tomlin and O'Sullivan (1985) identified the success rate of established companies to be sixty-eight percent, while that of newer companies to be ninety-eight percent. In relation to the food industry, the reported level of new product failure varies from fifty to ninety percent. However it was

identified that new food products developed and launched on the Irish market achieve very high patterns of performance, with an average 85% success level.

Empirical research has shown that the type of product innovation being developed by a company has an effect on their overall success (Johne 1985, Johne and Snelson 1987). The results from the first sub-objective in this study strongly support this argument and found that the type of new product introduced may influence the level of performance achieved. More specifically, the less innovative the new product, the higher the level of success attained. Most companies prefer to concentrate on developing more innovative new products as they still achieve a good level of success with these types of products. Therefore, the type of new product developed and launched by companies operating on the Irish market is related to the success or failure of the product.

Strategic Business Requirements- Sub-objective 1B

Past research identified that many companies set strategic roles for new products and devise financial criteria as a yardstick to measure their performance. The two most common new product roles were defending a market share position and maintaining a position as a product innovator, whilst the most commonly used performance criteria were profit contribution, sales volume and return on investment (Mahajan and Wind 1992, Booz Allen and Hamilton 1982).

The results of this research found that companies operating on the Irish market set strategic roles for new products and also establish formal financial performance criteria. The most common roles are market driven, with the main one being to establish a foothold in a new market. In addition, one-third of all companies formally measure new product performance using on average two performance criteria.

The two most commonly used are sales volume and profit contribution. It has also been advocated in the literature that different types of new product strategies are linked to specific levels of performance (Cooper 1984). However, this research reveals that establishing a strategic role for the new product does not influence its outcome on the market.

The findings of a previous study suggest that new product development will become even more important as new products are expected to account for forty percent of corporate sales and profits in the future (Booz Allen and Hamilton 1982). The analysis of management practices in companies developing and launching new products on the Irish market shows that approximately one-quarter of total company sales and profits are generated by new products. This implies that new products presently play an important role in companies operating on the Irish market. However the cost of introducing new products over the past five years has increased and if this trend continues it could have a significant effect on the future contribution of new products to company sales and profits.

Impact of Internal and External Factors- Sub-objective 1C

It has been suggested in the literature that the need for product development is born out of environmental forces operating on the marketplace (Rothberg 1981, Urban, Hauser and Dholakia 1987), while it is recognised that certain internal factors, such as a short term orientation by management, may become obstacles to successful new product development (Booz Allen and Hamilton 1982.)

The results of the research are in agreement with this view. In particular, the trend towards the increased development and introduction of new products is supported by a number of external factors. Technology advances, changing market requirements,

shortening product life cycle's and world market competition are expected to increase the number of new products introduced in the future. Management practices are viewed as the principal internal obstacles to new product development, with inadequate market research and a lack of proven analytical techniques and a new product strategy being the most significant. Therefore, the research results support the notion that both internal and external factors could have an impact on the future development and launch of new food products by companies on the Irish market .

The New Product Process - Sub-objective 1D

Despite the internal and external obstacles, the development and launch of new food products will continue in the future. The management practices presently employed incorporate the use of an informal new product process where the stages are carried out sequentially. This supports the underlying notion behind many of the traditional new product development models, which suggest that the stages should be undertaken sequentially (Heany and Vinson 1984, Kotler 1986, Booz Allen and Hamilton 1982, Johne and Snelson 1987, Cooper 1988). However some authors advocate the use of parallel or simultaneous processing (Cooper 1988, Takeuchi and Nonaka 1986, Johne and Snelson 1987), but this was found to result in lower levels of new product success on the Irish market.

Booz Allen and Hamilton (1982) discovered that more management attention and financial resources were devoted to the early steps in the new product process. However this was not the case in companies developing and launching new products on the Irish market. Instead, it was identified that more management attention and financial resources are given to the latter steps in the new product process, with the main level of expenditure being utilised at the commercialisation stage.

It is suggested in the literature that the utilisation of a more sophisticated new product process has led to a dramatic reduction in the amount of ideas considered for every successful product launched, from an average of fifty-eight to seven, while considering fewer ideas was also found to be a distinctive trait of companies with more successful products (Booz Allen and Hamilton 1982). The findings of this research show that on average sixteen new product ideas are usually considered for every new product introduced and the amount of ideas in the future is forecast to increase. However, the lack of management attention and financial resources given to the predevelopment stages in the new product process may account for the high amount of new product ideas usually considered. The new product development process is believed to be a significant factor in the success or failure of new products (Cooper 1988, Rothwell 1974, Maidique and Zirger 1984, Cooper and Kleinschmidt 1987). Boag and Rinholm (1989) contend that new product success is closely linked to the use of a formal process. However some authors identified that the use of formal methods was seriously lacking in many companies across different industries (Boag and Rinholm 1989, Cooper and DeBrentani 1988, Johne 1993).

In relation to this study, higher rates of success were found to accrue from the use of a formal process where the stages are carried out sequentially, although most companies operating on the Irish market use an informal process. The results also indicate that considering more rather than fewer new product ideas are conducive to higher levels of performance. In addition, the percentage of overall expenditure at each stage was not found to be a major factor in determining success. Therefore, the use of a new product development process in companies developing and launching new food products on the Irish market is related to the success or failure of the new product, while the breakdown of expenditure at each stage of the process does not influence new product outcomes .

Strategic Orientation- Sub-objective 1E

It has been widely suggested in the literature that creating a new product strategy, relating to corporate strategies and objectives, is closely linked to new product performance (Dwyer and Mellor 1991, Barclay and Benson 1990, Cooper 1984, 1987, Johne and Snelson 1985), while a lack of new product strategy was found to be an obstacle to successful new product development (Booz Allen and Hamilton 1982). In addition Cooper (1984) surmised that it is imperative to adopt all the elements of the winning strategy if a high level of success is to be achieved. The results from this research strongly support these arguments.

The majority of companies in this study were found to be strategically oriented. For example a high proportion of companies have a strategic plan, which includes the development and launch of new products, and also set specific strategic objectives for new products. Furthermore, the results suggest that success is more likely to occur in companies that have a strategic plan and are more strategically oriented. This also incorporates the formulation of a new product strategy to link corporate objectives to the new product effort and provide direction for the new product process. If this is carried out efficiently, the strategic roles to be played by new products will be identified and financial criteria established (see Sub-objective 1b, Strategic Business Requirements). Setting specific new product objectives does not appear to be a major factor in determining the outcome of new products on the marketplace. Therefore, the strategic orientation of companies developing and launching new food products on the Irish market is related to the success or failure of the new product, while the setting of specific new product objectives is not a decisive determinant of new product outcomes.

New Product Structure and Style - Sub-objective 1F

(Distributors and Manufacturers only)

Empirical research has identified that some companies use more than one type of new product structure and that the choice was associated with product specific requirements (Booz Allen and Hamilton 1982, McTavish 1984, Mahajan and Wind 1992). Among the structures commonly used are free standing units, such as new product departments, venture groups and interdisciplinary teams, and functionally based units in existing departments. The typical new product structure and style used in manufacturer companies operating on the Irish market consists of a functionally based unit in an existing marketing/R&D department, while half of the companies encourage a product champion whilst the majority of them do not have a senior new product manager.

Although previous research has identified that the new product organisational structure is only a minimal factor contributing to the success of new products (Booz Allen and Hamilton 1982, Kuczmarski 1992), the results of this study suggest that the type of new product structure and style does affect the level of performance achieved. For example, the presence of a new product department and a functionally based unit in an existing marketing/R&D department were found to relate more strongly to higher levels of success, whereas lower levels of performance were experienced in companies who used venture teams for new product purposes. In addition, the role top management and product champions play in the new product development process have been found to enhance new product performance in previous research. (Johne and Snelson 1988, Sands 1983, Craig and Hart 1991, Barclay, Benson and Lunt 1990, Booz Allen and Hamilton 1982, Crawford 1987, Dwyer and Mellor 1991).

However, the findings of this study suggest that the role certain people play in the new product process may actually hinder rather than help improve the level of performance achieved. For example, the presence of a product champion and senior new product manager in manufacturer companies, resulted in lower levels of success than those companies who lacked them. A possible explanation for this is that these people become too involved in the process and pursue an idea even if it is likely to be a failure. Thus, the new product structure and style in companies developing and launching new food products on the Irish market is related to the success or failure of the product.

Company Resources And Skills- Sub-objective 1G

It has been suggested that the success of a firm's new product program hinges on the resources and skills of the firm (Link 1987, Cowan 1989). For example, having a good fit between the needs of the project and the existing resources and skills of the firm (synergy) has frequently been cited as a key influence on new product performance (Kulvik 1977, Cooper and Kleinschmidt 1987a,b, Maidique and Zirger 1990, Craig and Hart 1991). Similarly, Globe, Levy and Schwartz (1973) found that a common characteristic of outstanding innovation studies related to having sufficient development resources throughout the entire new product process, while Voss (1985) suggested that success accrues from having adequate resources.

This was reflected in the findings of this study. On average, the perceived level of resources and skills in companies operating on the Irish market are good. The main strengths appear to lie in management and salesforce/distribution, closely followed by financial and production resources and skills. In addition, a relationship emerged between the perceived level of company resources and skills and the level of new product success achieved. Those companies whose overall level of resources and skills were rated +3 or better,

attained a significantly higher success rate with new products compared to those companies with a less than +3 level of resources and skills (on a scale of +5 to -5). Therefore, the level of company resources and skills is related to the outcome of new food products developed and launched on the Irish market .

7.2.2 COMPANY OWNERSHIP

Amount Launched, Successful and Planned

Differences emerged in relation to the patterns of performance and management practices employed in Irish and foreign owned companies. Irish companies appear to be more innovative than foreign companies as they launch a higher proportion of more innovative new products such as new product lines.

Importantly, it appears that there is a relationship between the type of new product introduced and the level of performance achieved in Irish and foreign companies. Specifically, the less innovative the new product, the higher the success level attained. On a competitive level, Irish companies appear to capitalise more on their strengths with specific new products, while on an individual basis, both types of companies launch a low amount of those products in which they achieve the highest levels of success.

Strategic Business Requirements

The most common strategic roles set by Irish and foreign owned companies are market driven, the main one being to establish a foothold in a new market. In addition, establishing a strategic role for the new product does not influence its outcome on the market. More foreign owned companies measure new product performance compared with Irish companies. The two most commonly used criteria

are sales volume and profit contribution, while new products play a far greater role in terms of contribution to sales and profits in Irish companies.

Impact of Internal and External Factors

Various external factors are envisaged to affect Irish and foreign owned companies in different ways. The principal factor that would cause Irish companies to launch more new food products in the future would be changing consumer needs. Technology advances, changing consumer needs and shortening product life cycles would increase the amount of new products introduced by foreign companies, whereas more government regulations on food would have a negative impact. Management practices are viewed as the principal internal obstacles to successful new product development for Irish and foreign companies.

The New Product Process

The majority of Irish companies use an informal new product development process and carry out the stages sequentially. Similarly, most foreign companies carry out the process sequentially, although the use of a formal process is predominant. The breakdown of expenditure at each stage of the process does not differ by company ownership, with the last three stages receiving the majority of expenditures. However, foreign companies consider significantly more new product ideas on average than Irish companies. In relation to new product outcomes, the percentage of overall expenditure at each stage was not found to be a major factor in determining success for Irish and foreign owned companies. Higher rates of success accrue from the use of a formal process where the stages are carried out sequentially. Thus, on a competitive level, Irish companies benefit from a greater use of sequential processing, whereas foreign companies benefit from a greater use of a formal process. The results also indicate that

considering more rather than fewer new product ideas is conducive to higher levels of performance and this is more predominant in foreign companies.

Strategic Orientation

Foreign companies are much more strategically oriented as a greater amount carry out strategic planning and set strategic objectives than their Irish counterparts. Furthermore, a competitive advantage accrues to foreign companies as they are more strategically oriented than Irish companies and this is conducive to higher levels of new product success.

Company Resources And Skills

Both types of companies claim to have a high level of management and salesforce/distribution resources and skills, while foreign companies claim to be stronger in relation to financial and advertising/promotion resources and skills. In addition, a relationship emerged between the perceived level of company resources and skills and the level of new product success achieved. Thus foreign companies have a much greater opportunity for new product success as a higher proportion of them claim to have a strong level of resources and skills.

7.2.3 TYPE OF COMPANY

Amount Launched, Successful and Planned

Differences emerged in relation to the patterns of performance and management practices employed in distributor and manufacturer companies. It was identified that distributor companies launch more innovative new products in greater quantities than manufacturers. It

appears that the type of new product introduced may influence the level of performance achieved in distributor and manufacturer companies. Specifically, the less innovative the new product, the higher the success level attained. Overall on a competitive and individual basis, manufacturers capitalise more on their new product strengths compared to distributors.

Strategic Business Requirements

The most common strategic roles set by distributors and manufacturers are market driven with the main one being to establish a foothold in a new market. In addition, establishing a strategic role for the new product does not influence its outcome on the market. More manufacturers measure new product performance compared with distributors. The two most commonly used criteria are sales volume and profit contribution, while the average contribution of new products to total company sales and profits is far greater for manufacturers.

Impact of Internal and External Factors

Changing consumer needs is the principal factor likely to cause both distributors and manufacturers to launch more new products, although it would have a greater affect on manufacturers. However the main cause of reduced new product introductions for distributors would be more government regulations. In addition, management practices are viewed as the principal internal impediments to new product development for both types of companies.

The New Product Process

The majority of both companies use an informal process and carry out the stages sequentially. Similarly the breakdown of expenditures at

each stages does not differ significantly by the type of company, with the last three stages receiving the majority of expenditures. Differences were evident in relation to the number of new product ideas considered, with distributors usually considering more. The level of top management support at each stage of the process did not vary in the majority of manufacturer companies, whilst distributors appear to be quite active with manufacturers throughout the various stages of the new product development process. In relation to new product outcomes, the percentage of overall expenditure at each stage was not found to be a major factor in determining success for distributor and manufacturer companies. Conversely, higher rates of success accrue from the use of a formal process where the stages are carried out sequentially. Both distributors and manufacturers benefit from a high usage of sequential processing. However a low level of formal new product processes are employed in both types of companies, although more distributors have them than manufacturers and have a greater opportunity for new product success. The results also indicate that considering more, rather than fewer, new product ideas are conducive to higher levels of performance and this is more predominant in distributor companies.

Strategic Orientation

In general, a greater amount of manufacturers have a strategic plan than distributors, although more distributors set specific strategic new product objectives. Furthermore, success is more likely to occur in companies that have a strategic plan, whilst setting specific new product objectives does not appear to be a major factor in determining the outcome of new products on the marketplace. Thus a competitive advantage accrues to manufacturers due to the higher presence of strategic plans.

Company Resources And Skills

Finally, a comparison of the level of resources and skills shows that both types of companies claim to have a strong level of management and salesforce/distribution resources and skills. On a competitive basis, distributors claim to be much stronger in relation to finance and advertising/promotion, whilst manufacturers claim to have greater market research resources and skills. In addition, a relationship emerged between the perceived level of company resources and skills and the level of new product success achieved. Distributors have a much greater opportunity for new product success as a higher proportion of them claim to have a strong level of resources and skills.

7.2.4 SIZE OF COMPANY

Amount Launched, Successful and Planned

Differences emerged in relation to the patterns of performance and management practices employed by company size. Large companies launch more innovative new products than medium and small companies, while large and small companies achieve much higher overall levels of new product success than medium sized companies. In addition, the type of new product introduced appears to contribute to the level of performance achieved. Specifically, the less innovative the new product, the higher the success level attained. On an individual level, small companies capitalise more on their specific new product strengths. On a competitive level, large and small companies launch greater proportions of those products in which they achieve higher levels of success.

Strategic Business Requirements

The most common strategic roles set by small, medium and large size companies are market driven with the main one being to establish a foothold in a new market. In addition, establishing a strategic role for the new product does not influence its outcome on the market. More medium sized companies measure new product performance compared with small and large companies. The two most commonly used criteria are sales volume and profit contribution. The average contribution of new products to total company sales and profits is greater for medium sized companies, which is surprising when one takes into consideration their performance level compared to small and large companies.

Impact of Internal and External Factors

Changing consumer needs is the main factor likely to cause all of the companies to launch more new products, although it would have the least affect on larger companies. In addition, technology advances, increased foreign competition in Ireland and shortening product life cycles would also have an impact on small, medium and large size companies respectively. Increased capital costs would cause medium sized companies to reduce the amount of new product introductions. Furthermore, management practices are viewed as the principal internal impediments to new product development for small companies, while a delay in making decisions is the most likely impediment in large companies.

The New Product Process

There is a relationship between company size and the use of a formal new product process. It is evident that as companies increase in size, they employ a more formal approach to new product development.

More small and large companies carry out the stages sequentially. In addition, the breakdown of expenditure at each stage of the process does not differ by company size. However it is apparent that more new product ideas are considered as companies increase in size. In relation to new product outcomes, the percentage of overall expenditure at each stage was not found to be a major factor in determining success in small, medium and large companies. However, higher rates of success accrue from the use of a formal process where the stages are carried out sequentially. Thus, on a competitive level, large companies benefit from a high use of formal and sequential processing, whereas more small companies gain from carrying out sequential processing but only a low level use formal processes. Conversely, more medium sized companies use formal processes than small companies, but a lower level carry out the stages sequentially.

It is apparent that more new product ideas are considered as companies increase in size. However this leads to higher levels of performance in small and medium sized companies and is more predominant in medium companies. In larger companies, considering more new product ideas appears to lead to failure.

Strategic Orientation

Size also appears to be a key factor in relation to the strategic orientation of companies, with more strategic planning and setting of new product objectives occurring as companies increase in size. Thus, a competitive advantage accrues to medium and large companies as they are more strategically oriented than small companies and this is conducive to higher levels of new product success.

Company Resources And Skills

Finally, the perceived level of resources and skills tends to improve as companies increase in size. A comparison of all the companies denotes that larger companies claim to be somewhat stronger in relation to R&D and market research. Financial, engineering, production and salesforce/distribution resources and skills are all rated higher in medium and large companies compared to small companies. In addition, a relationship emerged between the perceived level of company resources and skills and the level of new product success achieved. Thus, larger companies have a much greater opportunity for new product success as a higher proportion of them claim to have a strong level of resources and skills than small and medium sized companies.

7.2.5 OVERALL CONCLUSION - KEY OBJECTIVE 1

The firm conclusion that has been reached in light of the research findings and the preceding sections of this chapter is that **differences exist in the patterns of performance and management practices of companies developing and launching new products on the Irish market, which contribute to the level of success and failure achieved.**

Specifically, the type of new product being developed and launched, the type of new product process employed, the strategic orientation of companies, the type of new product structure and style and the level of company resources and skills are factors which influence the outcome of new products. The presence of these factors in companies developing and launching new food products on the Irish market will contribute to the ultimate success levels achieved. Conversely, their absence is likely to result in higher levels of failure for the new product. The strategic role established, the setting of new product objectives and the breakdown of expenditure at each stage of the

process do not have a direct effect on the level of new product performance achieved. Furthermore, differences are evident in relation to company ownership, type of company and company size which also affect the outcome of new products on an individual and competitive level.

7.3 RECOMMENDATIONS - Key Objective 1

The following recommendations for management are made in light of the research findings.

7.3.1 Amount Launched, Successful and Planned

Companies developing and launching new food products on the Irish market similar to those examined in the study should increase the development of less innovative new products which attain higher levels of success. In addition, the success level of more innovative new products needs to be improved. One possible solution is to implement the factors found to be conducive to higher levels of success. The lack of development in relation to new to the world products could be a barrier to competitiveness abroad, especially as the issue of scale has been identified as a weakness in Irish companies. Thus, more Irish companies need to consider developing those types of products and perhaps be encouraged to do so through support from Government agencies and semi-state bodies. Alternatively, they could seek extra resources internally to devote to new product development or consider strategic alliances to overcome their weaknesses in relation to size.

