

University of Strathclyde

Department of Marketing

COMPETITIVE MARKETING STRATEGY: A STUDY OF
COMPETITIVE PERFORMANCE IN THE BRITISH CAR MARKET

VOLUME ONE

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Dedication

To my parents

"My Lord! bestow on them Thy Mercy even as they
cherished me in childhood".

Abstract

In the past few years there has been a dramatic change in the orientation of marketing, and strategic thinking has become the order of the day. More and more attention has been paid to the competitor. Competitive marketing in general has become an area of primary concern to marketers, managers, and businessmen.

Despite its potential, however, competitive marketing strategy has received relatively little attention in the marketing literature. Few studies have provided analytical techniques for gaining a clearer understanding of industries and competitors, and those that have emerged are considered to lack breadth and comprehensiveness.

This study of competitive marketing strategy represents a step towards bridging this gap, by reviewing the concepts and issues related to the practice of competitive strategy and its relation to corporate success. It shows how marketing factors, besides others, shape the competitive position of firms within an industry or any industry within the world market place. A general view of competitive marketing strategy is presented and thereafter illustrated with specific evidence about the competitive dilemma facing the British car industry.

It is hoped that this work will not only provide help for practitioners who need to develop an appropriate strategy for a particular business, or scholars trying to understand competition better, but also be of help to analysts and policy makers within government who wish to understand the pressures that affect the competitive position in an industry or the whole economy in the world trade scene. The study generally makes the point that it is, after all, the practice of competitive marketing strategies within individual businesses that largely determines national competitiveness.

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CHAPTER ONE

INTRODUCTION AND THE PURPOSE OF THE STUDY

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Developments in the domestic and international economic position of UK industry over the past few decades have increased concern about the international competitiveness of British producers. Many question Britain's ability to succeed in meeting competition in world markets and even in domestic market. The country's competitive position has deteriorated badly, and Britain's market share in world trade of manufacturers has fallen while import penetration has rocketed. Table 1.1 provides details of the trends in the UK's visible trade balance over the period 1974-1984. Apart from the years 1980-1982, the table shows virtually continuous deficit during this period.

Table 1.1: UK's visible trade balance⁽¹⁾ (£ million)

Year	Exports	Imports	Balance
1974	16395	21745	- 5350
1975	19330	22663	- 3333
1976	25191	29121	- 3930
1977	31728	34012	- 2284
1978	35063	36605	- 1542
1979	40686	44135	- 3449
1980	47422	46062	+ 1360
1981	50977	47617	+ 3360
1982	55565	53234	+ 2331
1983	60776	61611	- 0835
1984	70409	74510	- 4101

(1) Source: Central Statistical Office, Annual Abstract of Statistics, 1986 edition.

Not surprisingly therefore, many attempts have been made over the years to explain the country's predicament in terms of a wide variety of factors acting individually or in combination.

The car industry shows many of the symptoms of the "British disease", with declining market share both at home and abroad. Table 1.2 shows the import penetration ratio over the period 1968 - 1984 and reflects the real troubles the industry has faced in recent years.

Table 1.2: Import penetration ratio in the car industry⁽¹⁾

Year	Import Penetration Ratio
1968	8.3
1970	14.3
1972	23.5
1974	27.9
1975	34.0
1976	37.9
1977	45.4
1978	49.3
1980	56.3
1981	55.7
1982	57.7
1983	56.8
1984	55.8

(1) Source: SMMT, The Motor Industry of Great Britain, various issues.

A number of reasons have been advanced for the general decline in the competitive position of this industry which, along with others, was the mainstay of economic prosperity in the past. Among these reasons; poor productivity, bad industrial relations, insufficient research and development, reduction of import duties, and unfavourable government policies are frequently mentioned.

What is not generally admitted is the poor marketing strategies adopted and pursued by UK car manufacturers. There is evidence to suggest that within this industry the problem seems to be rooted in the persistent failure to produce enough competitive products and British marketing has been generally lacking in aggressiveness. On the other hand, it is indicated that the success of many foreign car manufacturers in the British market can be attributed to their marketing approach.

Against this background, the main concern of this research is to identify the extent to which marketing factors could contribute to competitive success in general and in the car business in particular, and how the difference in the attitudes towards developing and adopting effective competitive marketing strategies exhibited by UK and foreign car producers could be used as a basis for explaining the performance gap between them.