7.3.2 Strategic Business Requirements

Although the setting of strategic roles was not found to be a decisive determinant of new product outcomes, nevertheless it provides

direction for the new product process and ensures the fulfilment of new product objectives. Thus, it should be maintained in the future. Similarly establishing new product performance criteria and strategic roles enables companies to have a benchmark on which to measure the contribution and effectiveness of the new product both internally and externally. Therefore, it should also continue to be a common practice in all companies operating on the Irish market, irrespective of type of company, company ownership and company size. In addition, it was found that new products can contribute significantly to company sales and profits. However, an increase in costs relating to the development and introduction of new products on the marketplace could hinder their future contribution. As the majority of companies have experienced an increase in costs over the past five years, they must take cognisance of this fact and try to prevent the costs from rising further. One way to alleviate this problem is by incorporating those factors found to be conducive to new product success, and thus reduce the level of new product failure.

7.3.3 Impact of Internal and External Factors

Companies must frequently scrutinise the external environment to ensure that they identify changes and develop new product opportunities which emerge. They must also evaluate internal strengths and weaknesses to ensure that obstacles to the successful introduction of new products are either eliminated, curtailed or prevented from occurring altogether, while strengths are enhanced. Specific internal obstacles were identified in relation to companies overall, company ownership, type of company, and company size. It is imperative that the respective companies take cognisance of those factors salient to them and adapt accordingly. Attention must also be given to those specific external factors which could affect the future introduction of new products. This will enable companies to prepare for their possible occurrence, and to guarantee that if the situation

arises, it results in new product opportunities as opposed to threats.

7.3.4 The New Product Process

Management must recognise the importance of a formal new product process, which adheres to strict guidelines and practices, and the necessity of sequential processing, which are both more conducive to higher levels of performance. In general, more companies need to switch from taking a haphazard approach to new product development and instead, formalise their new product process activities. Although the percentage of expenditure at each stage in the process was not found to influence new product success, nevertheless more management attention and financial resources were given to the latter steps in the process. This may account for the large amount of new product ideas considered overall. However, investing more resources in the predevelopment stages may reduce the number of ideas considered and result in a better utilisation of resources. This is of particular importance to companies as the amount of ideas in the future is forecast to increase. Nevertheless, a balance must be obtained between considering too many and too few ideas.

Specifically, it was found that considering more rather than fewer new product ideas resulted in higher levels of success. However, substantial differences were evident in relation to the amount of new product ideas usually considered and the amount actually considered in relation to the new product pair. For example, a larger amount of ideas were considered for the successful, compared to the unsuccessful product, although the amount was substantially smaller than the number of ideas considered overall. This reinforces the notion that an optimum balance exists between considering too few and too many new product ideas. It suggests that companies overall, irrespective of ownership, type and size, need to be more selective when considering new product ideas, to ensure this optimum balance is achieved.

7.3.5 Strategic Orientation

It is essential that companies developing and launching new food products on the Irish market are strategically oriented, if a successful outcome is to be achieved. Devising strategic plans and formulating new product strategy will ensure that the new product effort fulfils corporate objectives and provides direction for the new product process. In addition strategic orientation is a necessity throughout the whole organisation and not just in relation to new product development. Therefore, companies in general must adopt a more strategically oriented approach, beginning with the setting of corporate strategy and objectives.

7.3.6 New Product Structure and Style

In relation to new product structure and style, manufacturers should establish a new product department if higher levels of performance are to be achieved. In those companies where financial resources are constrained, establishing a functionally based unit in an existing marketing/ R&D department will also enhance success.

7.3.7 Company Resources and Skills

Weaknesses were identified in relation to company resources and skills in general, and also by company ownership, type of company and company size. This problem must be addressed, if the success rate is to be improved and companies are to remain competitive. One possible remedy would be to seek more assistance from government agencies, semi state bodies or from internal budgets. Again a similar solution is offered, which is to seek extra financial resources from either internal or external sources or to engage in strategic alliances were costs may be shared by those involved.

7.3.8 Overall Recommendation - Key Objective 1

Overall, it is apparent that the future success of new product development in the Irish food industry is largely dependent on management's actions. This research has identified specific areas which need closer attention and require change if new product success rates are to improve. One of the more recent criticisms of new product development literature is that management is not implementing the necessary changes because of a lack of clear and meaningful normative guidelines which can be employed (Cooper 1983, Craig and Hart 1991, Barclay 1992). In view of this, the aim of the recommendations outlined in this research is to detail more specifically the type of actions needed. However, recognising that change must be made is only the first step in the process; implementing the necessary changes requires a commitment and dedication by management to the entire new product development process. The advantages that will accrue from this will largely be characterised by increased new product performance and more resources devoted to future new product development.

7.4 NEW PRODUCT SUCCESS AND FAILURE FACTORS - ISSUES RELATING TO THE LITERATURE AND CONCLUSIONS - Key Objective 2

One of the main aims of this section of the research is to ascertain if different controllable and environmental factors exist in relation to companies developing and launching new food products on the Irish market which ultimately results in their success or failure. In particular, variables relating to product advantage, proficiency of activities, synergy, organisational structure and style, firm characteristics and market characteristics were examined to determine their effect on new product outcomes. In addition, issues relating to the literature are addressed in light of the research findings. The

conclusions are examined in terms of the impact of controllable and environmental variables.

CONTROLLABLE VARIABLES

Product Advantage - Sub-objective 2A

Empirical research has shown that a product which offers a significant advantage to the consumer is one of the most important dimensions contributing to new product success (Utterback et al, Cooper 1979, 1980, 1990 Cooper and Kleinschmidt 1987 a, b). The results from this study supported this argument and found that the most important variable is to launch a product which has a high acceptance in export/other markets. Thus, product advantage appears to effect the outcome of new food products launched onto the Irish market. However, while it is related to the outcome of new food products launched by most companies, it is only partially related to new product success in manufacturer companies.

Proficiency of Process Activities - Sub-objective 2B

It has been advocated in the literature that proficiency in conducting the new product process activities leads to higher levels of performance (Cooper 1990, Maidique and Zirger 1990, Globe et al 1973 Utterback et al 1976, Voss 1985, Link 1987, Barclay 1992). The results support this argument and find that the protocol activities are the most important, while proficiency of technological and market related activities are the least important. Overall, carrying out the product development activity was found to be the most salient activity in determining new product success. Thus, proficiency in conducting the new product process activities is partially related to the outcome of new food products launched on the Irish market.

The proficiency of process activities was strongly related to new product outcomes in Irish and medium sized companies, while it only played a lesser role in foreign, distributor and manufacturer, and small and large companies.

Synergy - Sub-objective 2C

It has been suggested that success is more likely to occur if a firm builds on its existing resources, skills and strengths rather than seeking new opportunities far removed from its experience and resource base. Specifically, both marketing and technological synergy have been strongly recommended in the literature (Kulvic 1977, Booz Allen and Hamilton 1982, Maidique and Zirger 1990, Cooper 1990, Craig and Hart 1991). However, this was only partially evident from the research results.

Marketing synergy only has a weak impact on new product success, whereas both technological and product range synergy are strongly related. In particular having a good fit between the needs of the project and the firm's R&D /product development skills and resources is most strongly linked to a positive outcome. Therefore, both technological and product range synergy appear to be related to the outcome of new food products launched on the Irish market, whilst marketing synergy is only a weakly related factor. This was found to be the case in relation to Irish owned companies and small companies. In addition, all the synergy variables were only partially related to new product success in foreign and manufacturer companies, whereas they were strongly related to success in distributors and medium sized companies. However in large companies, marketing synergy was found to be only weakly related to new product outcomes, while there was no relationship between technological and product range synergy and new product success.

Organisational Structure and Style - Sub-objective 2D

Numerous research studies have identified various aspects of organisational structure and style as facillitators to a successful product outcome (Cooper and Kleinschmidt 1987, Link 1989, Johne and Snelson 1989, Lillien and Yoon 1989, Maidique and Zirger 1990). There was only limited support from the research results that organisational structure and style, in general, is conducive to new product success. In addition, the findings indicated that top management support has a relatively weak impact and distributor support only a partial impact.

Nevertheless, devoting a high level of company resources to the new product project was identified as the most important variable discriminating between new product success and failure. Thus, the conclusion is drawn that organisational structure and style is not a decisive determinant of the outcomes of new food products launched on the Irish market. This was found to be the case irrespective of company ownership, type of company and company size.

Firm Characteristics - Sub-objective 2E

The notion that characteristics of the firm are a major determinant of new product outcomes has been widely reported in the literature. Several studies have shown that both elements of the marketing mix and financial resources of the firm influence new product success (Cowan 1989, Rothwell et al 1974, Voss 1985, Link 1987, Baker et al 1986, Cooper and Kleinschmidt 1987). The results from this study found that financial characteristics of the firm were salient to a positive outcome, but here was only partial support that marketing mix characteristics are related to success. Nevertheless, the two most important variables are developing a product which yields a high contribution margin (financial) and the level of support given by the distribution channel (marketing mix). Therefore, financial characteristics of the firm are

directly related to the outcome of new food products on the Irish market, while the marketing mix characteristics are only partially related to new product success. This was apparent in relation to Irish and foreign owned companies, distributors, manufacturers, small and large companies. All of the firms characteristics were found to be strongly related to a positive outcome in medium sized companies. Thus, most of the variables over which the firm has control during the innovation process are directly related to the outcome of new food products on the Irish market.

ENVIRONMENTAL VARIABLES

Market Characteristics - Sub-objective 2F

Various authors have agreed that the interaction of the new product within the market environment affects new product performance, although there has been some debate as to the exact nature of this relationship (Maidique and Zirger 1990, Cowan 1989, Link 1987, Lillien and Yoon 1989, Cooper and Kleinschmidt 1987a,b, Cooper 1990). This study found that there is a partial relationship between new product outcomes and both market potential and market competitiveness. However, it must be noted that a high level of competitiveness in the marketplace appears to result in new product failure. The key variables which discriminate between new product success and failure are launching a product in a category where the purchase frequency was high (potential) and the existence of a dominant competitor in the marketplace (competitiveness). Therefore, market potential and market competitiveness are partially related to the outcome of new food products launched on the Irish market.

Both characteristics of the market were found to have a strong impact on new product outcomes in foreign, distributor, large and medium sized companies, they were only found to have a partial impact in

manufacturer companies. In addition market potential was strongly related to new product success in Irish and small companies, while market competitiveness was only a weakly related factor in Irish companies and a partially related factor in small companies.

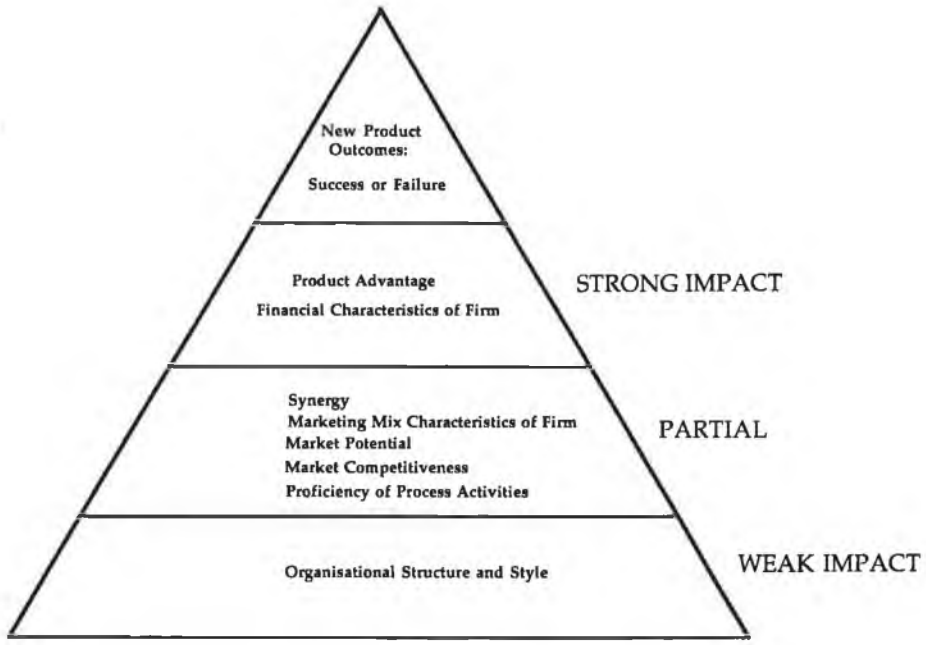
Therefore, environmental variables only have a partial influence in determining new product success. Furthermore, in comparison to the controllable variables, they play a lesser role in deciding the outcome of new food products on the Irish market. This implies that the fate of new products lies to a certain extent in the hands of management. However, the external environment over which the firm has no control, will ultimately have an influence on determining the level of performance achieved.

7.4.1 OVERALL CONCLUSION - KEY OBJECTIVE 2

Key objective 2 was strongly supported by the research results. The firm conclusion that has been reached in light of the research findings and the preceding sections of this chapter is that **different controllable and environmental factors exist in relation to companies developing and launching new food products on the Irish market, although the level of impact varies. These differences contribute to the success or failure of the new product.** Furthermore, differences are also evident in relation to company ownership, type of company and company size.

The diagram on the next page illustrates those factors found to be conducive to successful new product development. It is a hierarchial framework denoting the level of impact the various factors have on new product outcomes. It is based solely on the findings of this research.

Figure 7.1 Hierarchial Effect of Key Factors Determining New Product Outcomes



7.5 MAIN OBJECTIVE - CONCLUSIONS

Both key objectives which form the core of this study, have been supported by the findings of the research. Therefore, it is concluded that :

differences exist in the development and launch of new food products onto the Irish market which ultimately result in the success or failure of the new product.

The results of this study support the main findings from Cooper et al's (1980, 1982, 1984-1988, 1990, 1992, 1993) longitudinal research into new product success and failure. However, a noticeable difference is evident in relation to the level of impact of the various success factors. This may be due to the unique nature of the Irish industry, which is vastly different to those industries studied by Cooper and Kleinschmidt in

Canada and America. Furthermore, the issues in relation to company ownership, type of company and company size in the Irish food industry, may not transcend global differences and therefore, may only be of relevance in countries with similar economies to Ireland.

Additional Conclusions

Several broader conclusions emerged from this study into the development and launch of new food products on the Irish marketplace. Firstly, the outcome of new food products on the market are determined by certain key factors which relate to both environmental and controllable variables. However, there is a hierarchial effect in relation to the key success factors, which implies that some factors have a stronger impact than others. Secondly, it is evident that new product success is both predictable and partially controllable. Variables over which management has control such as product advantage and financial characteristics of the firm were found to be central to success. In addition, synergy, proficiency of process activities and marketing mix elements are also controllable and have a partial impact on new product outcomes. However, other environmental variables over which the firm has no control, also play a role. Finally, new insights were gleaned in areas that had previously not been researched extensively. For example, differences in company ownership, type of company and company size were found to effect the influence of key factors on new product success. Certain management practices, such as the type of product being developed and launched, the type of new product process employed, the strategic orientation of companies, the type of new product structure and style and the level of company resources and skills, were found to be more important than would appear from existing empirical research.

7.6 RECOMMENDATIONS - Key Objective 2

The following recommendations are made in light of the research findings. The findings of the research indicate a number of ways to improve new product performance.

7.6.1 Product Advantage

Companies developing and launching new food products on the Irish market must ensure that the product has a distinct and identifiable advantage. More importantly, it is essential that the consumers recognise that the product offers unique benefits not found in other new products on the market. One way to ensure this is to conduct extensive market research to determine if the product is superior in the eyes of the consumer. Therefore, financial resources must be devoted to carrying out market research. In addition, products which have a high acceptance in export/other markets were found to be determinants of new product success. In those areas where manufacturers lack the available resources to develop new products internally, one option is to seek new ideas from abroad, while distributors should contemplate importing other new products from abroad. In addition, product advantage must be used as a criteria in the screening and evaluation of new product ideas, finally developing a product advantage must become a key objective throughout the new product process.

7.6.2 Proficiency of Process Activities

Management must ensure that not only are the key activities in the new product development process carried out, but also that they are undertaken proficiently. This reinforces the need both for formal procedures and guidelines and sequential processing (see Section 7.3.4). Carrying out the stages in the process formally and sequentially will

ensure that the necessary activities are carried out proficiently and with adequate time devoted to them. In addition, it is recommended that the use of checkpoints or gates (as suggested by Cooper 1988) will guarantee that each stage has been fully and adeptly completed before the next stage proceeds. It is also essential that the necessary resources are devoted to defining the new product project well, as the protocol activities were found to be most important to a successful outcome. This implies that market research plays a vital role in order to proficiently define customer needs, wants and preferences, the product specifications and requirements, the product concept and the target market. It is also important that the predevelopment activities are undertaken well. However, where financial resources are constrained, less attention need be placed on the technological and market related activities as these were found to be less important in determining success.

7.6.3 Synergy

Ensuring that the company has both technological and product range synergy is a vital prerequisite for success. This implies that there is a good 'project-company fit' in terms of the technological skills and resources and also in terms of the existing products being distributed by the firm. These factors should be incorporated into a checklist for screening and evaluating new product ideas. Using the existing market resources and skills of the firm may not be sufficient and instead the company should devote the necessary resources to marketing, where appropriate. In addition, having a good fit between the needs of the project and the existing products being distributed by the firm is essential for distributor companies.

The main implication in this section is that the existing product range and technological skills and resources should be sufficient for conducting successful new product development. However, where

these are lacking in companies, added financial resources are needed to build on the existing skills and resources. This is especially pertinent for those companies identified in the research as having weaknesses in relation to certain resources and skills and reinforces the recommendation outlined in section 7.3.7. Finally having synergy with the firms R & D/ product development skills and resources was found to the most salient variable relating to new product success. Again, this reiterates the importance of adequate finances devoted to the market research and appropriate procedures and guidelines for conducting the new product process proficiently.

7.6.4 Organisational Structure and Style

The implications in relation to organisational structure and style are particularly appropriate to management as they are entirely within their control. Firstly, it is essential that a high level of company resources are devoted to the new product project, if success is to be attained. Therefore, management must ensure that the necessary resources are allocated from the budget to new product development. Communication, both inside and outside the organisation, must also be effective and this requires that internal communication, specifically between R&D/ manufacturing-marketing functions are well interfaced and co-ordinated. In relation to distributors, communication between the company and the manufacturer must be effective.

The project should also be clearly planned with goals and objectives established. Thus, if the recommendations in relation to strategic orientation (section 7.3.5) are adhered to, then this should automatically follow. In addition, top management should be involved in the day-to-day management of the project. However, caution is stressed here, as management must ensure that enthusiasm does not crowd on facts throughout the entire development process. This implies both in relation to management and the role other key

people play in the process such as product advocates, technical champions and senior management (see section 7.3.6). Finally, in relation to distributors, a high level of support for the new product is essential but companies should avoid having a high risk taking attitude to new products.

7.6.5 Firm Characteristics

The importance of financial resources devoted to the new product project has been repeatedly stressed in the preceding sections. However, management must recognise that ensuring the magnitude of investment in the new product project is large, will lead to a successful outcome. This implies a need for financial commitment to new product development, although where financial resources are constrained, companies must look to external sources such as Government agencies and semi-state bodies. In addition, costs must be kept to a minimum and companies should prepare contingency plans in the event that there is an unexpected high product cost, as without adequate forethought of this occurring, failure is likely to ensue. Furthermore, if costs are kept to a minimum, then the product should yield a high contribution margin to the firm and this is closely tied to success. Perhaps one way to reduce costs and enhance the new products contribution to sales and profits, is by investing more in the predevelopment stages of the new product process. This may reduce the number of new product ideas considered and result in a better utilisation of resources in the remaining stages of the process (see section 7.3.4). An alternative solution would be to reduce the level of new product failure by incorporating those factors found to be conducive to new product success (see section 7.3.2).

Certain marketing mix implications are also evident. In relation to manufacturers, obtaining distribution channel support for the new product is imperative. In addition, all companies must ensure that

adequate promotion and advertising effort are used. However, distributors must be careful that the advertising and promotion effort is not aimed at products which are doomed to become failures (see section 7.3.6). Therefore, market research should be conducted prior to the launch stage to test whether the product is likely to be a success or failure, and the necessary actions taken.

7.6.6. Market Characteristics

Management should recognise that they have little control over the environment in which the new product is launched. However there are certain actions they can take to ensure that the environmental influences result in a successful outcome for the new product. In particular, new products should be launched in product categories where the purchase frequency is high. Launching a product which is very important to the customer, will also lead to success. Markets should be targeted where the customers needs and wants for the product change rapidly, although markets should be avoided where customers are extremely satisfied with competitive products. These characteristics relating to the market potential should be researched extensively prior to committing resources to the new product project. They should also become criteria to be used in the screening and evaluation of new product ideas.

One of the main implications from the research findings is that launching a new product in intensely competitive markets results in new product failure. Therefore, market competitiveness needs to be researched and evaluated early on in the process. In particular, the existence of a dominant competitor in the market and a high degree of loyalty to competitors products should refrain companies from launching the new product in that market. Thus, companies should avoid markets which show indications of being intensely competitive.

Implications relating to company ownership, type of company and company size are denoted in the following table. It is recommended that management ensure those factors found to have a strong impact on new product success are present in the respective companies.

Table 7.1 Salient New Product Success Factors By Company Type

Controllable	Irish	Foreign	Distributor	Manufacturer	Small	Medium	Large
Product Advantage	*	*	*		*	*	*
Proficiency of Process Activities							
- Protocol	*		*	*		*	
- Predevelopment	*					*	
- Market Related	*		*			*	
- Technological						*	
Synergy							
- Marketing			*			*	
- Technological	*				*	*	
- Product Range	*		*		*	*	
Organisational Structure & Style							
- Top Mgt Support						*	
- Distributor Support							*
Firm's Characteristics							
- Financial	*	*	*	*	*	*	*
- Marketing						*	
Environmental							
Market Characteristics							
- Market Potential	*	*	*		*	*	*
- Mkt Competitiveness		*	*			*	*

7.6.7 Overall Recommendation - Key Objective 2

Overall, the recommendation for this section of the research indicates a need to marry a financial commitment to new product development with a commitment by management to the entire new product process. Developing products which are synergistic with existing resources and skills of the organisation, will aid new product development and alleviate some of the burden on financial resources. One exception to this is in the area of marketing, where new products may require new marketing skills and resources. In addition, implementing the necessary organisational structure and style will ensure that this commitment to new product development will permeate throughout the entire organisation. It is also imperative that close attention be paid to the market environment in which the new products are launched. Frequent market research is advocated to highlight any changes in the marketplace and enable management to adapt accordingly.

7.7 RECOMMENDATIONS FOR FUTURE RESEARCH

The present study examined the influence of key success factors on the success or failure of new food products developed and launched on the Irish market. However, the influences exerted by the factors is very complex due to its individualistic nature. For example, differences were evident in relation to the impact of factors according to the company ownership, type of company and company size. Add to this differences which may occur depending on the type of products which are developed, the nature of the marketplace in which they are launched and differences in relation to the type of industry, and one can see a multitude of intervening variables in operation. A very real step forward would be a study examining whether the differences relating to company ownership, type of company and company size are universal.

Many other areas also need to be researched. For example, to examine if there are similarities or differences in the influences exerted by the key success factors in other sectors of the Irish food industry or in other industries in the Irish market. The preliminary findings of this research indicate that certain management practices which were found to be more important than would appear from past empirical studies, need to be researched more deeply to determine their specific impact on new product success. Additional research should also be conducted to examine other facets of management practices that may result in a positive outcome. Perhaps, a study across the entire food industry would elicit more distinct results rather than from just the secondary food processing sector.

One has to keep in mind the small number of companies researched, although a census was compiled. It may be that research conducted on a broader scale would elicit more distinctive results. For example, a greater percentage of larger companies may show the development of new to the world products which were absent in companies included in the present research.

There are many possible areas of further research in the theory of new product development and key success factors (in the food industry) that are still relatively unexplored. However, the knowledge provided by this study does have implications for management and future research should provide more interesting and concrete application of the concept to the business environment. This is imperative because as Cooper (1990 p.27) states ***'an accurate understanding of why new products succeed or fail is vital to improving new product performance'.***

Bibliography

Abernathy, W.J. and Townsend P.L. (1975) cited in Utterback, J.M. and Abernathy, W.J., "A Dynamic Model Of Process And Product Innovation", Omega,Vol. 3, No. 6, 1975, p. 639-656 .

Abernathy, William J. And Utterback, James M. (1981), "Patterns Of Industrial Innovation", in Corporate Strategy And Product Innovation, edited by Robert R. Rothberg,The Free Press, New York, p. 428-436.

Abetti, Pier A. and Stuart, Robert W. (1988), "Evaluating New Product Risk", Research Technology Management,Vol. 31, Issue 3, May/June, p. 40-43.

Ancona, Deborah Gladstein and Caldwell, David (1990), "Improving The Performance Of New Product Teams", Research Technology Management,Vol. 33, Issue 2, March/April, p. 25-29.

Ansoff (1965) cited in Johne, Dr. F. A., Industrial Product Innovation Organisation And Management , Croom Helm, London, 1985.

Axelrod, M.E. (1975), "Ten Essentials For Good Qualitative Research", Marketing News, Vol VIII, March, p. 10-11.

Baker, Michael J. (1975), Marketing New Industrial Products , The Macmillan Press Ltd., London.

Baker, R., Green, G. and Bean, S. (1986) cited in Lilien , Gary L. and Yoon, Eunsang, "Determinants Of New Industrial Product Performance : A Strategic Reexamination Of The Empirical Literature", IEEE Transactions On Engineering Management ,Vol. 36, No. 1, February 1989, p. 9.

Barclay, Ian (1992),"The New Product Development Process: Past Evidence And Future Practical Application ; Part 1", R&D Management,Vol. 22, No. 3, p. 255-263.

Barclay, Ian, Benson, Mark And Lunt, Patricia (1990), "Managing New Product Development Effectively", Leadership And Organisation Development Journal,Vol. 11, No. 6, p. 1-37.

Barczak, Gloria and Wilemon, David (1991), "Communications Patterns Of New Product Development Team Leaders", IEEE Transactions On Engineering Management,Vol. 38, No. 2, May, p. 101-109.

Barczak, Gloria and Wilemon, David (1992), "Successful New Product Team Leaders", Industrial Marketing Management,Vol. 21, p. 61-68.

Bertrand, Kate (1988), "New Product Success Starts With 'Homework'", Business Marketing,August, p. 36-48.

Besford, John (1987), "Designing A Quality Product", Journal Of Marketing Management,Vol. 3, Issue 3, Winter, p. 133-143.

Bingham, Frank G. and Quigley, Charles (1990), "A Team Approach To New Product Development", Journal Of Marketing Management,Vol. 6, Issue 1, Summer, p. 47-58.

Black, Fergus (1993), "£720m Plan To Boost Food Industry Jobs And Profits", Irish Independent,April 22nd, p.6.

Blois, Keith (1985), "New Product Development Proactice And Reactive", Journal Of Marketing Management,Vol.1, Issue 1, p. 27-34.

Boag, David and Rinholm, Brenda (1989), "New Product Management Practices Of Small High Tech Firms", Journal Of Product Innovation Management. Vol. 6, No. 2, June, p.109-122.

Booz Allen and Hamilton Inc. (1968),"A Program For New Product Evolution", Booz Allen Hamilton Inc.. p. 51-57.

Booz Allen and Hamilton Inc. (1981),"A Program For New Product Evolution", Corporate Strategy And Product Innovation. 2nd Edition,Edited By Robert R. Rothberg, The Free Press, New York, p. 177-184.

Booz Allen and Hamilton (1968), cited in Calantone, Roger and Cooper, Robert, "New Product Scenarios - Prospects For Success", Journal Of Marketing. Vol. 45, Spring 1981, p. 48-60.

Booz Allen and Hamilton (1982), "New Product Management For The 1980's", Booz Allen Hamilton, New York, p.1-24.

Boyle, Pat (1993),"£450m Opportunity For Irish Food Producers", Irish Times,February 26th, p. 27.

Bright (1964) cited in Barclay, Ian, Benson, Mark And Lunt, Patricia, "Managing New Product Development Effectively", Leadership And Organisation Development Journal.Vol. 11, No. 6, 1990, p. 1-37.

Brockhoff, Klaus and Chakrabarti, Alok K. (1988),"R&D/Marketing Linkage And Innovation Strategy : Some West German Experience", IEEE Transactions On Engineering Management ,Vol. 35, No. 3, August, p. 167-174.

Brown, Andy (1991),"Exploring The Food Industry's Financial Future", Checkout. October, p. 9-12.

Buggie, Frederick D. (1981),"New Product Development Strategies, AMACOM. New York.

Byrne, John J. (1987),"The Cost/Risk Factors Can Be Prohibitive", Irish Marketing Journal.May, p. 13-14.

Calatone, Roger and Cooper, Robert G. (1981), "New product Scenarios -Prospects For Success", Journal Of Marketing.Vol. 45, Spring, p. 48-60.

Campbell, Patrick (1992), "New Products, New Markets, New Jobs", Business And Finance.October, p. 27-30.

Checkout. (1989)"Frozen Foods : Time For A Cabinet Reshuffle ?", Vol. 15, No. 2, February 1st., p. 14-16.

Checkout (1991), "Singing Pasta's Praises" , October, p. 40-44.

Checkout (1992), "New Products Show Off At IFEX '92", April, p. 32-34.

Checkout (1992),"The Changing Face Of Food", May, p. 17.

Checkout (1993),"New Product Of The Year Awards 1992", February, p. 25-34.

Checkout Yearbook And Buyer's Guide (1993),"Hard Times Ahead", p. 28-29.

Chisnall, Peter M. (1986), Marketing Research,3rd Edition, McGraw-Hill Book Company, London.

Clark (1961) cited in Baker, Michael J., Marketing New Industrial Products , The Macmillan Press Ltd., London, 1975.

Clark, L.R. (1991),"Trends That Will Impact New Products",Journal Of Consumer Marketing,Vol. 8, No.1, Winter, p. 35-40.

Cochran, Betty and Thompson, G. Clark (1964),"Why New Products Fail : Survey Of Business Opinion And Experience",The Conference Board Record,October, p. 11-18.

Cogan, D.J. (1991),"Innovation Output Of Irish Industry In 1991",Irish Trade Literature, p. 1-21.

Comerford, Kieran (1985),"New Products = New Jobs",Technology Ireland, October, p. 23-25.

Comerford, Kieran (1990),"Finding New Product Opportunities Through Licensing", Business Front,June/July, p. 38-39.

Condon, Sean (1987) cited in Shanahan, Ella, "New Marketing Strategy Needed", Irish Times, April 18th, p. 6.

Consumer Choice (1991),"Pasta", March, p. 92-93.

Consumer Choice (1992),"Future Foods",October, p. 300.

Constandse, W. J. (1971) cited in Lilien , Gary L. and Yoon, Eunsang,"Determinants Of New Industrial Product Performance : A Strategic Reexamination Of The Empirical Literature", IEEE Transactions On Engineering Management ,Vol. 36, No. 1, February 1989, p. 8.

Co-op Ireland (1992),"Avonmore's Global Food Industry Strategy", June, p. 11.

Cooper, Robert G. (1975), cited in Cooper, Robert G.,Winning At New Products,Addison-Wesley Publishing Co. Inc., Massachusetts,1986.

Cooper, Robert G. (1976), cited in Cooper, R.G. and Kleinschmidt, E.J.,"New Products What Separates Winners From Losers", Journal Of Product Innovation Management,Vol. 4, No. 3, 1987, p.169-184.

Cooper, Robert G. (1979),"The Dimensions Of Industrial New Product Success And Failure",Journal Of Marketing,Vol. 43, Summer, p. 93-103.

Cooper, Robert G. (1980) cited in O'Sullivan, Brendan and Tomlin, Breffni,"Innovation In Established Irish Industry", Journal Of Irish Business And Administrative Research, Vol. 7, No. 1, Spring 1985, p. 57-78.

Cooper, Robert G. (1980),"How To Identify Potential New Product Winners",Research Management, September, p. 10-19.

Cooper, Robert G. (1981), "New Product Scenarios: Prospects For Success", Journal Of Marketing, Vol. 45, Spring 1981, p. 48-60.

Cooper, Robert G. (1982),"New Product Success In Industrial Firms", Industrial Marketing Management,Vol. 11, p. 215-223.

Cooper, Robert G. (1983a),"A Process Model For Industrial New Product Development",IEEE Transactions On Engineering Management ,Vol. EM-30, No. 1, February, p. 2-11.

Cooper, Robert G. (1983b),"The New Product Process : An Empirically Based Classification Scheme",R & D Management,Vol.13, No.1, p. 1-13.

Cooper, Robert G. (1984),"The Performance Impact Of Product Innovation Strategies", European Journal Of Marketing,Vol.18, No. 5, p. 5-54.

Cooper, Robert G. (1984), "The Strategy-Performance Link In Product Innovation", R&D Management, Vol. 14, No. 4.

Cooper, Robert G. (1985),"Industrial Firm's New Product Strategies",Journal Of Business Research,Vol. 13, p. 107-121.

Cooper, Robert G. (1985),"Overall Corporate Strategies For New Product Programs",Industrial Marketing Management,Vol. 14, No. 3, p. 179-193.

Cooper, Robert G. (1985c),"Selecting Winning New Product Projects: Using The NewProd System",Journal Of Product Innovation Management,Vol. 2, p. 34-44.

Cooper, Robert G. (1986),Winning At New Products,Addison-Wesley Publishing Co. Inc., Massachusetts.

Cooper, Robert G. (1987),"Defining The New Product Strategy",IEEE Transactions On Engineering Management ,Vol. EM-34, No. 3, August, p. 184-193.

Cooper, Robert G. (1988a),"Predevelopment Activities Determine New Product Success",Industrial Marketing Management,Vol. 17, Issue 2, p. 237-247.

Cooper, Robert G. (1988b),"The New Product Process - A Decision Guide For Management",Journal Of Marketing Management,Vol. 3, Issue 3, Spring, p. 238-255.

Cooper, Charles G. (1989),"Innovative Products Trigger Growth",Journal Of Business Strategy,Vol. 10, No. 6, November/December, p. 14-16.

Cooper, Robert G. (1990),"New Product What Distinguishes The Winners",Research Technology Management,Vol. 33, Issue 6, November/December, p. 27-31.

Cooper, Robert G. (1991),"Stage-Gate Systems : A New Tool For Managing New Products", IEEE Engineering Management Review, Vol. 19, No. 3, Fall, p. 5-12.

Cooper, Robert G. (1992),"The NewProd System: The Industry Experience",Journal Of Product Innovation Management,Vol. 9, No. 2, p. 113-127.
Cooper, R.G. and De Brentani, U. (1984),"Criteria For Screening New Industrial Products",Industrial Marketing Management,Vol. 13, No. 3, p. 149-156.

Cooper, R.G. and De Brentani, U. (1992), "Developing Successful New Financial Services For Businesses", Industrial Marketing Management, Vol. 21, p. 231-241.

Cooper, Robert G. And Kleinschmidt, Elko J. (1986),"An Investigation Into The New Product Process: Steps, Deficiencies And Impact",Journal Of Product Innovation Management,Vol. 3, No. 2, p. 71-85.

Cooper, R.G. and Kleinschmidt, E.J. (1987a),"New Products What Separates Winners From Losers", Journal Of Product Innovation Management,Vol. 4, No. 3, p.169-184.

Cooper, R.G. and Kleinschmidt, E.J. (1987b),"Success Factors In Product Innovation", Industrial Marketing Management. Vol. 16, p. 215-223.

Cooper, R.G. and Kleinschmidt, E.J. (1987c),"What Makes A New Product A Winner-Success Factors At Project Level",R & D Management.Vol. 17, No.3, p. 175-189.

Cooper, R.G. and Kleinschmidt, E.J. (1988),"Resource Allocation In The New Product Process", Industrial Marketing Management, Vol. 17, No. 3, 1988, p. 249-262.

Cooper, R.G. and Kleinschmidt, E.J. (1992),"The Performance Impact Of An International Orientation On Product Innovation",European Journal Of Marketing.Vol. 22, No. 10, p. 56-71.

Cooper, R.G. and Kleinschmidt, E.J. (1993),"New Product Success In The Chemical Industry",Industrial Marketing Management.Vol. 22, p. 85-99.

Cork Examiner (1988), "Walsh Tells Food Industry To Get Ready For 1992", October 10th, p. 8.

Cork Examiner (1990a),"Attitudes To Food Changing", June 6th, p. 9.

Cork Examiner (1990b),"Consumers Set To Become Food 'Kings", June 7th, p. 9.

Cowan, C. (1989), "The Chilled Food Market", Farm and Food Research. Vol. 20, No. 2, April, p. 23-24.

Cowan, Cathal (1989-1990), "Success In New Product Development",Proceedings Of The Agricultural Economics Society Of Ireland. p. 1-30.

Craig, Angie and Hart, Susan (1991),"Identifying Trends In Literature - Determinants Of New Product Success",MEG Proceedings 1991 Annual Conference.Vol.1, p. 212-229.

Craig, Angie and Hart, Susan (1991),"Where To Now In New Product Development Research",Working Paper Series, p. 1-56.

Crawford, C. Merle (1977), "Marketing Research And The New Product Failure Rate",Journal Of Marketing.Vol. 41, No. 2, April , p. 51-61.

Crawford, C. Merle (1979), "New Product Failure Rates - Facts And Fallacies",Research Management.Vol. 22, Issue 5, September, p. 9-13.

Crawford, C. Merle (1984), "Protocol: New Tool For Product Innovation",Journal Of Product Innovation Management.Vol. 2, p. 85-91.

Crawford, C. Merle (1986), "Evaluating New Products : A System, Not An Act",Business Horizons.November/December, p. 48-55.

Crawford, C. Merle (1987a), "New Product Failure Rates- A Reprise",Journal of Research Management.Vol. 4, July/August, p. 20-24.

Crawford, C. Merle (1987b), New Product Management , 2nd Ed., Irwin, Illinois.

Crawford, C. Merle (1991), "The Dual Drive Concept Of Product Innovation", IEEE Engineering Mangagement Review, Vol. 19, No. 2, Summer, p. 36-41.

Crawford, C. Merle (1992),"The Hidden Costs Of Accelerated Product Development",Journal Of Product Innovation.Vol. 9, No. 3, p. 188-199.

Cullen, Adrienne (1992),"Irish Dairy Sector's Huge R&D Investment Pays Off",Food Ireland,July 17th, p.24-25.

Cunningham, John (1992),"What Makes A New Product Successful",Business News,August 23, p.10.

Dace, Roger (1989),"Japanese New Product Development",The Quarterly Review Of Marketing,Vol. 14, No. 2, January, p. 4-13.

Dand, David (1988) cited in "Food Industry Draws Criticism" Irish Times, February 27th, p. 10.

Davidson, Hugh (1987), Offensive Marketing, Penguin Books, England, 1987.

Davidson, J. Hugh (1976),"Why Most New Consumer Brands Fail",Harvard Business Review,March/April, p. 117-122.

Davies, Paul S. (1987),"Should We Develop New Products And How",Irish Marketing Journal,May, p. 10-12.

Davis, John Stephen (1988),"New Product Success and Failure: Three Case Studies",Industrial Marketing Management,Vol. 17, No. 2, p. 103-109.

DeBrentani, Ulrike and Cooper, Robert G. (1992),"Developing Successful New Financial Services For Businesses", Industrial Marketing Management,Vol. 21, p. 231-241.

Diamantopoulos, Dr. A. and Mathews, Dr. B.P. (1990) ,"A Model For Analysing Product Performance",Quarterly Review of Marketing,Vol. 15, No. 3, Spring, p. 7-13.

Douglas, Gordon, Kemp, Philip And Cook (1983), Jeremy,Systematic New Product Development, 2nd Ed., Gower Publishing Co. Ltd., England.

Downes, Margaret (1990), "Farm Incomes Drop But Food Firms Continue Buying Abroad", Sunday Business Post, December 23rd, p. 7.

Droz, Dan (1992),"Prototyping: A Key To Managing Product Development", Journal Of Business Strategy,Vol. 13, No. 3, May/June, p. 34-38.

Drucker, Peter F. (1985),"The Discipline Of Innovation",Harvard Business Review,Vol. 63 , No. 3. , May/June, p. 67-72.

Drucker, Peter F. (1985) cited in Barclay, Ian, Benson, Mark And Lunt, Patricia, "Managing New Product Development Effectively", Leadership And Organisation Development Journal,Vol. 11, No. 6, 1990, p. 1-37.

Duke, Robert (1990-1991),"Winning and Losing In Product Innovation - A Case History",Irish Marketing Review,Vol. 5, No. 1, p. 11-19 .