The study argues that an effective marketing strategy has never been more vital to British companies in general and car producers in particular than it is now, and that if the trend of imports is to be reversed, it will only come from knowing more about markets than competitors do, and exploiting this knowledge by developing and introducing products that match the real needs and expectations of the market place.

The aim of the study

The main objective of this study is to compare and contrast the key elements of the competitive marketing strategies adopted and pursued by domestic car producers and their major competitors in the UK market and seek to explain the disparity in their competitive performance.

Strictly speaking, the central concern of this study is threefold:

- (1) To identify the full range of factors which determine the competitive position of an economy or industry and within these, the potential role of marketing factors.

- (2) To carry out a preliminary appraisal of the marketing policies of competing car manufacturers in the British market and the effect of these policies, if any, on their relative market position.
- (3) Having determined the main factors which contribute to competitive success, and analysed both the strengths and weaknesses in the competitive marketing strategies adopted by British car producers, to offer suggestions for recovering and maintaining competitiveness.

General statement of methodology

The starting point of the research is a set of hypotheses suggesting reasons contributing to the poor performance of British car producers. To test these hypotheses, the study was designed to obtain and analyse data concerning car buying behaviour, experience with the car, distribution and promotion policies, brand loyalty and switching, and perceptions and attitudes towards competing car brands. The choice of the questions used was based on a review of the available literature and the advice of the researcher's supervisor.

An appropriate questionnaire was designed and pilot-tested with a convenience sample of car owners. Data for the study were obtained through the questionnaire sent to two samples of car owners including private owners and companies. The questionnaires, together with covering letters describing the objectives of the study were handed personally to private car owners and mailed to companies, asking both groups to answer the questions included and to return them at their earliest convenience. The questionnaire design, sample frame, methods of questionnaire delivery and the response rate achieved, are dealt with in greater detail in Chapter Six.

Organisation of the study

The thesis is organised in nine chapters, including a bibliography and an appendix. The first chapter outlines briefly the major topic of the study and identifies its primary objectives.

Essentially, Chapters Two to Five review the relevant literature. Chapter Two reviews the Concept of Competitiveness; its meaning and importance, its development, and the principal measures of competitiveness in international trade. Chapter Three examines the major factors affecting competitiveness in international trade both at the macro and micro levels.

Chapter Four gives an overview of the theoretical dimensions within which competitive strategy are developed and explains how different producers from different countries compete in the market place. It ends with a summary of the major lessons that can be learned from the experience of the most successful competitors.

Competition in the car industry, the specific area of inquiry in this study, is considered in Chapter Five. Following a review of the importance of the industry, requirements for success in the car business, and the recent trends shaping its environment; a detailed assessment of the present position as well as the major problems facing the British car industry is presented and discussed.

Chapter Six, which deals with the design of the field research, is a bridge between the theoretical framework and the empirical findings. It presents a statement of the research problems and objectives, formulation of the research hypotheses, identification of the the sample, development of the questionnaire, and the response rate.

Chapters Seven and Eight are devoted to a discussion of the research findings as well as the statistical techniques used in analysing the data. In Chapter Seven, the findings of the customer survey are presented, while the findings pertaining to the companies' survey are included in Chapter Eight.

The final chapter, Chapter Nine, presents a summary of the study findings, its implications, study contributions and limitations as well as proposals for further research.

CHAPTER TWO

THE CONCEPT OF COMPETITIVENESS

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Introduction:

Competitiveness has been the subject of considerable research in both Governmental and business circles recently. It is seen as all - important aim on which will depend the return to balanced economic growth in general and the survival and expansion of individual companies in particular. However, any attempt at conceptualising competitiveness should, at some stage, involve an attempt to answer certain questions, such as what is the definition of competitiveness, what is its importance, how has this concept developed, and how can it be measured?

The answers of these fundamental questions will be the subject of this chapter. Thus, in the course of such an inquiry the following sections will be presented.

Section one: is concerned with exploring the meaning of competitiveness and how it is important for balanced economic growth.

Section two: Seeks to explain how the concept of competitiveness was introduced and developed.

Section three: Outlines the principal measures of competitiveness in international trade.

Section One

The meaning and importance of Competitiveness

What is meant by Competitiveness?