Dwyer, Larry And Mellor, Robert (1991),"Organisational Environment, New Product Process Activities, And Project Outcomes", Journal of Product Innovation Management,Vol. 8, p. 39-48.

EOLAS (1990),"Business Expenditure On Research and Development", Report Prepared By EOLAS, p. 1-40.

EOLAS (1991),"Business Expenditure On Research and Development", Report Prepared By EOLAS, p. 1-48.

Eurofood And Drink (1992),"Food Industry Column", April, p. 5-7.

Eurofood And Drink (1992), "Poldy's Fresh Foods - The Other Irish Pizza Base", July/August, p. 15-31.

Eurofood And Drink (1992), "Greater Variety At Heinz", July/August, p. 7-18.

Eurofood And Drink (1993), "The Elite Eighty Food And Drink Companies In The UK And Ireland", January, p. 5-41.

Eurofood And Drink (1993), "Heinz's Irish Pizza Base Ready For Business", March, p. 47.

Euromonitor (Market Reports) (1989), "The Euromonitor UK Food Report", p. 61-304.

Europen (1989), "Europen: Think Ahead - Act Now, 1992 And The Food And Drink Industry", A Report For The European Bureau, Department Of The Taoiseach, December, p. 1-82.

Expert Group (1993), Report Of The Expert Group On The Food Industry, Department Of Agriculture, Food And Forestry, Dublin, April p. 1-56.

Farming Independent (1993), "Irish Food Industry", May 18th, p. 2.

Fennell, T.D., Flood, P.R., O'Sullivan, P.J.P., Butler, P. and Demick, D., Marketing Practice: The Republic Of Ireland And Northern Ireland, Report Prepared For Co-operation North, Dublin And Belfast, Report No. 3, September 1991, p. 1-82.

Finkin, Eugene F. (1983),"Developing And Managing New Products", Journal Of Business Strategy, Vol. 3, No. 4, Spring, p. 39-46.

Fitzgerald, Niall (1988), cited in "Food Industry Draws Criticism" Irish Times, February 27th, p. 12.

Food Ireland (1992), "The National Food Centre", Dublin, p. 7.

Food Ireland (1991),"Microwaves Mean More Meals !, February 1991, p. 4

Food Ireland (1991), "Healthy Eating Helps Boost Frozen Foods", November, p. 3.

Food Ireland (1992),"Quality Is Key To Successful Food Manufacture", June, p. 38.

Food Ireland (1992),"Ready Meals Worth £772m", July, p. 37.

Food Ireland (1992), "Original Light Goods To Win Out", October, p. 40.

Food Ireland (1992),"The Convenience Food Myth", November/December, p. 17.

Food Ireland (1992),"Fast Growth In 'Fast Food', October, p. 31

Food Ireland (1992), "The End Of The Mass Market Food Concept", November/December, p. 35-37.

Fletcher, Keith (1990). Marketing Management And Information Technology, Prentice-Hall, London.

Foster, Ann (1991),"Consumers And The European Market In The 1990's".Food Ireland.April, p. 43-53 .

Foxall, Gordon R. (1988),"Marketing And Innovation - Research And Practice",Journal Of Marketing Management.Vol. 3, Issue 3, Spring, p. 231-237.

Francis, Arthur and Winstanley, Diana (1988),"Managing New Product Development : Some Alternative Ways To Organise The Work Of Technical Specialists",Journal Of Marketing Management.Vol. 4, Issue 2, Winter, p. 249-260.

Frumerman, Robert (1990),"10 Commandments For Successful Development",Research Technology Management.Vol. 33, Issue 4, July/August, p. 10-11.

Gerstenfeld, A. (1976), cited in Cooper, Robert G.,"A Process Model For Industrial New Product Development",IEEE Transactions On Engineering Management .Vol. EM-30, No. 1, February 1983, p. 2-11.

Globe, S. and Levy, G.W. and Schwartz, C.M. (1973), cited in Barclay, Ian,"The New Product Development Process: Past Evidence And Future Practical Application ; Part 1", R&D Management.Vol. 22, No. 3, 1992, p. 255-263.

Goltz, G.E. (1986),"A Guide To Development",R & D Management.Vol. 16, No. 3, p. 243-249.

Gomory, Ralph E. (1989),"From The 'Ladder Of Science' To The Product Development Cycle", Harvard Business Review, November/ December, p. 99-105.

Goold, Michael and Campbell, Andrew (1989),"Brief Case- A Porfolio Of Commentary, Opinion, Research and Experience",Long Range Planning.Vol. 22, No. 4, August, p. 129-132.

Gorman (1989), cited in Cowan, Cathal, "Success In New Product Development",Proceedings Of The Agricultural Economics Society Of Ireland.1989-1990, p. 1-30.

Goulding, Ian (1983),"New Product Development - A Literature Review",Management Bibliographies.Vol. 9, No. 1, p. 3-30.

Gourlay, Richard (1991a),"An Appetite For Growth In The Food Industry-Financial Times Survey", Financial Times, May 10th, p.10-16.

Gourlay, Richard (1991b),"Border Raiders In Action", Financial Times, May 10th, p. 11.

Gourlay, Richard (1991c),"The Food Industry - Financial Times Survey", Financial Times,May 10, p. 10-16.

Government Publications Office. "Promoting Development And Structural Adjustment In Ireland Under The Community Support Framework", Programme For Industrial Development 1989-1993. Government Publications Office, 1991, p. 1-285.

Green, Paul E. and Tull, Donald S. cited in Chisnall, Peter M. (1986), Marketing Research, 3rd Ed., McGraw-Hill Book Company, London, p. 21.

Gupta, Ashok K. and Rogers, Everett M., (1991) Internal Marketing- Integrating R & D and Marketing Within The Organisation,Journal of Services Marketing,Vol. 5, No. 2, p. 55-68.

Gupta, Ashok K. and Wileman, David L. (1988),"Why R & D Resists Using Marketing Information", Research Technology Management, Vol. 32, Issue 6, November/December, p. 36-41.

Gupta, Ashok K. and Wileman, David L. (1990),"Accelerating The Development Of Technology-Based New Products",California Management Review,Vol. 32, No. 2, Winter, p. 24-51.

Gupta, Ashok K., Raj, S.P. and Wileman, David (1986),"Model For Studying R & D-Marketing Interface In The Product Innovation Process",Journal Of Marketing,Vol. 50, No. 2, April, p. 7-17.

Hamilton, Christine (1993),"Learning From Japan",Management,Vol. 40, No. 6, June, p. 14-19.

Harrington, D. (1989), "Challenges For The Food Industry", Farm and Food Research, Vol. 20, No. 3, June, p. 12-13.

Harrington, D., Connolly, J.F., Gormley, R., Kenny, A. and Nash, P. (1988),"The Effects Of Science And Technology On The Food Industry In Ireland To The Year 2000",Report prepared for An Foras Taluntais,March, p. 1-40.

Harris, Clay (1990),"The Food Industry - Financial Times Survey",Financial Times,March 5th, p. 13-17.

Harris, Clay (1991), "Carnivores Lose Ground", Financial Times, May 10th, p. III.

Harris, Robert G. and Mowrey, David C. (1990), " Strategies For Innovation: An Overview", California Management Review, Vol. 32, No. 3, Spring, p. 7-16.

Hart, Susan (1988),"The Causes Of Product Deletion In British Manufacturing Companies",Journal Of Marketing Management,Vol. 3, No. 3, Spring, p. 328-343.

Hart, Susan (1990-1991),"The Managerial Setting Of The Product Deletion Decision",Irish Marketing Review,Vol. 5, No. 3, p. 41-54.

Hart, Susan (1991),"New Product Triggers And Their Antecedents : An Empirical Analysis",EMAC - 1991 Annual Conference,21-23 May, p. 1098-1119.

Hart, Susan (1992),"Dimensions Of Success In New Product Development - An Exploratory Investigation",MEG Proceedings 1991 Annual Conference, p. 402-427.

Hart, Susan and Steenkamp, Jan-Benedict (1991), "New Product Triggers And Their Antecedents; An Empirical Analysis, EMAC 1991 Annual Conference, 21-23 May, p. 1098-1119.

Heany, Donald F. (1983), "Degrees Of Product Innovation",Journal Of Business Strategy,Vol. 3, No. 4, Spring, p. 3-14.

Heany, Donald F. and Vinson, William D. (1984),"A Fresh Look At New Product Development",Journal Of Business Strategy,Vol. 5, No. 2, Fall, p. 22-31.

Hedigan, David (1991) cited in "Food Industry Must Follow Market Demand", Sunday Business Post, April 28th, p. D5.

Heneghan, Grace (1991), "Irish Food Green, Lean And Clean", Irish Exporter. May, p. 17-18.

Henry, Maurice (1991), "US Food Industry A Trensetter",Food Ireland. May, p. 34.

Hill, Philip (1988), "Market Research Contribution To New Product Failure and Success",Journal Of Marketing Management.Vol. 3, No. 3, p. 269-277.

Hise, Richard T., O'Neal, Larry, Parasuraman, A. And McNeal, James U. (1990), "Marketing R&D Interaction In New Prod Development : Implications For New Product Success Rates",Journal Of ProductInnovation Management.Vol. 7, Issue 2, June, p. 142-155.

Hisrich, Robert D. And Peters, Michael P. (1984), Marketing Decisions For New And Mature Proudcts - Planning,Development And Control. Charles E. Merrill Publishing Company, Ohio.

Holmes, Professor A.W. (1991),The Food Industry Of The Future - A Personal View,Special Report By Leatherhead Food R.A., March, p. 1-24.

Hopkins, David S. (1980), "New Product Winners And Losers",Conference Board Report. No. 773, p. 2-34.

Hopkins, David S. And Bailey, Earl L. (1971),"New Product Pressures",The Conference Board Record.Vol. 8, June, p. 16-24.

Howley, Michael (1990), "Criteria For Success In New Prod Development For Consumer Goods",European Journal Of Marketing.Vol. 24, No. 4, p. 55-60.

I.D.A. (IRL.) (1987) A Future In Food - Strategy For The Food And Drink Industry 1988 - 1992,Report Prepared By The I.D.A. Ireland, Dublin, December.

Irish Exporter (1991), "Value Added Foods Can Win The Day", May, p. 19-20.

Irish Times (1988), "Food Industry Draws Criticism", February 27th, p. 6.

Johne, Axel (1986), "Substance V's Trappings In New Product Management",Journal Of Marketing Management.Vol. 1, Issue 3, Spring, p. 291-301.

Johne, Axel (1992),"New Style Product Development",1992 MEG Conference Papers.6-8 July, p. 428-437.

Johne, Axel (1993),"Managing Innovation In Services",Paper Presented At The S.I.M.R.U. Conference.April, p. 15-32.

Johne, Axel And Rowntree, Stephen (1991),"High Technology Product Development In Small Firms : A Challenge For Marketing Specialists",Technovation.Vol. 11, No. 4, p. 247-259.

Johne, Axel (1993),"Insurance Product Development : Managing The Changes, Paper Presented At The S.I.M.R.U. Conference, Cardiff Business School , April, p. 15-32.

Johne, Dr. F. A. (1985), Industrial Product Innovation Organisation And Management , Croom Helm, London.

Johne, F. Axel And Snelson, Patricia A. (1987),"Innovate Or Die",Management Today,November, p. 133-138.

Johne, F. Axel And Snelson, Patricia A. (1988), "Marketing's Role In Successful Product Development", Journal Of Marketing Management, Vol.3, Issue 3, Spring, p. 256-268.

Johne, F. Axel And Snelson, Patricia A. (1988),"Success Factors In Product Innovation - A Select Review Of The Literature", Journal Of Product Innovation Management, Vol. 5, No. 2, p. 114-128.

Johne, F. Axel And Snelson, Patricia A. (1989), "Product Development Approaches In Established Firms", Industrial Marketing Management, Vol.18, Issue 2, May, p.113-124.

Johne, F. Axel And Snelson, Patricia A. (1990), Successful Product Development - Management Practices In American And British Firms, Basil Blackwell Ltd., Oxford.

KAE Report (1989), cited in Cowan, Cathal, "Success In New Product Development", Proceedings Of The Agricultural Economics Society Of Ireland, 1989-1990, p. 1-30.

Kearney, Brendan (1992), "Agri-Food Industry Lacking Direction", Irish Times, 20th April, p. 7.

Kennard, R. B. (1991), "From Experience- Japanese Product Development Process", Journal Of Product Innovation Management, Vol. 8, p. 184-188.

Kinnear, Thomas C. And Taylor, James R. (1991), Marketing Research: An Applied Approach, 4th Edition, McGraw-Hill Inc., New York.

Kleinschmidt, E.J. (1991), "Differences In New Product Development For Industrial Firms Between West Germany And Canada : An Empirical Investigation", EMAC - 1991 Annual Conference, 21-23 May, p. 1121-1141.

Klompmaker, J., Hughes, G. David and Haley, R. (1976),"Test Marketing In New Product Development", Harvard Business Review, May/June, p. 128-138.

Kortge, G. Dean and Okonkwo, Patrick A. (1989), "Simultaneous New Product Development : Reducing The New Product Failure Rate", Industrial Marketing Management, Vol.18, No. 4, November, p. 301-306.

Kotler, Philip (1984), Marketing Management: Analysis, Planning And Control, 5th Edition, Prentice-Hall Inc., New Jersey.

Kotler, Philip (1986), Principles Of Marketing 3rd Edition, Prentice-Hall, New Jersey, 1986.

Kraushar, Peter M. (1977), New Products And Diversification, The Anchor Press Limited.

Kraushar, Peter (1985),"Which Way To Develop", Marketing, Vol. 22, No. 10, September, p. 23-25.

Krubasik, Edward G. (1988),"Customise Your Product Development", Harvard Business Review, Vol. 66, No. 6, November/December, p. 46-48.

Kuczmarski, Thomas D. (1992), Managing New Products - The Power Of Innovation, 2nd Ed., Prentice-Hall, New Jersey.

Kulvik, H. (1977), cited in Cooper, R.G. and Kleinschmidt, E.J., "New Products ; What Separates Winners From Losers", Journal Of Product Innovation Management, Vol. 4, No. 3, 1987, p. 169-184.

Larson, Erik W. And Gobeli, David H. (1988),"Organising For Product Development Projects", Journal Of Product Innovation Management,Vol. 5, p. 180-190.
Law, Kate (1992),"A Value Added Slice" ,Management, Vol. 39, No. 4, April, p. 44-46.

Lazaro, Colin (1991), "Fitting The Grill", Caterer And Hotelkeeper, July 11th, p. 76-77.
Levitt, Theodore (1966),"Innovative Imitation", Harvard Business Review,September /October, p. 63-70.

Lilien , Gary L. and Yoon, Eunsang (1989),"Determinants Of New Industrial Product Performance : A Strategic Reexamination Of The Empirical Literature", IEEE Transactions On Engineering Management ,Vol. 36, No. 1, February, p. 3-10.

Link, Peter L. (1987),"Keys To New Product Success And Failure", Industrial Marketing Management,Vol.16, p.109-118.

Littler, Dale (1984), Marketing And Product Development , Philip Allan Publishers Ltd., Oxford.

Lorenz, Andrew (1993),"Pasta With Lashings Of High-Tech Expertise", The Sunday Times, May 16th, p. 9.

Lorsch, Jay W. and Lawrence, Paul R. (1965), " Organising For Product Innovation", Harvard Business Review, Vol. 43, No. 1, January/February, p. 109-122.

Mabert, Vincent A., Muth, John F. and Schmenner, Roger W. (1992), "Collapsing New Product Development Times : Six Case Studies",Journal Of Product Innovation,Vol. 9, No. 3, p. 200-212.

MacConnell, Sean (1993), "Food, Glorious Food", The Irish Times. May 25th, p. 9.

Mahajan, Vijay and Wind, Jerry (1992), "New Product Models, Practice, Shortcomings and Desired Improvements", Journal Of Product Innovation Management,Vol. 9, No. 2, p. 128-139.

Maidique, M.A. and Zirger, B.J. (1982), cited in Maidique, Modesto A. And Zirger, Billie Jo,"A Model Of New Product Development : An Empirical Test", Management Science. Vol. 36, No. 7, July 1990, p. 867-883.

Maidique, Modesto A. And Zirger, Billie Jo (1984),"A Study Of Success And Failure In Product Innovation: The Case Of The U.S. Electronics Industry", IEEE Transactions On Engineering Management ,Vol. EM-31,No.4, November, p.192-203.

Maidique, M.A. and Zirger, B.J. (1985), "The New Product Learning Cycle", Research Report Series. Innovation And Entrepreneurship Institute, School Of Business Administration, University Of Miami, February, p. 85-101.

Maidique, Modesto A. And Zirger, Billie Jo (1990),"A Model Of New Product Development : An Empirical Test", Management Science, Vol. 36, No. 7, July, p. 872.

Mansfield, Edwin (1981),"How Economists See R&D", Harvard Business Review, November/December, p. 98-106.

Market Opportunities (1992), Irish Trade Board, p. 1-157.

Market Research Europe (1990),"Pasta In Europe", Vol. 22, March, p. 1-8.

Market Research Europe (1992),"Frozen Foods", Vol. 24, February, p. 1-23.

Marketing Success(1990), "Why Research", The Chartered Institute Of Marketing, p. 2.
Marquis, Donald G. (1981),"The Anatomy Of Successful Innovations", Corporate Strategy And Product Innovation. 2nd Edition,Edited By Robert R. Rothberg, The Free Press, New York, p. 15-25.

Mayo, Nancy And Denison-Pender, Michael (1988),"Development Of And Demand For New Food And Drink Products",British Food Journal.Vol. 90, No. 5, p.205-210.

McCarrick, John (1991),"The Declining Volume Of Brand Dominance",Food Ireland, October, p. 3-4.

McDonald Wood, Ian (1988), "Innovation- A State Of Mind",Management Decision.Vol. 26, No. 4, p.17-24.

McDonnell, Alan (1986),"The Marketing Of Irish Products",Irish Marketing Journal.November, p. 12-13.

McDonnell, Pat (1991),"A Future For Agri-Food Research",Published By Teagasc, April-June, p. 3-12.

McIntyre, Bridin and Pitts, Eamonn (1993), "The Facts About Food", Checkout Yearbook And Buyer's Guide, p. 2-18.

McTavish, Ronald (1984),"Approaching The New Product Organisation Problem", European Journal Of Marketing.Vol. 18, No. 6/7, p. 30-42.

Merrins, Michael (1989-1990),"Competing In The Frozen Foods Market From An Irish Base", Proceedings Of The Agricultural Economics Society Of Ireland. p. 78-87.

Miaoulis, George and LaPlaca, Peter (1982),"A Systems Approach For Developing High Technology Products",Industrial Marketing Management.Vol.11, p. 253-262.

Midgley, David F. (1977), Innovation And New Product Marketing ,Croom Helm, London.

Millson, Murray R., Raj, S.P. and Wilemon, David (1992),"A Survey Of Major Approaches For Accelerating New Product Development", Journal Of Product Innovation.Vol. 9, No. 1, p. 53-69.

Moorcroft, Sheila (1987), "Lifestyle And Values : The European Dimension", Admap, May, p. 27-31.

Moore, Richard A. (1984), "Control Of New Product Development In U.K. Companies", European Journal Of Marketing.Vol. 18, No. 6/7, p. 5 -13.

Moore, William L. (1987),"New Product Development Practices Of Industrial Marketers", Journal Of Product Innovation Management.Vol. 4, p. 6-20.

Morden, Tony (1989),"Innovation - Sources and Strategies", Management Decision.Vol. 27, No.1, p. 22-29.
Morgan, Rory and Godfrey, Simon (1985),"The Role Of Pricing Research In New Product Development", Market Research Society. 28th Annual Conference, Conference Papers, March 19-22, p. 235-246.

Moriarty, Paddy (1992),"Encouraging The Development Of New Products", Business And Finance, October, p. 3-5.

Myers, S. and Marquis, D.G. (1969), cited in Maidique, Modesto A. And Zirger, Billie Jo,"A Study Of Success And Failure In Product Innovation: The Case Of The U.S. Electronics Industry", IEEE Transactions On Engineering Management.Vol. EM-31, No.4, November 1984, p.192-203.

National Industrial Conference Board (1964), "Why New Products Fail", The Conference Board Record, October, p.11-18.

Nayak, P. Ranganath (1992),"Measuring Product Creation Effectiveness", Journal Of Business Strategy, Vol. 13, No. 6, November/December, p. 48-52.

NESC Report (1989) cited in Cowan, Cathal, "Success In New Product Development",Proceedings Of The Agricultural Economics Society Of Ireland,1989-1990, p. 1-30.

Nickolaus, Nicholas (1990),"Marketing New Products With Industrial Distributors", Industrial Marketing Management.Vol. 19 p. 287-299.

Nystrom, Harry (1985), "Product Development Strategy : An Integration Of Technology And Marketing", Journal Of Product Innovation Management.Vol. 2, p. 25-33.

O'Connell, Dr. John (1987), "Too Ready To Give Up ?", Irish Independent.December 15th, p. 9.

O'Connell, Siobhan (1992), "Food Industry Must Develop New European Markets To Ensure Future", Sunday Business Post, June 7th,p. 30-31.

O'Connor, Stephen (1992), "New Products, New Markets, New Jobs", Business And Finance.October, p. 12-16.

O'Connor, Stephen (1990), "The Way Forward For Food Marketing", Irish Marketing Journal.May, p. 12-16.

O'Meara Jr., John T. (1961), "Selecting Profitable Profits", Harvard Business Review.Vol. 39, No.1, January/February, p. 83-89.

O'Meara, Annette (1992), "Opportunity Or Threat", Management.Vol. 39, No. 4, April, p. 51-53.

O'Neill (1988), cited in Cowan, Cathal, "Success In New Product Development",Proceedings Of The Agricultural Economics Society Of Ireland,1989-1990, p. 29.

O'Neill, John (1990), "Pasta Sales Spiralling Up ! ", Checkout, May, p. 26-27.

O'Neill, Patrick A. (1991), "Development Of The Food Industry In Ireland", Food Ireland, November, p. 17-18.

O'Neill, F. And Shanahan, U. (1991), "Are People Worried About Food Quality", Farm And Food, April/June, p.11.

O'Reilly, Dr. A.J.F. (1993), "Irish Food Industry", Farming Independent.
May 18th, p.12.

O'Reilly, Tony (1988), "Marketing Ireland Internationally", Irish Marketing Journal, June, p. 6-7.

O'Reilly, Tony (1992) cited in Dillon, Frank, "Staying Competitive", Management. Vol. 39, No.4, April, p. 15-21.

O'Shaughnessy, Rosamund (1983), Qualitative Market Research. Eukon Associates, p.1-4.

O'Sullivan, Brendan and Tomlin, Breffni (1985),"Innovation In Established Irish Industry", Journal Of Irish Business And Administrative Research. Vol. 7, No. 1, Spring, p. 57-78.

PA Consulting Group (1992), "The Food Industry, A Time For Change : Industrial Policy For The 1990's,"A Report By PA Consulting Group To The Indusrial Policy Review Group, Dublin, p. 1-104.

Pearson, Jill (1990), "Innovation Abounds", Financial Times, March, p. 15.

Peters, T. (1990), "Get Innovative Or Get Dead", California Management Review. Part 1, Vol. 33, Issue 1, p. 9-26.

Peters, T. (1991),"Get Innovative Or Get Dead", California Management Review. Part 2, Vol. 33, No. 2, Winter, p. 9-23.

Petroni, Giorgio (1991), "New Directions For Food Research", Long Range Planning.Vol. 24, No. 1, p. 40-51.

Pettit, Linda (1991),"UK's Unhealthy Appetite", Caterer and Housekeeper.November 7th, p. 81.

Pitts, Eamonn (1989-1990),"1992 And The Food Industry", Proceedings Of The Agricultural Economics Society Of Ireland. p. 229-245.

Programme For Industrial Development. "Promoting Development And Structural Adjustment In Ireland Under The Community Support Framework", Stationery Office, Dublin, 1991, p. 1-285.

Quinn, Fergal (1986), "New Product Dilemmas", Todays Grocer. November, p. 67.

Ramanujam, Vasudevan And Mensch, Gerhard O. (1985), "Improving The Strategy-Innovation Link", Journal Of Product Innovation Management. Vol. 4, p. 213-223.

Retail Monitor International (1991). "Future Strategies In European Food Retailing", Vol. 3, September, p. 47-62.

Retail News (1992),"CPC Foods - 60 Years At The Top", February, p. 15-17.

Retail News (1992), "Good Refrigeration Units Can Grow Frozen Sales", June, p. 22.

Retail News (1992),"Continued Growth In UK Chilled Foods Sector", July/August, p. 4.

Retail News (1992), "Growth Markets - What Will Be Big In 1993", December/January, p. 19-21.

Roberts, R.W. and Burke, J.E. (1974), cited in Cooper, Robert G.,"A Process Model For Industrial New Product Development",IEEE Transactions On Engineering Management. Vol. EM-30, No. 1, February 1983, p. 2-11.

Roberts, R. W. And Burke, J. E. (1974), "Six New Products - What Made Them Successful?", Research Management.Vol. 16, p. 21-24.

Robertson (1967) cited in Hisrich, Robert D. And Peters, Michael P., Marketing Decisions For New And Mature Proudcts - Planning,Development And Control. Charles E. Merrill Publishing Company, Ohio,1984.

Robson, Andrew (1989-1990),"Trends in Food Retailing in Britain and Ireland", Proceedings Of The Agricultural Economics Society Of Ireland. p. 30-77.

Rosenau Jr., Milton D. (1989),"Speeding Your New Product To Market", IEEE Engineering Management Review. Vol. 17, No. 3, September, p. 27-40.

Rothberg, Robert R. (1981), "Product Innovation In Perspective", Corporate Strategy And Product Innovation. 2nd Edition, Edited By Robert R. Rothberg, The Free Press, New York, p. 3-13.

Rothwell, R. (1976), cited in Cooper, Robert G.,Winning At New Products.Addison-Wesley Publishing Co. Inc., Massachusetts,1986, p. 26.

Rothwell, R., Freeman, C., Horsley, A., Jervis, V.T.P., Robertson, A.B. and Townsend, J. (1974), "SAPPHO Updated- Project SAPPHO Phase II", Research Policy,Vol. 3, p. 258-291.

Rubenstein, A.H., Chakrabarti, A.K., O'Keefe, R.D., Souder, W.E. and Young, H.C. (1976), "Factors Influencing Innovation Success At The Project Level ", Research Management,Vol. 16, p. 15-20.

Sampson (1970) cited in Goulding, Ian,"New Product Development - A Literature Review",Management Bibliographies.Vol. 9, No. 1, 1983, p. 3-30.

Sands, Saul (1983), "Problems Of Organising For Effective New Product Development", European Journal Of Marketing, Vol. 17, No. 4, p. 18-33.

Saunders, John and Wong, Veronica (1985),"In Search Of Excellence In The U.K.",Journal Of Marketing Management,Vol.1, Issue 2, p. 119-137.

Schalinski, Joachim (1991), "Green Theme Should Be Kernel Of Your Policy", Food Ireland, May, p. 34.

Schlossberg, Howard (1991),"Innovations An Elusive Commodity With Many Definitions", Marketing News.Vol. 25, Issue 8 , April 15, p. 11.

Schrage, Michael (1989),"Innovation And Applied Failure",Harvard Business Review,November/December, p. 42-47.

Sedgwick, Lindsay (1993),"Losing The Brand Game", Management.Vol. 40, No. 6, June, p. 8-11.

Shanahan, Ella (1988a),"Trend Is Towards Health Foods", Irish Times, March 31st, p. 7.

Shanahan, Ella (1988b),"Firms Urged To Compete In British Grocery Market", Irish Times, November 2nd, p. 7.

Shanahan, Ella (1987),"How Food Industry Can Cope With Changing Tastes", Irish Times. October 12th, p. 6.

Shipley, David, Edgett, Scott and Forbes, Giles (1991),"New Product Success Rates Among British And Japanese Companies", EMAC 1991 Annual Conference,21-23 May, p. 1161-1174.

Skinner, Richard (1984),"New Industrial Products - The Marketing Input", in Marketing Of Industrial Products. edited by Norman A. Hart, 2nd Ed., McGraw-Hill Book Co. (U.K.) Ltd., London.

Slone, Reuben E. (1991),"Shortening Product Lead Time", Computer Aided Engineering,Vol.10, March, p. 73-74.

Smale, John (1985),"Behind The Brands At P&G", Harvard Business Review,Vol. 63 , No. 2, November/December, p. 79-90.

Sowrey, Dr. Trevor (1989),"New Product Development : A Literature Review", Quarterly Review of Marketing,Vol.14, No. 3, Spring, p.10-13.

Sowrey, Trevor (1987), The Generation Of Ideas For New Products , Kogan Page Ltd, Great Britain.

Sunday Business Post (1992), "Food Firms Need To Consolidate In Ireland", April 26, p. 4.

Sunday Business Post (1993), "Pizza And Pasta Opportunities For Irish", May 23rd, p. 20.

Takeuchi, Hirotaka and Nonaka, Ikujiro (1986),"The New Product Development Game", Harvard Business Review,Vol. 64 , No. 1, January/February, p. 137-146.

The Grocer (1992), "Product Launches Fall, But Some Sectors Keep Rising", May, p. 9.

The Irish Trade Board (1991), Food And Drink Products Export Directory, Report Prepared By The Irish Trade Board, Food Ireland, p. 1-112.

Today's Grocer (1990) "Veni, Vidi, Vici, Says Ragu", April, p. 22.

Today's Grocer (1991),"Clayton Love Celebrates Twenty-five Successful Years," February/March, p. 2-4.

Today's Grocer (1991),"Dunnes Changes Direction For The Nineties", June, p. 3.

Today's Grocer (1991),"EC Markets To Grow Over Next Four Years", August, p. 6.

Townsend, J.F. (1976), cited in Kleinschmidt, E.J., "Differences In New Product Development For Industrial Firms Between West Germany And Canada : An Empirical Investigation",EMAC - 1991 Annual Conference. 21-23 May, 1991, p. 1121-1141.

Tull, Donald S. And Hawkins, Del I. (1987), Marketing Research: Measurement And Method, 4th Edition, Macmillan Publishing Company, New York.

Tushman, Michael and Nadler, David (1986), "Organising For Innovation", California Management Review, Vol. 28, No. 3, Spring, p. 74-92.

Tyrell, Bob (1990),"The Green Factor", Irish Marketing Journal,March, p. 16-17.

Ulster Grocer (1992),"Convenience Foods For Today's Lifestyle",Vol. 21, No. 9, September, p. 23-32.

Urban, Glen L. And Hauser, John R. (1980), "Design And Marketing Of New Products",Prentice-Hall. New Jersey.

Urban, Glen L., Hauser, John R. And Dholakia, Nikhilesh (1987), Essentials Of New Product Management, Prentice-Hall, New Jersey.

Uttal, Bro (1987),"Speeding New Ideas To Market", Fortune.Vol. 115, No. 5, March 2, p. 54-57.

Utterback, J.M. (1985) cited in Johne, Dr. F. A., Industrial Product Innovation Organisation And Management. Croom Helm, London.

Utterback, J.M. and Abernathy, W.J. (1975), "A Dynamic Model Of Process And Product Innovation", Omega.Vol. 3, No. 6, p. 639-656 .

Utterback, J.M., Allan, T.J., Holloman, J.H. and Sirbu, M.J. (1976), cited in Kleinschmidt, E.J., "Differences In New Product Development For Industrial Firms Between West Germany And Canada : An Empirical Investigation", EMAC - 1991 Annual Conference, 21-23 May, p. 1121-1141.

Vesey, Joseph T. (1991),"The New Competitors : They Think In Terms Of 'Speed-To-Market'", IEEE Engineering Management Review.Vol. 19, No. 4, Winter, p. 12-17.

Voss, C. A. (1985) cited in Lilien , Gary L. and Yoon, Eunsang,"Determinants Of New Industrial Product Performance : A Strategic Reexamination Of The Empirical Literature", IEEE Transactions On Engineering Management ,Vol. 36, No. 1, February 1989, p. 3-10.

Walsh, Joe (1991a) cited in "Value Added Foods Can Win The Day", Irish Export, May, p.19-20.

Walsh, Joe (1991b) cited in Kelly, Dermot and O'Regan, Michael, "Food Firms Record On R&D Criticised", Irish Times, November 9th, p. 7.

Walsh, Joe (1992) cited in O'Connell, Siobhan, "Quality Of Produce Is Key To Growth", Sunday Business Post, June 7th, p.31.

Walsh, William J. (1990), "Get The Whole Organisation Behind New Product Development", Research Technology Management.Vol. 33, Issue 6, November/December, p. 32-36.

Wentz, Walter B. (1985), Marketing Research, Management Methods And Cases, Harper and Raw, 2nd Ed., p. 357.

West, Alan (1992), Innovation Strategy, Prentice-Hall International (U.K.) Ltd., Great Britain.

Wheelwright, Stephen and Clark, Kim B. (1992),"Creating Project Plans To Focus Product Development", Harvard Business Review, March/April, p. 70-82.

Williams, J. (1986), "The Generation Of Ideas - Paper To New Product Development Seminar", Todays Grocer, November, p. 64-67.

Wind, Jerry and Mahajan, Vijay (1987), "Marketing Hype- A New Perspective For New Product Research And Introduction", Journal Of Product Innovation Management.Vol. 14, p. 43-49.

Wood, Lisa (1990), "Competition Intensifies", Financial Times, March,p. 14.

Wood, Lisa (1988), "Low Fat, High Fibre, With Fewer E's", Financial Times,February 1st, p. 16.

Workman, Richard (1992) cited in "The Convenience Food Myth", Food Ireland. November/December, p. 17.

Zirger, Billie Jo and Maidique, Modesto A. (1990), "A Model Of New Product Development : An Empirical Test ", Management Science. Vol. 36, No. 7, July, p. 867-883.

Appendix A

	1972	1977	1982	1987
Bel/Lux	9	9	10	9
Denmark	33	31	30	26
Germany	5	4	5	4
Greece	40	25	22	21
Spain	26	16	13	14
France	18	11	13	11
Ireland	44	38	27	25
Italy	7	6	6	5
Netherlands	27	19	18	18
Portugal	13	8	5	4
U.K.	5	4	4	5

Table 1.1 Food Exports as % of Total Exports

Source: Europen, 1989.

	A	B	C	D
Denmark	19.5	37.2	173.7	22.6
Germany	6.0	11.8	170.7	6.3
France	9.0	16.3	180.9	10.6
Ireland	23.6	44.0	183.1	9.1
Italy	7.0	14.3	184.6	9.1
Luxemburg	6.6	8.6	140.5	5.6
Netherlands	16.8	26.6	225.0	17.4
U.K.	10.6	19.3	132.5	13.6

A- Employment as % of total number employed in manufacturing

B - Turnover as % of total turnover of manufacturing Industries

C - Turnover per person employed (ECU)

D - Gross value added in the food and drink industry at factor cost as % of total gross value added in manufacturing

Table 1.2 Comparison of Food and Drink Industries In Some Countries for 1985

Source: Europen, 1989.

Appendix B

Questionnaire : Manufacturer

Types Of New Products

Q.1a The following is a list of different types of new products.
Please indicate how many of each type the company has launched over the past five years and how many were successful?

Type of New Product	Amount Launched	Amount Successful	Amount Unsuccessful
New to the world products			
New product lines			
Additions to existing product lines			
Improvements in/ revisions to existing products			
Repositionings			
Cost reductions			

Q.1b Overall, which type was most successful and which type was most unsuccessful ?

Successful _____ Unsuccessful _____

Q.2 How many of each new product does the company plan to introduce over the next five years ?

Type of New Product	Plan To Introduce
New to the world products	
New product lines	
Additions to existing product lines	
Improvements in/ revisions to existing products	
Repositionings	
Cost reductions	

Q.3 Please indicate the most important strategic role the following types of products were expected to play ?

	Successful	Unsuccessful
Externally driven (market requirements)		
1. Increase market share	☐	☐
2. Defend market share position	☐	☐
3. Establish a foothold in the new market	☐	☐
4. Preempt market segment	☐	☐
5. Other, please state _____	☐	☐
Internally Driven (company requirements)		
6. Maintain position as product innovator	☐	☐
7. Exploit technology in new way	☐	☐
8. Capitalise on distribution strengths	☐	☐
9. Use excess or off season capacity	☐	☐
10. Other, please state _____	☐	☐

Q.4a What percentage of total company sales were generated by new products ? _____

Q.4b What percentage of total company profits were generated by new products ? _____

Expenditure on New Products

Q.5 Has the cost of introducing new products increased or decreased over the past five years ?

Increased ☐ Decreased ☐

Measurement Criteria for New Products

Q.6 Which of the following criteria are used to measure new products ? :-

Profit contribution	☐
Return on investment	☐
Sales volume	☐
Payback period	☐
Internal rate of return	☐
Net present value	☐
Other please state _____	☐

Q.7 What impact do you expect the following factors to have on the introduction of new products by your company (over the next five years?):-

Factors	Introduce More	Introduce Same	Introduce Fewer
Technology Advances	☐	☐	☐
Changing consumer needs	☐	☐	☐
Shortening product life cycles	☐	☐	☐
Increasing foreign market access	☐	☐	☐
Increasing foreign competition in Ireland	☐	☐	☐
Increasing labour costs	☐	☐	☐
Government regulations	☐	☐	☐
Increasing capital costs	☐	☐	☐

Internal Obstacles To New Product Development

Q.8 The following is a list of internal obstacles which may impede the successful introduction of new products. Please rate the likelihood of these impeding development in your company ? (On a scale of 1 - 4, where 1=very likely to impede, 4=very unlikely to impede).

	very likely to impede			very unlikely to impede
Management Orientation				
Lack of attention to new products	1	2	3	4
Emphasis on short-term profitability	1	2	3	4
Management Practices				
Inadequate market research	1	2	3	4
Lack of new product strategy	1	2	3	4
Lack of measurement criteria	1	2	3	4
Lack of proven analytical techniques	1	2	3	4
Organisation				
Delay in making decisions	1	2	3	4
Ineffective communication between functions and departments	1	2	3	4
Current organisational structure	1	2	3	4
Unclear assignment of ultimate new product responsibility	1	2	3	4
Excessive top management involvement in process details	1	2	3	4
Lack of general business skills among new product managers	1	2	3	4
Other, please specify _____	1	2	3	4

The New Product Process

Q.9 Does the company operate a formal or informal new product development process?

Formal Process ☐ Informal Process ☐

Q.10 Are the different stages carried out sequentially or are some of the stages carried out simultaneously ?

Sequential Process ☐ Simultaneous Process ☐

Q.11 Please indicate what percentage of total expenditures was allocated at each stage to the most successful product and the most unsuccessful product ?

	Most Successful	Most Unsuccessful
New product strategy development	_____	_____
Idea generation	_____	_____
Screening and evaluation	_____	_____
Business analysis	_____	_____
Development	_____	_____
Testing	_____	_____
Commercialisation	_____	_____

Q.12 Did the level of top management support vary at any stage in the process for either the successful and unsuccessful product?

Successful : Yes ☐ No ☐ Unsuccessful : Yes ☐ No ☐

Which stage(s) received the most or the least attention ? Most Attention _____ Least Attention _____

Q.13 How many new product ideas are usually considered when developing new products and how many new product ideas were considered for the most successful and unsuccessful new product ?

	Overall	Most Successful	Most Unsuccessful
Number of new product ideas	_____	_____	_____

Q.14a Has the number of new product ideas increased or decreased over the past five years?

Increased ☐ Decreased ☐

Q.14b What reasons have led to this increase/decrease ? _____

Q.14c Do you expect the number of new product ideas to increase or decrease over the next five years?

	Increase	Decrease
Overall	☐	☐

General - Strategic Planning

Q.15 Does the company have a strategic plan which includes developing new products? Yes☐ No☐

Q.16 Is the company committed to growth through new product development, as a strategic objective ? Yes☐ No☐

Q.17 Please tick the statement which describes the company's approach to growth ?

The company is committed to growing through :-

Internal new product development - own R&D department	☐
Contract new product development - hiring independent researchers/agencies	☐
Corporate acquisitions - buy other companies	☐
Patent acquisition - buy the right	☐
Licence acquisition - buy the licence	☐
Other, please specify _____	☐

New Product Strategy

Q.18 Does the company set specific strategic objectives for new products ? Yes ☐ No ☐

Q.19 Which of the following stages did the company complete when formulating new product strategy for both the successful and unsuccessful product ?