Competitiveness is an often used, but rarely defined, Term in the terminology of trade. It is often treated as though it were synonymous with price or cost competitiveness. However, this is a considerable oversimplification. Competitiveness is not a uni-dimensional concept. A low price will be weighed against poor quality or lack of after-sales service and the like. Thus, the notion that competitiveness might be reduced to a simple consideration of costs or prices is a dangerous one.⁽¹⁾

Competitiveness is in fact a complex, many faceted concept and cannot be reduced to a simple evaluation of obvious factors such as price, profit, and cost. At best, it is a composite concept because different measures including price, cost, market share, profitability, etc., give different results.⁽²⁾

Murray,⁽³⁾ for example, points out that "It is not at all easy to define competitiveness because it is so multifaceted a concept". He continues, "however, the concept is of such importance that it is worthwhile to spend time analysing its meaning and trying to get to grips with some of its deeper implications".

Broadly speaking, the very essence of competition is the comparison by the buyer of the options he faces, between buying a product which meets a need or doing without, and choosing between alternative ways of meeting the need which may involve similar products. More specifically, competitiveness refers to the ability of an individual, an enterprise, or a country to be successful in a market under conditions of rivalry.

Although the meaning of competitiveness is much the same for a country as for a company, yet, it is reported that at the company level, the term competitiveness can be related to many aspects including:-⁽⁴⁾

- 1) The quality of management, which makes and monitors strategic decisions and the procedures adopted by management to make and monitor decisions in response to the specific environment in which firms operate.
- 2) Product development, design and range, especially with respect to the number of personnel and resources devoted to ensuring the market acceptability of products.
- 3) Marketing policies, where it is important to recognise the full spectrum of marketing activities whether it is related to price or non-price policies which make up the essential part of the total offering.

On the other hand, in the analysis of international trade, the term "Competitiveness" can be used with two different meanings.⁽⁵⁾ The first and most common meaning refers to the country's trading performance. Examples would be a country's share of world exports of manufactured goods, the import penetration ratio, or the trade balance. According to this meaning, a country whose share in world exports of manufactured goods has declined is said to have suffered a loss of competitiveness. The second meaning covers the evolution of factors affecting trade performance. Ignoring the effect of short-run demand changes, the main factors typically considered can be sub-divided into price and non-price influences.

As the term competitiveness means different things to different people and also at different levels, it is perhaps not surprising to find that a clear - cut definition is not available. Nonetheless, some researchers have proposed general definitions of competitiveness.

Enoch,⁽⁶⁾ for instance, offers the suggestion that competitiveness may be defined as "The advantage in price, speed of delivery, design, etc., which enables a company or a country to secure sales at the expense of its competitors".

According to this definition, the ability of a nation or an enterprise to compete in the market place will depend on its relative advantage in respect of factors such as price, design, quality, etc., that will make it possible to achieve sales at the expense of its competitors. In other words, whether the product of a particular enterprise or country is considered to be competitive or not will depend on how well the factors relating to this product will satisfy the demand criteria of a particular market in comparison to other products that may be on offer.

In the same spirit, Murray,⁽⁷⁾ proposed that a good working definition of competitiveness might be that "competitiveness consists of all those qualities and characteristics that enable one manufacturer to surpass his rivals in attracting, and retaining customers", he adds, "many of these qualities and characteristics are non-quantifiable, and so, in judging changes in competitiveness, one must fall back on proxy measures based on some definition of relative prices or relative costs".

The European Management Forum,⁽⁸⁾ suggests a similar general definition when it states that "competitiveness is a measure of the immediate and future ability of industrialists to design, produce and market goods whose price and non-price qualities form a more attractive package than those of competitors abroad or in the domestic market". According to this definition, the final judge of competitiveness is considered to be the market place.

Finally, The Economic Progress Report⁽⁹⁾ defines competitiveness as "The ability of a country's producers to compete successfully in world markets and with imports in its own domestic market".

The above definition has the merits of throwing more light on the idea that, competitiveness is not only a matter of being successful in the foreign markets, but also, more important, being so in respect of imports in the home market.

Bearing in mind the above mentioned difficulty of formulating a precise definition, one might propose the following:

Competitiveness may be defined in terms of "The ability of a country's producers to create, sustain and develop advantages for their products in domestic and international markets by means of price and non-price qualities, which constitute a more attractive offer than that presented by competitors".