	Successful	Unsuccessful
Set corporate objectives and corporate strategy	☐	☐
Identify corporate growth role for new products	☐	☐
Scan external environment	☐	☐
Analyse industry	☐	☐
Assess new product experience	☐	☐
Assess internal capabilities	☐	☐
Appraise corporate culture	☐	☐
Appraise the product life cycle	☐	☐

New Product Structure and Style

Q.20 Please indicate which type of organisation structure exists in the company (for new product development) :-

Venture team e.g. free standing autonomous units	☐
New product department	☐
Functional (units) -part of existing planning,marketing, R&D or engineering departments	☐

Q.21 Is a product champion encouraged in the organisation ?
e.g. Someone to promote and shepherded the new product concept through the development stage/accept personal risk and made personal commitment. Yes ☐ No ☐

Q.22 Is there a senior new product manager in the company ? Yes ☐ No ☐

Q.23 Please rate the company's resources and skills relative to domestic competition in the following areas on a scale of +5 to -5, where +5=extremely good and -5=extremely bad :-

Financial resources	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
R&D resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Engineering resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Marketing Research resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Management resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Production resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Salesforce/distribution resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Advertising/promotion resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5

Number of Employees 1-10 ☐ 11-20 ☐ 21-50 ☐ 51-100 ☐ 101+ ☐

Mainline of Business Distributor ☐ Manufacturer ☐

Company Ownership Domestic☐ Domestic MNC☐ Foreign ☐ Foreign MNC☐

The following is a list of variables which may effect the outcome of new products, either successful or unsuccessful. Please indicate whether you agree agree or disagree (on the scale of 0 to 5 where 0= no affect, 1=strongly disagree and 5 = strongly agree) that the variable was present in relation to :-

a) a successful product launched in the past five years
b) a product which failed after launch in the past five years

	SUCCESSFUL	UNSUCCESSFUL
Product Advantage		
The product offered unique benefits to the customer, benefits not found in competitive products	0 1 2 3 4 5	0 1 2 3 4 5
The product was the first of its kind on the market	0 1 2 3 4 5	0 1 2 3 4 5
The product was designed/developed for worldwide use (v's local use)	0 1 2 3 4 5	0 1 2 3 4 5
The product required little change in attitudes and behaviour of users	0 1 2 3 4 5	0 1 2 3 4 5
There was a high acceptance of the new product in export/other markets	0 1 2 3 4 5	0 1 2 3 4 5
Market Potential		
The product was very important to the customer	0 1 2 3 4 5	0 1 2 3 4 5
A high proportion of the market was foreign	0 1 2 3 4 5	0 1 2 3 4 5
Customers were extremely satisfied with competitive products	0 1 2 3 4 5	0 1 2 3 4 5
Existence of potential demand only (no actual demand)	0 1 2 3 4 5	0 1 2 3 4 5
Customer's needs and wants for this product category change rapidly in the market	0 1 2 3 4 5	0 1 2 3 4 5
The government played a major role in the marketplace	0 1 2 3 4 5	0 1 2 3 4 5
Buyer's were very willing to try new products	0 1 2 3 4 5	0 1 2 3 4 5
Customers were very familiar with products in this category	0 1 2 3 4 5	0 1 2 3 4 5
Purchase frequency was high for this product category	0 1 2 3 4 5	0 1 2 3 4 5
Frequency of new product introductions in this market and product category was high	0 1 2 3 4 5	0 1 2 3 4 5
Market Competitiveness		
The competition in the marketplace was very intense	0 1 2 3 4 5	0 1 2 3 4 5
There were many competitors in the market	0 1 2 3 4 5	0 1 2 3 4 5
A dominant competitor existed in the marketplace	0 1 2 3 4 5	0 1 2 3 4 5
There was a high degree of loyalty to competitor's product	0 1 2 3 4 5	0 1 2 3 4 5
Marketing Synergy -there was a good fit between the needs of the project and...		
the salesforce/distribution system of the firm	0 1 2 3 4 5	0 1 2 3 4 5
the firm's advertising and promotion resources and skills	0 1 2 3 4 5	0 1 2 3 4 5
the firm's market research skills and resources	0 1 2 3 4 5	0 1 2 3 4 5
the firm's management skills and resources	0 1 2 3 4 5	0 1 2 3 4 5
Technological Synergy -there was a good fit between the needs of the project and		
the firm's R&D or product development skills and resources	0 1 2 3 4 5	0 1 2 3 4 5
the firm's engineering skills and resources	0 1 2 3 4 5	0 1 2 3 4 5
the firm's production skills and resources	0 1 2 3 4 5	0 1 2 3 4 5
Protocol - prior to product development ...		
the target market was well defined	0 1 2 3 4 5	0 1 2 3 4 5
the customer's needs,wants and preferences were well defined	0 1 2 3 4 5	0 1 2 3 4 5
the product concept was well defined	0 1 2 3 4 5	0 1 2 3 4 5
the product specifications and requirements were well defined	0 1 2 3 4 5	0 1 2 3 4 5
Proficiency of Predevelopment Activities -the following stages were carried out proficiently		
Idea Generation	0 1 2 3 4 5	0 1 2 3 4 5
Initial screening	0 1 2 3 4 5	0 1 2 3 4 5
Preliminary market assessment	0 1 2 3 4 5	0 1 2 3 4 5
Preliminary technical assessment	0 1 2 3 4 5	0 1 2 3 4 5
Detailed market study/ marketing research	0 1 2 3 4 5	0 1 2 3 4 5
Business/ financial analysis	0 1 2 3 4 5	0 1 2 3 4 5
Proficiency of Market Related Activities -the following activities were carried out proficiently		
Preliminary market assessment	0 1 2 3 4 5	0 1 2 3 4 5
Detailed market study/marketing research	0 1 2 3 4 5	0 1 2 3 4 5
Customer test of prototype or sample	0 1 2 3 4 5	0 1 2 3 4 5
Trial selling/test market	0 1 2 3 4 5	0 1 2 3 4 5
Market Launch	0 1 2 3 4 5	0 1 2 3 4 5
Proficiency of technological activities -the following activities were carried out proficiently		
Preliminary technical assessment	0 1 2 3 4 5	0 1 2 3 4 5
Product development	0 1 2 3 4 5	0 1 2 3 4 5
In-house testing of product (prototype)	0 1 2 3 4 5	0 1 2 3 4 5
Trial/pilot production	0 1 2 3 4 5	0 1 2 3 4 5
Production start up	0 1 2 3 4 5	0 1 2 3 4 5
There were technical problems in product and production design	0 1 2 3 4 5	0 1 2 3 4 5
Top Management Support		
There was a high level of top management support for the project	0 1 2 3 4 5	0 1 2 3 4 5
Top management was very involved in the day-to-day management of the project	0 1 2 3 4 5	0 1 2 3 4 5
Top management initiated the project	0 1 2 3 4 5	0 1 2 3 4 5
The management team consisted of senior managers with high levels of authority	0 1 2 3 4 5	0 1 2 3 4 5
Management had a high risk taking attitude	0 1 2 3 4 5	0 1 2 3 4 5

	SUCCESSFUL						UNSUCCESSFUL					
Firm Characteristics - Finance												
The firm had adequate financial resources for the project	0	1	2	3	4	5	0	1	2	3	4	5
The product yields a high contribution margin to the firm	0	1	2	3	4	5	0	1	2	3	4	5
There was an unexpected high product cost	0	1	2	3	4	5	0	1	2	3	4	5
Relative magnitude of investment in the project was large	0	1	2	3	4	5	0	1	2	3	4	5
Firm Characteristics - Marketing Mix												
Distribution channel gave a lot of support for the new product	0	1	2	3	4	5	0	1	2	3	4	5
There was a good stock cover for the product	0	1	2	3	4	5	0	1	2	3	4	5
Adequate salesforce training and effort were used	0	1	2	3	4	5	0	1	2	3	4	5
Adequate promotion and advertising effort were used	0	1	2	3	4	5	0	1	2	3	4	5
Appropriate pricing strategies were used	0	1	2	3	4	5	0	1	2	3	4	5
Organisation Structure & Style / Human Resources												
A technical champion managed the new product very well	0	1	2	3	4	5	0	1	2	3	4	5
A dedicated and strong product advocate managed the new product very well	0	1	2	3	4	5	0	1	2	3	4	5
Internal communication in the company was effective	0	1	2	3	4	5	0	1	2	3	4	5
R&D manufacturing - marketing functions were well interfaced and coordinated	0	1	2	3	4	5	0	1	2	3	4	5
A high level of company resources were devoted to the new product project	0	1	2	3	4	5	0	1	2	3	4	5
The project was clearly planned with goals and objectives established	0	1	2	3	4	5	0	1	2	3	4	5
Enthusiasm crowded on facts throughout the entire development process	0	1	2	3	4	5	0	1	2	3	4	5
Company politics affected the way the new product process was carried out	0	1	2	3	4	5	0	1	2	3	4	5
The product met management's original expectations for it in all important respects	0	1	2	3	4	5	0	1	2	3	4	5

Questionnaire : Distributor

Q.1a The following is a list of different types of new products.
Please indicate how many of each type the company has launched over the past five years and how many were successful?

Type of New Product	Amount Launched	Amount Successful	Amount Unsuccessful
New to the world products			
New product lines			
Additions to existing product lines			
Improvements in/ revisions to existing products			
Repositionings			
Cost reductions			

Q.1b Overall, which type was most successful and which type was most unsuccessful ?

Successful _____ Unsuccessful _____

Q.2 How many of each new product does the company plan to introduce over the next five years ?

Type of New Product	Plan To Introduce
New to the world products	
New product lines	
Additions to existing product lines	
Improvements in/ revisions to existing products	
Repositionings	
Cost reductions	

Q.3 Please indicate the most important strategic role the following types of products were expected to play ?

	Successful	Unsuccessful
Externally driven (market requirements)		
1. Increase market share	☐	☐
2. Defend market share position	☐	☐
3. Establish a foothold in the new market	☐	☐
4. Strengthen position with key supplier	☐	☐
5. Other, please state _____	☐	☐
Internally Driven (company requirements)		
6. Maintain position as product innovator	☐	☐
7. Capitalise on distribution strengths	☐	☐
8. Other, please state _____	☐	☐

Q.4a What percentage of total company sales were generated by new products ? _____

Q.4b What percentage of total company profits were generated by new products ? _____

Expenditure on New Products

Q.5 Has the cost of introducing new products increased or decreased over the past five years ?

Increased ☐ Decreased ☐

Measurement Criteria for New Products

Q.6 Which of the following criteria are used to measure new products ? :-

- Profit contribution ☐
- Return on investment ☐
- Sales volume ☐
- Payback period ☐
- Internal rate of return ☐
- Net present value ☐
- Other please state _____ ☐

Q.7 What impact do you expect the following factors to have on the introduction of new products by your company (over the next five years?):-

Factors	Introduce More	Introduce Same	Introduce Fewer
Technology Advances	☐	☐	☐
Changing consumer needs	☐	☐	☐
Shortening product life cycles	☐	☐	☐
Increasing foreign market access	☐	☐	☐
Increasing foreign competition in Ireland	☐	☐	☐
Increasing labour costs	☐	☐	☐
Government regulations	☐	☐	☐
Increasing capital costs	☐	☐	☐

Internal Obstacles To New Product Development

Q.8 The following is a list of internal obstacles which may impede the successful introduction of new products. Please rate the likelihood of these in your company ? (On a scale of 1 - 4, where 1=very likely to impede, 4=very unlikely to impede).

	very likely to impede			very unlikely to impede
Management Orientation				
Lack of attention to new products	1	2	3	4
Emphasis on short-term profitability	1	2	3	4
Management Practices				
Inadequate market research	1	2	3	4
Lack of new product strategy	1	2	3	4
Lack of measurement criteria	1	2	3	4
Lack of proven analytical techniques	1	2	3	4
Organisation				
Delay in making decisions	1	2	3	4
Ineffective communication between functions and departments	1	2	3	4
Current organisational structure	1	2	3	4
Unclear assignment of ultimate new product responsibility	1	2	3	4
Loyalty to established manufacturers	1	2	3	4
Lack of general business skills among new product managers	1	2	3	4
Other, please specify _____	1	2	3	4

The New Product Process

Q.9 Does the company operate a formal or informal process when considering the distribution of new products ?

Formal Process ☐ Informal Process ☐

Q.10 Are the different stages carried out sequentially or are some of the stages carried out simultaneously ?

Sequential Process ☐ Simultaneous Process ☐

Q.11 Please indicate what percentage of total expenditures was allocated at each stage to the most successful product and the most unsuccessful product ?

	Most Successful	Most Unsuccessful
New product strategy development	_____	_____
Idea Generation	_____	_____
Screening and evaluation	_____	_____
Business analysis	_____	_____
Development	_____	_____
Testing	_____	_____
Commercialisation	_____	_____

Q.12 Have you ever been involved in any of the following activities with the manufacturer's ?

Idea Generation	Yes	☐	No	☐
Screening and Evaluation	Yes	☐	No	☐
Business Analysis	Yes	☐	No	☐
Development	Yes	☐	No	☐
Testing	Yes	☐	No	☐
Commercialisation	Yes	☐	No	☐

Q.13 How many new product ideas are usually considered when distributing new products and how many new product ideas were considered for the most successful and unsuccessful new product ?

	Overall	Most Successful	Most Unsuccessful
Number of new product ideas	_____	_____	_____

Q.14a Has the number of new product ideas considered, increased or decreased over the past five years?

	Increased	Decreased
Overall	☐	☐

Q.14b What reasons have led to this increase/decrease ? _____

Q.14c Do you expect the number of new product ideas to increase or decrease over the next five years?

	Increase	Decrease
Overall	_____	_____

General - Strategic Planning

Q.15 Does the company have a strategic plan which includes distributing new products? Yes ☐ No ☐

New Product Strategy

Q.16 Does the company set specific strategic objectives for new products ? Yes ☐ No ☐

Q.17 Which of the following stages did the company complete when formulating new product strategy for both the successful and unsuccessful product ?

	Successful	Unsuccessful
Set corporate objectives and corporate strategy	☐	☐
Identify corporate growth role for new products	☐	☐
Scan external environment	☐	☐
Analyse industry	☐	☐
Assess new product experience	☐	☐
Assess internal capabilities	☐	☐

New Product Structure and Style

Q.18 Is there any increased emphasis on distributing new products ?

Yes ☐ No ☐

Q.19 Is there any particular person in the company who only distributes new products ?

Yes ☐ No ☐

Q.20 Do you carry out joint advertising and promotion with the manufacturer to help push the product?

Yes ☐ No ☐

Q.21 Please indicate the degree of exclusiveness of products distributed by the company ?

Exclusive - only carry one manufacturer's line of products in any product area ☐

Selective - carry similar products for a number of manufacturer's ☐

Complimentary - carry complimentary product lines only ☐

Q.22 Please rate the company's resources and skills relative to domestic competition in the following areas on a scale of +5 to -5, where +5=extremely good and -5=extremely bad :-

Financial resources	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Marketing Research skills and people	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Management skills and people	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Salesforce/distribution resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5
Advertising/promotion resources and skills	+5 +4 +3 +2 +1 0 -1 -2 -3 -4 -5

Number of Employees 1-10 ☐ 11-20 ☐ 21-50 ☐ 51-100 ☐ 101+ ☐

Mainline of Business Distributor ☐ Manufacturer ☐

Company Ownership Domestic ☐ Domestic MNC ☐ Foreign ☐ Foreign MNC ☐

The following is a list of variables which may effect the outcome of new products, either successful or unsuccessful. Please indicate whether you agree or disagree (on the scale of 0 to 5 where 0= no affect, 1=strongly disagree and 5 = strongly agree) that the variable was present in relation to :-

a) a successful product launched in the past five years
b) a product which failed after launch in the past five years

	SUCCESSFUL						UNSUCCESSFUL					
Product Advantage												
The product offered unique benefits to the customer, benefits not found in competitive products	0	1	2	3	4	5	0	1	2	3	4	5
The product was the first of its kind on the market	0	1	2	3	4	5	0	1	2	3	4	5
The product was designed/developed for worldwide use (v's local use)	0	1	2	3	4	5	0	1	2	3	4	5
The product required little change in attitudes and behaviour of users	0	1	2	3	4	5	0	1	2	3	4	5
There was a high acceptance of the new product in export/other markets	0	1	2	3	4	5	0	1	2	3	4	5
Market Potential												
The product was very important to the customer	0	1	2	3	4	5	0	1	2	3	4	5
A high proportion of the market was foreign	0	1	2	3	4	5	0	1	2	3	4	5
Customers were extremely satisfied with competitive products	0	1	2	3	4	5	0	1	2	3	4	5
Existence of potential demand only (no actual demand)	0	1	2	3	4	5	0	1	2	3	4	5
Customer's needs and wants for this product category change rapidly in the market	0	1	2	3	4	5	0	1	2	3	4	5
The government played a major role in the marketplace	0	1	2	3	4	5	0	1	2	3	4	5
Buyer's were very willing to try new products	0	1	2	3	4	5	0	1	2	3	4	5
Customers were very familiar with products in this category	0	1	2	3	4	5	0	1	2	3	4	5
Purchase frequency was high for this product category	0	1	2	3	4	5	0	1	2	3	4	5
Frequency of new product introductions in this market and product category was high	0	1	2	3	4	5	0	1	2	3	4	5
Market Competitiveness												
The competition in the marketplace was very intense	0	1	2	3	4	5	0	1	2	3	4	5
There were many competitors in the market	0	1	2	3	4	5	0	1	2	3	4	5
A dominant competitor existed in the marketplace	0	1	2	3	4	5	0	1	2	3	4	5
There was a high degree of loyalty to competitor's product	0	1	2	3	4	5	0	1	2	3	4	5
Marketing Synergy -there was a good fit between the new product and...												
the salesforce/distribution system of the firm	0	1	2	3	4	5	0	1	2	3	4	5
the firm's advertising and promotion resources and skills	0	1	2	3	4	5	0	1	2	3	4	5
the firm's market research skills and resources	0	1	2	3	4	5	0	1	2	3	4	5
the firm's management skills and resources	0	1	2	3	4	5	0	1	2	3	4	5
Product range synergy - there was a good fit between the new product and ...												
existing products being distributed by the firm	0	1	2	3	4	5	0	1	2	3	4	5
Protocol - prior to distributing the new product ...												
the target market was well defined	0	1	2	3	4	5	0	1	2	3	4	5
the customer's needs,wants and preferences were well defined	0	1	2	3	4	5	0	1	2	3	4	5
Proficiency of Predevelopment Activities -the company participated in the following activities with the manaufacturer												
Idea Generation	0	1	2	3	4	5	0	1	2	3	4	5
Initial screening	0	1	2	3	4	5	0	1	2	3	4	5
Preliminary market assessment	0	1	2	3	4	5	0	1	2	3	4	5
Preliminary technical assessment	0	1	2	3	4	5	0	1	2	3	4	5
Detailed market study/ marketing research	0	1	2	3	4	5	0	1	2	3	4	5
Business/ financial analysis	0	1	2	3	4	5	0	1	2	3	4	5
Proficiency of Market Related Activities -the following activities were carried out proficiently												
Customer test of prototype or sample	0	1	2	3	4	5	0	1	2	3	4	5
Trial selling/test market	0	1	2	3	4	5	0	1	2	3	4	5
Market Launch	0	1	2	3	4	5	0	1	2	3	4	5
Distributor Support												
There was a high level of support for the new product	0	1	2	3	4	5	0	1	2	3	4	5
The distributor initiated the new product development	0	1	2	3	4	5	0	1	2	3	4	5
The company had a high risk taking attitude to new products	0	1	2	3	4	5	0	1	2	3	4	5
Firm Characteristics - Finance												
The product yields a high contribution margin to the firm	0	1	2	3	4	5	0	1	2	3	4	5
There was an unexpected high product cost	0	1	2	3	4	5	0	1	2	3	4	5
Relative magnitude of investment in the product was large	0	1	2	3	4	5	0	1	2	3	4	5
Firm Characteristics - Marketing Mix												
A lot of effort was placed on distributing the new product	0	1	2	3	4	5	0	1	2	3	4	5
There was a good stock cover for the product	0	1	2	3	4	5	0	1	2	3	4	5
Adequate salesforce training and effort were used	0	1	2	3	4	5	0	1	2	3	4	5
Adequate promotion and advertising effort were used	0	1	2	3	4	5	0	1	2	3	4	5
Appropriate pricing strategies were used	0	1	2	3	4	5	0	1	2	3	4	5

	SUCCESSFUL						UNSUCCESSFUL					
Organisation Structure & Style / Human Resources												
The sales rep. placed strong emphasis on distributing the product	0	1	2	3	4	5	0	1	2	3	4	5
A dedicated sales rep. distributed new products only	0	1	2	3	4	5	0	1	2	3	4	5
Communication between the company and the manufacturer was effective	0	1	2	3	4	5	0	1	2	3	4	5
A high level of company resources were devoted to the new product	0	1	2	3	4	5	0	1	2	3	4	5
The distribution of the new product was clearly planned with goals and objectives established	0	1	2	3	4	5	0	1	2	3	4	5
The product met management's original expectations for it in all important respects	0	1	2	3	4	5	0	1	2	3	4	5

Appendix C

Strategic Research & Development Programme

College of Marketing & Design. Telephone: 01-363000 (ext. 65). Fax: 01-740505.

Dear

I am undertaking research for a Master's degree in the area of new product development and would like you to participate in the research. My aim is to examine trends and patterns of performance in the Irish food industry over the past five years, with the intention of identifying factors relating to the success or failure of new products. Specifically, the research focuses on manufacturers and distributors operating on the Irish market.

Please be assured that all information received will be treated with the utmost confidentiality and any subsequent reporting of results will be stated generally and will not provide any company specific information. A summary of the survey results and conclusions will be available to you on request.

I am aware of how valuable your time is, but by participating in the research you will provide a valuable contribution to understanding the performance characteristics of this sector of the Irish food industry. Therefore, I would be delighted if you agree to participate in the research and hope that we can meet shortly.

I will contact you by telephone within the next few days. Thank you for taking the time to read this letter and for considering my request,

Yours sincerely,

Abigail Samuels

Post-Graduate Research Centre, C.O.M.A.D., 40 Mountjoy Square, Dublin 1.

Appendix D

Impact of Company Ownership on New Product Success and Failure:

Variable Name		Irish	Irish	
		SUCCESSFUL	UNSUCCESSFUL	Difference
PRODUCT ADVANTAGE		0	0	
Product Offered Unique Benefits To Customer		95	71	24
Product Was First Of Kind On Market		57	48	9
Product Was Developed For Worldwide Use		43	28.5	14.5
Product Required Little Change In Attitudes And Behaviours Of Users		76	57	19
High Acceptance Of New Product In Export/Other Markets		52	14	38
MARKET POTENTIAL		0	0	0
Product Was Very Important To Customer		76	38	38
High Proportion Of Market Was Foreign		48	33	15
Customers Were Extremely Satisfied With Competitive Products		38	57	-19
Existence Of Potential Demand Only		86	81	5
Customers Needs And Wants For This Product Category Change Rapidly		57	48	9
Government Played A Major Role In Marketplace		5	5	0
Buyers Were Very Willing To Try New Products		90	86	4
Customers Were Very Familiar With Products In This Category		71	52	19
Purchase Frequency Was High For This Product Category		100	19	81
Frequency Of New Product Introductions In This Market And Product C		48	24	24
MARKET COMPETITIVENESS		0	0	0
Competiton In The Marketplace Was Intense		57	62	-5
There Were Many Competitors In The Market		38	43	-5
A Dominant Competitor Existed In The Marketplace		29	67	-38
There Was A High Degree Of Loyalty To Competitor's Product		33	38	-5
MARKETING SYNERGY- There Was A Good Fit Between The Needs Of T		0	0	0
The Salesforce/Distribution System Of The Firm		90.5	90.5	0
The Firm's Advertising/Promotion Resources And Skills		67	67	0
The Firm's Market Research Skills And Resources		81	71.5	9.5
The Firm's Management Skills And Resources		100	95	5

*TECHNOLOGICAL SYNERGY- There Was A Good Fit Between The Neec	0	0	0
The Firm's R&D/Product Development Skills And Resources	75	50	25
The Firm's Engineering Skills And Resources	75	67	8
The Firm's Production Skills And Resources	92	75	17
**PRODUCT RANGE SYNERGY- There Was A Good Fit Between The Ne	0	0	0
The Existing Products Being Distributed By The Firm	100	78	22
PROTOCOL- Prior To Product Development...	0	0	0
Target Market Was Well Defined	90	76	14
Customer's Needs, Wants And Preferences Were Well Defined	86	57	29
*Product Concept Was Well Defined	100	83	17
*Product Specifications And Requirements Were Well Defined	100	75	25
PROFICIENCY OF PREDEVELOPMENT ACTIVITIES-The Following Stage	0	0	0
Idea Generation	62	48	14
Initial Screening	71	57	14
Preliminary Market Assessment	67	52	15
Preliminary Technical Assessment	52	38	14
Detailed Market Study/Marketing Research	57	48	9
Business/Financial Analysis	57	43	14
PROFICIENCY OF MARKET RELATED ACTIVITIES- The Following Stage	0	0	0
Customer Test Of Prototype Or Sample	76	62	14
Trial Selling/Test Market	38	24	14
Market Launch	81	57	24
*PROFICIENCY OF TECHNOLOGICAL ACTIVITIES- The Following Stage	0	0	0
Product Development	100	67	33
In-House Testing Of Product (Prototype)	100	92	8
Trial/Pilot Production	83	75	8
Production Start-Up	83	17	66
There Were Technical Problems In Product And Production Design	8	17	-9
*TOP MANAGEMENT SUPPORT	0	0	0

There Was A High Level Of Top Management Support For The Project	92	92	0
Top Management Were Very Involved In The Day-To-Day Management	92	75	17
Top Management Initiated The Project	83	75	8
Management Team Consisted Of Senior Managers With High Levels Of	58	50	8
Management Had High Risk Taking Attitude	58	58	0
**DISTRIBUTOR SUPPORT	0	0	0
There Was A High Level Of Support For The New Product	100	56	44
The Distributor Initiated The New Product Development	22	22	0
Company Had A High Risk Taking Attitude To New Products	33	33	0
FIRM CHARACTERISTICS-FINANCE	0	0	0
*Firm Had Adequate Financial Resources For The Project	67	58	9
Product Yields A High Contribution Margin To The Firm	90	38	52
*There Was An Unexpected High Product Cost	8	29	-21
Relative Magnitude Of Investment In The Project Was Large	48	29	19
FIRM CHARACTERISTICS-MARKETING MIX	0	0	0
*Distribution Channel Gave A Lot Of Support For The New Product	92	67	25
There Was A Good Stock Cover For The Product	95	90	5
Adequate Salesforce Training And Effort Were Used	90.5	86	4.5
Adequate Promotion And Advertising Effort Were Used	62	38	24
Appropriate Pricing Strategies Were Used	95	81	14
**A Lot Of Effort Was Placed On Distributing The New Product	100	89	11
ORGANISATION STRUCTURE AND STYLE	0	0	0
*A Technical Champion Managed The New Product Very Well	50	50	0
*A Dedicated And Strong Product Advocate Managed The New Product	50	50	0
*Internal Communication In The Company Was Effective	92	83	9
*R&D Manufacturing-Marketing Functions Were Well Interfaced And C	75	58	17
A High Level Of Company Resources Were Devoted To The New Produ	67	38	29
*The Project Was Clearly Planned With Goals And Objectives Establish	83	67	16
*Enthusiasm Crowded On Facts Throughout The Entire Development Pr	33	50	-17

*Company Politics Affected The Way The New Product Process Was C	25	25	0
**The Sales Rep. Placed Strong Emphasis On Distributing The Product	100	38	62
**A Dedicated Sales Rep. Distributed New Products Only	0	0	0
**Communication Between The Company And The Manufacturer Was	89	78	11
**The Distribution Of The New Product Was Clearly Planned With Goal	78	78	0

Variable Name		Foreign	Foreign	
		SUCCESSFUL	UNSUCCESSFUL	Difference
PRODUCT ADVANTAGE		0	0	
Product Offered Unique Benefits To Customer		100	25	75
Product Was First Of Kind On Market		75	50	25
Product Was Developed For Worldwide Use		50	62.5	-12.5
Product Required Little Change In Attitudes And Behaviours Of Users		37.5	50	-12.5
High Acceptance Of New Product In Export/Other Markets		87.5	37.5	50
MARKET POTENTIAL		0	0	0
Product Was Very Important To Customer		50	12.5	37.5
High Proportion Of Market Was Foreign		62.5	50	12.5
Customers Were Extremely Satisfied With Competitive Products		25	62.5	-37.5
Existence Of Potential Demand Only		87.5	87.5	0
Customers Needs And Wants For This Product Category Change Rapidly		87.5	37.5	50
Government Played A Major Role In Marketplace		0	0	0
Buyers Were Very Willing To Try New Products		100	87.5	12.5
Customers Were Very Familiar With Products In This Category		25	62.5	-37.5
Purchase Frequency Was High For This Product Category		50	50	0
Frequency Of New Product Introductions In This Market And Product C		50	25	25
MARKET COMPETITIVENESS		0	0	0
Competiton In The Marketplace Was Intense		50	62.5	-12.5
There Were Many Competitors In The Market		62.5	62.5	0
A Dominant Competitor Existed In The Marketplace		50	87.5	-37.5
There Was A High Degree Of Loyalty To Competitor's Product		25	75	-50
MARKETING SYNERGY- There Was A Good Fit Between The Needs Of T		0	0	0
The Salesforce/Distribution System Of The Firm		100	87.5	12.5
The Firm's Advertising/Promotion Resources And Skills		100	87.5	12.5
The Firm's Market Research Skills And Resources		100	87.5	12.5
The Firm's Management Skills And Resources		100	87.5	12.5

*TECHNOLOGICAL SYNERGY- There Was A Good Fit Between The Need	0	0	0
The Firm's R&D/Product Development Skills And Resources	-	-	0
The Firm's Engineering Skills And Resources	-	-	0
The Firm's Production Skills And Resources	-	-	0
**PRODUCT RANGE SYNERGY- There Was A Good Fit Between The Ne	0	0	0
The Existing Products Being Distributed By The Firm	100	87.5	12.5
PROTOCOL- Prior To Product Development...	0	0	0
Target Market Was Well Defined	100	100	0
Customer's Needs, Wants And Preferences Were Well Defined	100	62.5	37.5
*Product Concept Was Well Defined	-	-	0
*Product Specifications And Requirements Were Well Defined	-	-	0
PROFICIENCY OF PREDEVELOPMENT ACTIVITIES-The Following Stage	0	0	0
Idea Generation	50	37.5	12.5
Initial Screening	37.5	25	12.5
Preliminary Market Assessment	50	37.5	12.5
Preliminary Technical Assessment	12.5	12.5	0
Detailed Market Study/Marketing Research	50	50	0
Business/Financial Analysis	50	50	0
PROFICIENCY OF MARKET RELATED ACTIVITIES- The Following Stage	0	0	0
Customer Test Of Prototype Or Sample	75	62.5	12.5
Trial Selling/Test Market	25	25	0
Market Launch	87.5	75	12.5
*PROFICIENCY OF TECHNOLOGICAL ACTIVITIES- The Following Stage	0	0	0
Product Development	-	-	0
In-House Testing Of Product (Prototype)	-	-	0
Trial/Pilot Production	-	-	0
Production Start-Up	-	-	0
There Were Technical Problems In Product And Production Design	-	-	0
*TOP MANAGEMENT SUPPORT	0	0	0

There Was A High Level Of Top Management Support For The Project	-	-	0
Top Management Were Very Involved In The Day-To-Day Management	-	-	0
Top Management Initiated The Project	-	-	0
Management Team Consisted Of Senior Managers With High Levels Of	-	-	0
Management Had High Risk Taking Attitude	-	-	0
**DISTRIBUTOR SUPPORT	0	0	0
There Was A High Level Of Support For The New Product	75	62.5	12.5
The Distributor Initiated The New Product Development	25	25	0
Company Had A High Risk Taking Attitude To New Products	25	62.5	-37.5
FIRM CHARACTERISTICS-FINANCE	0	0	0
*Firm Had Adequate Financial Resources For The Project	-	-	0
Product Yields A High Contribution Margin To The Firm	100	12.5	87.5
*There Was An Unexpected High Product Cost	-	-	0
Relative Magnitude Of Investment In The Project Was Large	75	50	25
FIRM CHARACTERISTICS-MARKETING MIX	0	0	0
*Distribution Channel Gave A Lot Of Support For The New Product	-	-	0
There Was A Good Stock Cover For The Product	100	100	0
Adequate Salesforce Training And Effort Were Used	87.5	87.5	0
Adequate Promotion And Advertising Effort Were Used	87.5	75	12.5
Appropriate Pricing Strategies Were Used	87.5	75	12.5
**A Lot Of Effort Was Placed On Distributing The New Product	100	100	0
ORGANISATION STRUCTURE AND STYLE	0	0	0
*A Technical Champion Managed The New Product Very Well	-	-	0
*A Dedicated And Strong Product Advocate Managed The New Product	-	-	0
*Internal Communication In The Company Was Effective	-	-	0
*R&D Manufacturing-Marketing Functions Were Well Interfaced And C	-	-	0
A High Level Of Company Resources Were Devoted To The New Produ	75	62.5	12.5
*The Project Was Clearly Planned With Goals And Objectives Establish	-	-	0
*Enthusiasm Crowded On Facts Throughout The Entire Development Pr	-	-	0

*Company Politics Affected The Way The New Product Process Was C	-	-	0
**The Sales Rep. Placed Strong Emphasis On Distributing The Product	100	100	0
**A Dedicated Sales Rep. Distributed New Products Only	25	12.5	12.5
**Communication Between The Company And The Manufacturer Was	87.5	75	12.5
**The Distribution Of The New Product Was Clearly Planned With Goal	100	100	0

Impact of Type of Company on New Product Success and Failure:

Variable Name		Distributors	Distributors	
		SUCCESSFUL	UNSUCCESSFUL	Difference
PRODUCT ADVANTAGE		-	-	
Product Offered Unique Benefits To Customer		100	47	53
Product Was First Of Kind On Market		76.5	53	23.5
Product Was Developed For Worldwide Use		59	59	0
Product Required Little Change In Attitudes And Behaviours Of Users		65	65	0
High Acceptance Of New Product In Export/Other Markets		76.5	35	41.5
MARKET POTENTIAL		-	-	0
Product Was Very Important To Customer		59	18	41
High Proportion Of Market Was Foreign		53	47	6
Customers Were Extremely Satisfied With Competitive Products		23.5	59	-35.5
Existence Of Potential Demand Only		88	82	6
Customers Needs And Wants For This Product Category Change Rapidly		71	41	30
Government Played A Major Role In Marketplace		0	0	0
Buyers Were Very Willing To Try New Products		100	88	12
Customers Were Very Familiar With Products In This Category		47	65	-18
Purchase Frequency Was High For This Product Category		76.5	41	35.5
Frequency Of New Product Introductions In This Market And Product C		59	29	30
MARKET COMPETITIVENESS		-	-	0
Competiton In The Marketplace Was Intense		59	59	0
There Were Many Competitors In The Market		53	59	-6
A Dominant Competitor Existed In The Marketplace		41	76.5	-35.5
There Was A High Degree Of Loyalty To Competitor's Product		29	59	-30
MARKETING SYNERGY- There Was A Good Fit Between The Needs Of T		-	-	0
The Salesforce/Distribution System Of The Firm		100	94	6
The Firm's Advertising/Promotion Resources And Skills		88	18	70
The Firm's Market Research Skills And Resources		88	18	70
The Firm's Management Skills And Resources		100	94	6

PROTOCOL- Prior To Product Development...	-	-	0
Target Market Was Well Defined	100	94	6
Customer's Needs, Wants And Preferences Were Well Defined	94	59	35
PROFICIENCY OF PREDEVELOPMENT ACTIVITIES-The Following Stage	-	-	0
Idea Generation	35	23.5	11.5
Initial Screening	35	23.5	11.5
Preliminary Market Assessment	47	29	18
Preliminary Technical Assessment	18	12	6
Detailed Market Study/Marketing Research	47	35	12
Business/Financial Analysis	41	29	12
PROFICIENCY OF MARKET RELATED ACTIVITIES- The Following Stage	-	-	0
Customer Test Of Prototype Or Sample	59	41	18
Trial Selling/Test Market	18	12	6
Market Launch	88	70.5	17.5
FIRM CHARACTERISTICS-FINANCE	-	-	0
Product Yields A High Contribution Margin To The Firm	94	23.5	70.5
There Was An Unexpected High Product Cost	0	12	-12
Relative Magnitude Of Investment In The Project Was Large	65	41	24
FIRM CHARACTERISTICS-MARKETING MIX	-	-	0
There Was A Good Stock Cover For The Product	100	100	0
Adequate Salesforce Training And Effort Were Used	88	88	0
Adequate Promotion And Advertising Effort Were Used	82	65	17
Appropriate Pricing Strategies Were Used	94	82	12
ORGANISATION STRUCTURE AND STYLE	-	-	0
A High Level Of Company Resources Were Devoted To The New Produ	65	41	24
**PRODUCT RANGE SYNERGY- There Was A Good Fit Between The Ne	-	-	0
The Existing Products Being Distributed By The Firm	100	82	18
**DISTRIBUTOR SUPPORT	-	-	0
There Was A High Level Of Support For The New Product	88	59	29

The Distributor Initiated The New Product Development	23.5	23.5	0
Company Had A High Risk Taking Attitude To New Products	35	53	-18
**A Lot Of Effort Was Placed On Distributing The New Product	100	94	6
**The Sales Rep. Placed Strong Emphasis On Distributing The Product	100	88	12
**A Dedicated Sales Rep. Distributed New Products Only	12	6	6
**Communication Between The Company And The Manufacturer Was	88	76.5	11.5
**The Distribution Of The New Product Was Clearly Planned With Goal	88	88	0

Variable Name		Manufacturer	Manufacturer	
		SUCCESSFUL	UNSUCCESSFUL	Difference
PRODUCT ADVANTAGE		-	-	
Product Offered Unique Benefits To Customer		92	82	10
Product Was First Of Kind On Market		42	45	-3
Product Was Developed For Worldwide Use		33	9	24
Product Required Little Change In Attitudes And Behaviours Of Users		58	45	13
High Acceptance Of New Product In Export/Other Markets		42	0	42
MARKET POTENTIAL		-	-	0
Product Was Very Important To Customer		92	54.5	37.5
High Proportion Of Market Was Foreign		50	27	23
Customers Were Extremely Satisfied With Competitive Products		58	64	-6
Existence Of Potential Demand Only		83	91	-8
Customers Needs And Wants For This Product Category Change Rapidly		50	54.5	-4.5
Government Played A Major Role In Marketplace		17	9	8
Buyers Were Very Willing To Try New Products		75	91	-16
Customers Were Very Familiar With Products In This Category		75	45.5	29.5
Purchase Frequency Was High For This Product Category		100	9	91
Frequency Of New Product Introductions In This Market And Product C		33	18	15
MARKET COMPETITIVENESS		-	-	0
Competiton In The Marketplace Was Intense		50	64	-14
There Were Many Competitors In The Market		33	36	-3
A Dominant Competitor Existed In The Marketplace		33	73	-40
There Was A High Degree Of Loyalty To Competitor's Product		33	36	-3
MARKETING SYNERGY- There Was A Good Fit Between The Needs Of T		-	-	0
The Salesforce/Distribution System Of The Firm		75	91	-16
The Firm's Advertising/Promotion Resources And Skills		58	64	-6
The Firm's Market Research Skills And Resources		83	73	10
The Firm's Management Skills And Resources		100	100	0