The main assumptions of the proposed definition are:-

- 1) In the national context, two dimensions of competitiveness have to be maintained. The Country's performance in different world markets, and the degree of success in facing the imported products in the home market.
- 2) Competitiveness is not a static but rather a dynamic concept. Accordingly, efforts are required to produce operationally dynamic competitive strategies for both the home and foreign markets.
- 3) Competitiveness is not only related to those factors that are amenable to quantification such as price, but also depends, to a large extent on those non-quantifiable factors such as design, quality, reliable delivery etc., which can also make a significant contribution to the performance of the economy both in world and home markets.

Before closing our discussion of the meaning of competitiveness, it is worth mentioning the following points:-

- First: Competitiveness is in any case a relative concept. The subject is a matter of relative positions in terms of resources and products and the change in relative positions over time.
- Second: Competitiveness is also a dynamic concept; the relative position of companies and countries in the future is not only affected by parameters determining present levels and trends, but also by changes in these parameters themselves, such as investment, the training of the working people, technology and innovation, among others.

- Third: Competitiveness is generally measured by results, by the shares which a country can attain in its markets, due allowance being made for its size and stage of development. This means that competitiveness in this very general sense comes close to being synonymous with overall economic performance.
- Fourth: Perhaps the most important practical point to be emphasised is that being competitive is not simply a question of being cheaper. In fact, competitiveness depends on price and many non-price factors connected with the product and how it is marketed, which have value to the customer and which influence his decision.
- Fifth: Given that the term "Competitiveness" refers to the ability of a country to generate output and dispose of that output both domestically and internationally, it therefore encompasses every aspect of how the nation's business is run. At the most basic level, it is important that the products the country is producing are those demanded by the consumer. This, in turn, requires that the country must be quick to adapt to, and even anticipate, the changing needs or tastes of its customers.
- Finally: Competitiveness entails not only selling but also remaining viable. Conceivably a company or a country could sell its products at a very large mark-up over costs because the product is unique. But, unless the company or the country is protected in some way, such policies could not be sustained over a long period. Competitiveness, therefore, involves selling to the market in the presence of substitutes and alternative suppliers and remaining viable over a long period.

The Importance of Competitiveness

The importance of competitiveness to the health of the economy is so self evident that it requires little elaboration. It is commonly recognised that international trade represents the life blood of any economy; not only is it the best means of maximising

the standard of living of its citizens, but it might be the only means whereby the economy can satisfy most of its basic needs. In this sense, competitiveness has been regarded as a topic which is central to the economic conditions of any country. For the individual firm, the ability to remain competitive is essential to its survival as a viable company, while for the nation, competitiveness, or the ability to compete in the world market, will determine, to large extent, the standard of living that may be enjoyed and will also affect the rate of growth and other factors relating to economic progress in such a society.

A loss of a particular country's competitiveness does not only mean the erosion of its export market shares, but also reduced ability to innovate, as well as less ability to invest in those new production techniques that improve productivity. As competitiveness declines, the standard of living will decline accordingly and with them earnings will also decline in relative terms to other nations.⁽¹⁰⁾ Thus, competitiveness is not only the problem of the individual firm or industry, but must also be regarded as a problem for the whole nation.

In his support to the above points and with relation to the Irish situation, O'Cofoigh⁽¹¹⁾ stated that "Even a static world market must present enormous potential to an economy of Ireland's size". He adds, "But to avail itself of the potential, the economy must produce quality products at costs that will allow it to sell at world prices at a profit, so as to finance further investment and create further sustainable employment".

Thus, for any economy wanting to take full advantage of up turn in the international economic environment, the economy must be competitive. Japan recognised this fact in the post-war period and spent more than twenty five years planning and developing an economy so structured as to be competitive. In contrast, Britain, for example, has only achieved a consistently poor performance compared to that of its major competitors in the world markets.

Ray⁽¹²⁾ may have best summarised the British situation when he raised the question of why Britain is losing piecemeal her share in world market? His answer was simply that she is not competitive enough. In brief, competitiveness is of critical importance to the individual firm and to the economy as a whole. Because of its potential for reducing the country's external imbalance and increasing the level of sustainable employment, it affects the life of everybody in the country.

As such, competitiveness has been the subject of considerable research in the period since 1960. During this period, it has increasingly become a matter of concern that many of the industrialised countries, especially the U.S. and Western Europe, are in danger of losing the race. That, in turn, leads researchers, business-men, and politicians to become engaged in the extensive debate over the problems facing different industries, and to suggest ways of improving their international competitiveness.

Section Two

The evolution of the concept of Competitiveness

Introduction

Since this research deals with issues and concepts related to international competitiveness, discussing the theories of international trade can be a useful starting point for understanding trends in and the evolution of this concept. In fact, there are two major models of interest here:-

- (1) The traditional trade model.
- (2) The product life cycle model.

In the traditional trade theory, industries are classified according to their use of various factors of production and countries are ranked according to their supplies of those factors. Countries will, it is suggested, be competitive in those industries that use intensively their most abundant factors of production.

The theory is well known. Equally well known is its presumption that free trade leads to mutual economic gains among trading nations. It is this presumption that represents the starting point for most economic discussions about the appropriate policy responses to the competitive difficulties of individual firms, sectors or countries.⁽¹³⁾

Also, to understand trends in the competitive position of a certain industry in the international market, one might turn to another conceptual model, namely the product life cycle. According to this model's explanation of trade, certain industries follow a predictable pattern that begins with a country which introduces a new product operating as a net exporter and ends with the same country becoming a net importer.

The model has various implications for international competitiveness which will be discussed later in this part of the study.

It is indicated that an understanding of the theories of international trade is useful to different individuals. It helps public policy planners to understand the implications of policy moves in the international area. Trade theory also helps the business person to appreciate the rationale for public policy decisions. Finally, despite their restrictive assumptions, trade theories provide a useful framework for assessing the economic effects of trade policies such as import duties and quotas.⁽¹⁴⁾

To outline the development of such a concept and to prevent any possible confusion, it is necessary at the outset to assume that the terms "Comparative advantage" and "Competitive advantage" will be used here as synonymous, although there are some writers who tend to treat them as representing different concepts.⁽¹⁵⁾ One study refers to this point by stating that "In many recent works, however, the term comparative advantage has been used in studying the direction of trade and investment for a single product or industry. Most of these studies could perhaps more accurately be called studies of competitive advantage rather than studies of comparative advantage".⁽¹⁶⁾

To explore these issues, it is planned to devote the following pages to explaining development in the theory of international trade as it represents, to a large extent, the development of the concept of competitiveness.

Theories of international trade

Absolute Advantage

The principle of absolute advantage is usually attributed to Adam Smith,⁽¹⁷⁾ who in his "Wealth of Nations" said that "a country might possess natural or other resources that simply were not available in some other countries. This would enable the country to produce certain products absolutely cheaper than they could be produced in other countries, when costs is measured in terms of physical amount of labour or other inputs required to produce a unit of output".

Under such conditions trade can be profitably carried on when each country specialises in the product which it can produce most cheaply. In essence, the nation faces the same "make-or-buy" decisions as does the firm. Just as most firms do not go far complete vertical integration but buy many materials and supplies from outside firms, so most nations decide against complete self-sufficiency in favour of buying cheaper goods from other countries.

The principle of absolute advantage states that a country's exports will consist of goods that it can produce with fewer resources per unit of output than its trading partners can. Similarly, it will import those goods that its trading partners can produce with fewer resources per unit of output than the country itself would need to produce the same goods.

Although Smith's principle survives today as an explanation of why certain countries export specific commodities - for example, it explains why Arab nations are the principle exporters of petroleum,

yet problems arise when we face the situation where one country is more efficient than another in manufacturing every product. The theory of comparative advantage may give an answer to this question.

Comparative advantage theory

(1) The Ricardian Model

The principle of comparative advantage extends the analysis of the basis of trade one step further by showing that two countries can gain from trade, even when one of them has an absolute advantage in the production of all goods. The earliest statement of the (18) principle of comparative advantage is attributed to David Ricardo.

According to the principle of comparative advantage; a country will tend to produce and export those goods in which it has the greatest comparative advantage, or the least comparative disadvantage, and import those goods in which it has the least comparative advantage, or the greatest comparative disadvantage. In other words, a country will export goods that are relatively cheap compared with other goods it can produce in terms of resource cost per unit of output. Its imports will consist of goods that are relatively expensive to produce at home.

From the empirical standpoint, the hypothesis suggested by the Ricardian model is that the observed composition of trade can be explained by inter country variation in comparative costs. Since labour is the key productive factor in the Ricardian model, measures of comparative labour productivity have been designed to serve as a proxy for comparative costs.