PROTOCOL- Prior To Product Development...	-	-	0
Target Market Was Well Defined	83	73	10
Customer's Needs, Wants And Preferences Were Well Defined	83	64	19
PROFICIENCY OF PREDEVELOPMENT ACTIVITIES-The Following Stage	-	-	0
Idea Generation	92	82	10
Initial Screening	92	82	10
Preliminary Market Assessment	83	82	1
Preliminary Technical Assessment	75	73	2
Detailed Market Study/Marketing Research	67	73	-6
Business/Financial Analysis	75	73	2
PROFICIENCY OF MARKET RELATED ACTIVITIES- The Following Stage	-	-	0
Customer Test Of Prototype Or Sample	100	100	0
Trial Selling/Test Market	67	45.5	21.5
Market Launch	67	55.5	11.5
Product Yields A High Contribution Margin To The Firm	92	54.5	37.5
*There Was An Unexpected High Product Cost	17	27	-10
Relative Magnitude Of Investment In The Project Was Large	33	18	15
FIRM CHARACTERISTICS-MARKETING MIX	-	-	0
There Was A Good Stock Cover For The Product	92	91	1
Adequate Salesforce Training And Effort Were Used	92	82	10
Adequate Promotion And Advertising Effort Were Used	50	27	23
Appropriate Pricing Strategies Were Used	92	82	10
A High Level Of Company Resources Were Devoted To The New Produ	75	54.5	20.5
*TECHNOLOGICAL SYNERGY- There Was A Good Fit Between The Neec	-	-	0
The Firm's R&D/Product Development Skills And Resources	75	54.5	20.5
The Firm's Engineering Skills And Resources	75	73	2
The Firm's Production Skills And Resources	92	82	10
?*Product Concept Was Well Defined	100	91	9
?*Product Specifications And Requirements Were Well Defined	100	82	18

*PROFICIENCY OF TECHNOLOGICAL ACTIVITIES- The Following Stage	-	-	0
Product Development	100	73	27
In-House Testing Of Product (Prototype)	100	100	0
Trial/Pilot Production	83	82	1
Production Start-Up	83	82	1
There Were Technical Problems In Product And Production Design	17	18	-1
*TOP MANAGEMENT SUPPORT	-	-	0
There Was A High Level Of Top Management Support For The Project	92	100	-8
Top Management Were Very Involved In The Day-To-Day Management	100	82	18
Top Management Initiated The Project	83	82	1
Management Team Consisted Of Senior Managers With High Levels Of	50	54.5	-4.5
Management Had High Risk Taking Attitude	67	64	3
FIRM CHARACTERISTICS-FINANCE	-	-	0
*Firm Had Adequate Financial Resources For The Project	58	64	-6
*Distribution Channel Gave A Lot Of Support For The New Product	92	73	19
ORGANISATION STRUCTURE AND STYLE	-	-	0
*A Technical Champion Managed The New Product Very Well	58	54.5	3.5
*A Dedicated And Strong Product Advocate Managed The New Product	50	54.5	-4.5
*Internal Communication In The Company Was Effective	83	91	-8
*R&D Manufacturing-Marketing Functions Were Well Interfaced And C	83	64	19
*The Project Was Clearly Planned With Goals And Objectives Establish	83	73	10
*Enthusiasm Crowded On Facts Throughout The Entire Development Pr	33	54.5	-21.5
*Company Politics Affected The Way The New Product Process Was C	25	27	-2

Impact of Company Size on New Product Success and Failure:

		Small	Small	Small
Variable Name		% Agree	% Agree	
		SUCCESSFUL	UNSUCCESSFUL	Difference
PRODUCT ADVANTAGE				
Product Offered Unique Benefits To Customer		100	62.5	37.5
Product Was First Of Kind On Market		63	50	13
Product Was Developed For Worldwide Use		37.5	31	6.5
Product Required Little Change In Attitudes And Behaviours Of Users		56	56	0
High Acceptance Of New Product In Export/Other Markets		50	25	25
MARKET POTENTIAL				
Product Was Very Important To Customer		87.5	50	37.5
High Proportion Of Market Was Foreign		50	37.5	12.5
Customers Were Extremely Satisfied With Competitive Products		37.5	69	-31.5
Existence Of Potential Demand Only		87.5	94	-6.5
Customers Needs And Wants For This Product Category Change Rapid		69	56	13
Government Played A Major Role In Marketplace		6	6	0
Buyers Were Very Willing To Try New Products		94	87.5	6.5
Customers Were Very Familiar With Products In This Category		56	50	6
Purchase Frequency Was High For This Product Category		94	19	75
Frequency Of New Product Introductions In This Market And Product C		50	25	25
MARKET COMPETITIVENESS				
Competiton In The Marketplace Was Intense		56	62.5	-6.5
There Were Many Competitors In The Market		37.5	44	-6.5
A Dominant Competitor Existed In The Marketplace		37.5	69	-31.5

There Was A High Degree Of Loyalty To Competitor's Product	25	37.5	-12.5
MARKETING SYNERGY- There Was A Good Fit Between The Needs Of The Project And...			
The Salesforce/Distribution System Of The Firm	94	94	0
The Firm's Advertising/Promotion Resources And Skills	62.5	62.5	0
The Firm's Market Research Skills And Resources	75	69	6
The Firm's Management Skills And Resources	100	100	0
*TECHNOLOGICAL SYNERGY- There Was A Good Fit Between The Needs Of The Project And...			
The Firm's R&D/Product Development Skills And Resources	67	44.5	22.5
The Firm's Engineering Skills And Resources	67	67	0
The Firm's Production Skills And Resources	89	78	11
**PRODUCT RANGE SYNERGY- There Was A Good Fit Between The Needs Of The Project And...			
The Existing Products Being Distributed By The Firm	100	71.5	28.5
PROTOCOL- Prior To Product Development...			
Target Market Was Well Defined	87.5	81	6.5
Customer's Needs, Wants And Preferences Were Well Defined	87.5	69	18.5
*Product Concept Was Well Defined	100	89	11
*Product Specifications And Requirements Were Well Defined	100	78	22
PROFICIENCY OF PREDEVELOPMENT ACTIVITIES-The Following Stages Were Carried Out Proficiently			
Idea Generation	56	50	6
Initial Screening	62.5	56	6.5
Preliminary Market Assessment	50	50	0
Preliminary Technical Assessment	44	37.5	6.5
Detailed Market Study/Marketing Research	44	50	-6
Business/Financial Analysis	50	50	0

PROFICIENCY OF MARKET RELATED ACTIVITIES- The Following Stages Were Carried Out Proficiently			
Customer Test Of Prototype Or Sample	87.5	75	12.5
Trial Selling/Test Market	50	37.5	12.5
Market Launch	69	50	19
*PROFICIENCY OF TECHNOLOGICAL ACTIVITIES- The Following Stages Were Carried Out Proficiently			
Product Development	100	67	33
In-House Testing Of Product (Prototype)	100	100	0
Trial/Pilot Production	78	78	0
Production Start-Up	78	78	0
There Were Technical Problems In Product And Production Design	0	22	-22
*TOP MANAGEMENT SUPPORT			
There Was A High Level Of Top Management Support For The Project	100	100	0
Top Management Were Very Involved In The Day-To-Day Management	100	89	11
Top Management Initiated The Project	89	89	0
Management Team Consisted Of Senior Managers With High Levels O	44.5	44.5	0
Management Had High Risk Taking Attitude	67	67	0
**DISTRIBUTOR SUPPORT			
There Was A High Level Of Support For The New Product	86	71.5	14.5
The Distributor Initiated The New Product Development	28.5	28.5	0
Company Had A High Risk Taking Attitude To New Products	43	43	0
FIRM CHARACTERISTICS-FINANCE			
*Firm Had Adequate Financial Resources For The Project	55.5	55.5	0
Product Yields A High Contribution Margin To The Firm	94	37.5	56.5
*There Was An Unexpected High Product Cost	11	44.5	-33.5

Relative Magnitude Of Investment In The Project Was Large	37.5	31	6.5
FIRM CHARACTERISTICS-MARKETING MIX			
*Distribution Channel Gave A Lot Of Support For The New Product	89	67	22
There Was A Good Stock Cover For The Product	94	94	0
Adequate Salesforce Training And Effort Were Used	81	81	0
Adequate Promotion And Advertising Effort Were Used	50	37.5	12.5
Appropriate Pricing Strategies Were Used	94	87.5	6.5
**A Lot Of Effort Was Placed On Distributing The New Product	100	100	0
ORGANISATION STRUCTURE AND STYLE			
*A Technical Champion Managed The New Product Very Well	55.5	55.5	0
*A Dedicated And Strong Product Advocate Managed The New Produc	55.5	55.5	0
*Internal Communication In The Company Was Effective	89	89	0
*R&D Manufacturing-Marketing Functions Were Well Interfaced And (	67	55.5	11.5
A High Level Of Company Resources Were Devoted To The New Prodı	62.5	50	12.5
*The Project Was Clearly Planned With Goals And Objectives Establis	78	67	11
*Enthusiasm Crowded On Facts Throughout The Entire Development P	44.5	44.5	0
*Company Politics Affected The Way The New Product Process Was (	33	33	0
**The Sales Rep. Placed Strong Emphasis On Distributing The Produc	100	100	0
**A Dedicated Sales Rep. Distributed New Products Only	14	0	14
**Communication Between The Company And The Manufacturer Was	86	71.5	14.5
**The Distribution Of The New Product Was Clearly Planned With Goa	71.5	71.5	0

		Medium	Medium	Medium
Variable Name		% Agree	% Agree	
		SUCCESSFUL	UNSUCCESSFUL	Difference
PRODUCT ADVANTAGE				
Product Offered Unique Benefits To Customer		100	40	60
Product Was First Of Kind On Market		80	40	40
Product Was Developed For Worldwide Use		80	60	20
Product Required Little Change In Attitudes And Behaviours Of Users		60	60	0
High Acceptance Of New Product In Export/Other Markets		80	20	60
MARKET POTENTIAL				
Product Was Very Important To Customer		80	0	80
High Proportion Of Market Was Foreign		20	20	0
Customers Were Extremely Satisfied With Competitive Products		40	40	0
Existence Of Potential Demand Only		100	40	60
Customers Needs And Wants For This Product Category Change Rapidly		60	40	20
Government Played A Major Role In Marketplace		0	0	0
Buyers Were Very Willing To Try New Products		100	60	40
Customers Were Very Familiar With Products In This Category		60	60	0
Purchase Frequency Was High For This Product Category		80	60	20
Frequency Of New Product Introductions In This Market And Product C		60	40	20
MARKET COMPETITIVENESS				
Competiton In The Marketplace Was Intense		40	40	0
There Were Many Competitors In The Market		20	40	-20
A Dominant Competitor Existed In The Marketplace		20	60	-40
There Was A High Degree Of Loyalty To Competitor's Product		60	60	0
MARKETING SYNERGY- There Was A Good Fit Between The Needs Of The Project And...				
The Salesforce/Distribution System Of The Firm		100	80	20
The Firm's Advertising/Promotion Resources And Skills		100	80	20
The Firm's Market Research Skills And Resources		100	80	20

The Firm's Management Skills And Resources	100	80	20
*TECHNOLOGICAL SYNERGY- There Was A Good Fit Between The Needs Of The Project And...			
The Firm's R&D/Product Development Skills And Resources	100	0	100
The Firm's Engineering Skills And Resources	100	0	100
The Firm's Production Skills And Resources	100	0	100
**PRODUCT RANGE SYNERGY- There Was A Good Fit Between The Needs Of The Project And...			
The Existing Products Being Distributed By The Firm	100	75	25
PROTOCOL- Prior To Product Development...			
Target Market Was Well Defined	100	60	40
Customer's Needs, Wants And Preferences Were Well Defined	100	40	60
*Product Concept Was Well Defined	100	0	100
*Product Specifications And Requirements Were Well Defined	100	0	100
PROFICIENCY OF PREDEVELOPMENT ACTIVITIES-The Following Stages Were Carried Out Proficiently			
Idea Generation	80	40	40
Initial Screening	80	40	40
Preliminary Market Assessment	80	40	40
Preliminary Technical Assessment	40	0	40
Detailed Market Study/Marketing Research	80	40	40
Business/Financial Analysis	60	20	40
PROFICIENCY OF MARKET RELATED ACTIVITIES- The Following Stages Were Carried Out Proficiently			
Customer Test Of Prototype Or Sample	40	40	0
Trial Selling/Test Market	40	20	20
Market Launch	100	60	40
*PROFICIENCY OF TECHNOLOGICAL ACTIVITIES- The Following Stages Were Carried Out Proficiently			
Product Development	100	0	100
In-House Testing Of Product (Prototype)	100	0	100
Trial/Pilot Production	100	0	100
Production Start-Up	100	0	100
There Were Technical Problems In Product And Production Design	100	0	100

*TOP MANAGEMENT SUPPORT			
There Was A High Level Of Top Management Support For The Project	100	0	100
Top Management Were Very Involved In The Day-To-Day Management	100	0	100
Top Management Initiated The Project	100	0	100
Management Team Consisted Of Senior Managers With High Levels Of	100	0	100
Management Had High Risk Taking Attitude	0	0	0
**DISTRIBUTOR SUPPORT			
There Was A High Level Of Support For The New Product	100	75	25
The Distributor Initiated The New Product Development	25	25	0
Company Had A High Risk Taking Attitude To New Products	25	50	-25
FIRM CHARACTERISTICS-FINANCE			
*Firm Had Adequate Financial Resources For The Project	100	0	100
Product Yields A High Contribution Margin To The Firm	80	0	80
*There Was An Unexpected High Product Cost	0	100	-100
Relative Magnitude Of Investment In The Project Was Large	80	60	20
FIRM CHARACTERISTICS-MARKETING MIX			
*Distribution Channel Gave A Lot Of Support For The New Product	100	0	100
There Was A Good Stock Cover For The Product	100	80	20
Adequate Salesforce Training And Effort Were Used	100	80	20
Adequate Promotion And Advertising Effort Were Used	80	80	0
Appropriate Pricing Strategies Were Used	100	80	20
**A Lot Of Effort Was Placed On Distributing The New Product	100	100	0
ORGANISATION STRUCTURE AND STYLE			
*A Technical Champion Managed The New Product Very Well	0	0	0
*A Dedicated And Strong Product Advocate Managed The New Product	0	0	0
*Internal Communication In The Company Was Effective	100	0	100
*R&D Manufacturing-Marketing Functions Were Well Interfaced And C	100	0	100
A High Level Of Company Resources Were Devoted To The New Produ	80	40	40
*The Project Was Clearly Planned With Goals And Objectives Establish	100	0	100

*Enthusiasm Crowded On Facts Throughout The Entire Development Pr	0	0	0
*Company Politics Affected The Way The New Product Process Was C	0	0	0
**The Sales Rep. Pkaced Strong Emphasis On Distributing The Product	100	100	0
**A Dedicated Sales Rep. Distributed New Products Only	0	0	0
**Communication Between The Company And The Manufacturer Was	75	50	25
**The Distribution Of The New Product Was Clearly Planned With Goal	100	100	0

		Large	Large	Large
Variable Name		% Agree	% Agree	
		SUCCESSFUL	UNSUCCESSFUL	Difference
PRODUCT ADVANTAGE				
Product Offered Unique Benefits To Customer		87.5	62.5	25
Product Was First Of Kind On Market		50	50	0
Product Was Developed For Worldwide Use		37.5	37.5	0
Product Required Little Change In Attitudes And Behaviours Of Users		87.5	50	37.5
High Acceptance Of New Product In Export/Other Markets		75	12.5	62.5
MARKET POTENTIAL				
Product Was Very Important To Customer		25	12.5	12.5
High Proportion Of Market Was Foreign		75	50	25
Customers Were Extremely Satisfied With Competitive Products		25	50	-25
Existence Of Potential Demand Only		75	87.5	-12.5
Customers Needs And Wants For This Product Category Change Rapidly		62.5	25	37.5
Government Played A Major Role In Marketplace		0	0	0
Buyers Were Very Willing To Try New Products		87.5	100	-12.5
Customers Were Very Familiar With Products In This Category		62.5	62.5	0
Purchase Frequency Was High For This Product Category		75	25	50
Frequency Of New Product Introductions In This Market And Product C		37.5	12.5	25
MARKET COMPETITIVENESS				
Competiton In The Marketplace Was Intense		62.5	75	-12.5
There Were Many Competitors In The Market		75	62.5	12.5
A Dominant Competitor Existed In The Marketplace		37.5	87.5	-50
There Was A High Degree Of Loyalty To Competitor's Product		25	62.5	-37.5
MARKETING SYNERGY- There Was A Good Fit Between The Needs Of The Project And...				
The Salesforce/Distribution System Of The Firm		87.5	87.5	0
The Firm's Advertising/Promotion Resources And Skills		87.5	87.5	0
The Firm's Market Research Skills And Resources		100	87.5	12.5

The Firm's Management Skills And Resources	100	87.5	12.5
*TECHNOLOGICAL SYNERGY- There Was A Good Fit Between The Needs Of The Project And...			
The Firm's R&D/Product Development Skills And Resources	100	100	0
The Firm's Engineering Skills And Resources	100	100	0
The Firm's Production Skills And Resources	100	100	0
**PRODUCT RANGE SYNERGY- There Was A Good Fit Between The Needs Of The Project And...			
The Existing Products Being Distributed By The Firm	100	100	0
PROTOCOL- Prior To Product Development...			
Target Market Was Well Defined	100	100	0
Customer's Needs, Wants And Preferences Were Well Defined	87.5	50	37.5
*Product Concept Was Well Defined	100	100	0
*Product Specifications And Requirements Were Well Defined	100	100	0
PROFICIENCY OF PREDEVELOPMENT ACTIVITIES-The Following Stages Were Carried Out Proficiently			
Idea Generation	50	37.5	12.5
Initial Screening	50	37.5	12.5
Preliminary Market Assessment	75	50	25
Preliminary Technical Assessment	37.5	37.5	0
Detailed Market Study/Marketing Research	62.5	50	12.5
Business/Financial Analysis	62.5	50	12.5
PROFICIENCY OF MARKET RELATED ACTIVITIES- The Following Stages Were Carried Out Proficiently			
Customer Test Of Prototype Or Sample	75	50	25
Trial Selling/Test Market	0	0	0
Market Launch	100	87.5	12.5
*PROFICIENCY OF TECHNOLOGICAL ACTIVITIES- The Following Stages Were Carried Out Proficiently			
Product Development	100	100	0
In-House Testing Of Product (Prototype)	100	100	0
Trial/Pilot Production	100	100	0
Production Start-Up	100	100	0
There Were Technical Problems In Product And Production Design	0	0	0

*TOP MANAGEMENT SUPPORT			
There Was A High Level Of Top Management Support For The Project	100	100	0
Top Management Were Very Involved In The Day-To-Day Management	50	50	0
Top Management Initiated The Project	50	50	0
Management Team Consisted Of Senior Managers With High Levels Of	100	100	0
Management Had High Risk Taking Attitude	50	50	0
**DISTRIBUTOR SUPPORT			
There Was A High Level Of Support For The New Product	83	33	50
The Distributor Initiated The New Product Development	17	17	0
Company Had A High Risk Taking Attitude To New Products	17	33	-16
FIRM CHARACTERISTICS-FINANCE			
*Firm Had Adequate Financial Resources For The Project	100	100	0
Product Yields A High Contribution Margin To The Firm	100	37.5	62.5
*There Was An Unexpected High Product Cost	0	50	-50
Relative Magnitude Of Investment In The Project Was Large	75	25	50
FIRM CHARACTERISTICS-MARKETING MIX			
*Distribution Channel Gave A Lot Of Support For The New Product	100	100	0
There Was A Good Stock Cover For The Product	100	100	0
Adequate Salesforce Training And Effort Were Used	100	100	0
Adequate Promotion And Advertising Effort Were Used	100	50	50
Appropriate Pricing Strategies Were Used	87.5	62.5	25
**A Lot Of Effort Was Placed On Distributing The New Product	100	83	17
ORGANISATION STRUCTURE AND STYLE			
*A Technical Champion Managed The New Product Very Well	50	50	0
*A Dedicated And Strong Product Advocate Managed The New Product	50	50	0
*Internal Communication In The Company Was Effective	100	100	0
*R&D Manufacturing-Marketing Functions Were Well Interfaced And C	100	100	0
A High Level Of Company Resources Were Devoted To The New Produ	75	37.5	37.5
*The Project Was Clearly Planned With Goals And Objectives Establish	100	100	0

*Enthusiasm Crowded On Facts Throughout The Entire Development Pr	0	100	-100
*Company Politics Affected The Way The New Product Process Was C	0	0	0
The Sales Rep Placed Strong Emphasis On Distributing The Product	100	83	
**A Dedicated Sales Rep. Distributed New Products Only	17	17	0
**Communication Between The Company And The Manufacturer Was	100	100	0
**The Distribution Of The New Product Was Clearly Planned With Goal	100	100	0