Given the existence of other productive factors, and the fact that, in actuality, trade is determined by differences in absolute money prices among countries, the question becomes: How good is comparative labour productivity as an approximation of comparative selling prices?

In fact, empirical testing of the Ricardian model has foundered on this particular issue, and interest has increasingly focused on more comprehensive measures of inter country differences in efficiency, especially in the context of estimating production functions.⁽¹⁹⁾

Moreover, even supposing that an empirical relationship is established between specialisation in trade and variations in comparative costs, it is argued that the Ricardian model is not of much help here, since it presumes that comparative - cost differences are a fact of life and thus do not require separate investigation.

In brief, the proposition upon which this theory was based has come under increasing criticism. The failure of the theory to explain why comparative costs differ between countries was examined by Heckscher and Ohlin.

(2) The Heckscher⁽²⁰⁾-Ohlin Model⁽²¹⁾

Despite the success of the Ricardian model in explaining trade patterns, it is still unrealistic to believe that a model built on a single factor of production can explain international trade patterns. For this reason, a second model, which is based on two factors of production has emerged. Each country is assumed to possess the two factors, capital and labour, and each product requires both of them in production. In the form of this model inter-country variations in comparative costs were determined by differential endowments of productive factors, with the quality of factors and production functions for given goods taken to be the same everywhere.

Two well-known Theorems have issued from the Heckscher-Ohlin model:-

- 1) Countries will tend to export goods embodying their relatively most abundant factors and import goods embodying their relatively most scarce factors.

- 2) Under certain specified conditions, international trade will result in the equalisation of returns to factors among countries.

In fact, the Heckscher-Ohlin theory of trade or the "factor endowment" theory of trade explanation of comparative advantage is based on the following assumptions:-

- (a) goods can be ranked by factor - intensity of production, from the most capital - intensive to the least capital - intensive. This ranking is not altered by changes in factor price ratios.
- (b) The factors of production do not cross international boundaries, however, mobile they are within a country.
- (c) Production functions for the same goods are internationally identical and that all countries possess equal technology.
- (d) Tastes are internationally identical and homogeneous.
- (e) It assumes constant returns to scale in the production of each commodity.
- (f) Perfect competition prevails, particularly free entry into the market.
- (g) There are only two trading countries with two commodities and with two production factors.

Given these assumptions, Heckscher-Ohlin theory provides a straightforward hypothesis which can be tested empirically. Unfortunately, the Heckscher-Ohlin theory failed in its first empirical test, resulting in the famous Leontif paradox.⁽²²⁾ Contrary to expectations, Leontif found that U.S. exports were labour - intensive while U.S. imports were capital - intensive.

Also, given the abundance of labour in Japan relative to other factors, we would expect Japan to export labour - intensive products and import capital - intensive ones. A study by Tatemoto and Ichimura⁽²³⁾ found the reverse: Japan exports capital - intensive goods but imports labour - intensive goods, contrary to the Heckscher - Ohlin predictions.

The question here is what can cause the Heckscher-Ohlin predictions to fail? In fact there are many factors that can cause the assumptions of a theory to fail and hence cause its predictions to be inaccurate. At least five important points could be cited here:

- 1) It is argued that the Heckscher-Ohlin theory is a supply - orientated model. It assumes that the consumer's preference for cars over trucks, for example, is the same between economies, and that a country's exports can be predicted by the factor intensities of the product and the factor endowments of the countries. However, it is clear that different preferences in two countries can cause the trade pattern to go the other way.
- 2) The model focuses attention on international differences in countries' relative endowments of capital and labour as the primary explanation of the pattern of trade. In doing so, of course, it ignores the influence of the third classical factor of production, natural resources in general, which remains a significant influence on international trade much to the discomfort of those who prefer a simple explanation of trade patterns. (24)
- 3) There are apparently other important influences on comparative advantage that lie outside the Heckscher-Ohlin model. These other influences relate mainly to technological differences, which the model ignores, economies of scale, and market imperfections of various kinds. Moreover, the model has come under increasing criticism because it does not offer an explanation of what determines a country's initial factor endowment and how this endowment may change through time.
- 4) The assumptions that factors of production are in fixed supply and do not move internationally have been questioned on numerous occasions, especially in theoretical enquiries. It is argued that the structure and factor content of trade will change over time, especially in response to differential rates in the accumulation of physical and human capital. International labour migration and direct foreign investment will also affect factor endowments and trade. That means that factors of production are not only mobile domestically but are also mobile internationally.

- 5) It is also argued that, any economic conditions that can reserve the pattern of trade will cause the Heckscher-Ohlin predictions to be reversed. For example, if a labour union or any factor of production causes the export industry to pay more for a factor than import - competing industries do, then the export industry will contract. If it contracts beyond a certain point, the goods that used to be exported may reach the stage of being imported. Thus, even though the U.S. for example, may be relatively well endowed with capital, it would have to import capital - intensive goods if labour unions or other distortions in factor markets caused U.S. production of these goods to fall sufficiently.⁽²⁵⁾

Although the results of some studies provided considerable support for the factor - endowment theory, yet it is indicated that such a theory of international trade is essentially a static theory which concentrates on the determination of comparative advantage at a given point in time. It does not deal with the more dynamic issues concerning the determinants of changes in comparative advantage over time. The trade effects of change in demand patterns associated with economic growth and development are not treated within the theory. Moreover, the impact of technological innovation on comparative advantage is ignored in the theory, which specifically assumes identical production functions internationally. Finally, the Heckscher-Ohlin theory does not discuss the introduction of new products or changes in production conditions over time. This situation is dealt with by the technological - gap theory.

The Technological - Gap Theory

An alternative to the static factor proportions approach to comparative advantage was developed by Posner,⁽²⁶⁾ who has developed the technological - gap theory. This theory demonstrates how an innovation in one country could create a comparative advantage which had not previously existed, and how the trade so generated would gradually be eliminated by the recognition and imitation of the innovation elsewhere.

According to this hypothesis, a basis for trade may exist between countries with identical factor endowments if a process of innovation occurs in one industry in either country.

In addition to an assumption of equal factor endowment, Posner assumes identical tastes across countries, no trade barriers, fixed exchange rates, full employment, and that all industries exist in all countries.

Given these assumptions, Posner argues that there is a certain time lapse between the introduction of particular innovation in one country and the successful adoption of that innovation by trade partners. The length of imitation lag depends on the length of time required for international transmission of this technical knowledge (The foreign reaction lag), the speed with which each country's producers adopt the technique (the domestic reaction lag), and the length of time required to master the new technique (the learning process).

In the absence of demand lag (i.e. a slow consumer response to the new production or innovation), the original innovating country will export the product involved throughout the imitation period. However, the existence of a demand lag will shorten the length of time that this good can be exported by the original innovator.

Trade ceases after the importing country masters the new technique. Posner notes that, under these circumstances, a continual flow of product or process innovation in one country relative to the rest of the world can promote a trade balance surplus for that country.

Within the boundaries of this theory it seems clear that:-

First: both the ability to produce superior products and the possession of superior production technology constitute sources of comparative advantage additional or alternative to comparative advantage based on relative factor abundance. (27)

Second: The analysis of technological superiority, or technological improvement, as a source of trade has produced a much more interesting type of dynamic comparative advantage. According to the technological - gap theory, the comparative advantage which comes through technological progress is dynamic in two senses.⁽²⁸⁾

- 1) It is a source of comparative advantage that occurs in the process of economic growth.
- 2) More important is that, the monopoly of the new knowledge is only transitory, because after a lag in time, this new knowledge, available initially in one country, becomes known to the rest of the world.

The Posner theory was elaborated and tested against the data on trade in synthetic materials by Hufbauer,⁽²⁹⁾ who developed a distinction between "Technological-gap" trade and "low-wage" trade, the latter being the result of the gradual transfer of technological improvements to countries in which they could be applied more cheaply than in their country of origin.

As developed by Hufbauer and other writers,⁽³⁰⁾ the theory suffered from an absence of explanation of why technological innovations occur in some countries rather than others, such explanation being left at the level of unexplained decisions to invest resources in research.

This gap has been filled, at least in large part, by Raymond Vernon, who has developed a theory of "The Product Cycle" which provides hypothesis to answer the main questions about genesis of innovations, the reasons for the location of production initially in the country of innovation, and the reasons for the general transfer of production to other countries, which may become exporters instead of importers of the product.

The product - life cycle theory

The product - life cycle hypothesis expands the basic premises of the technological - gap hypothesis into a detailed account of product development. The most complete account of the product - life cycle hypothesis is found in Vernon,⁽³¹⁾ Hirsch,⁽³²⁾ and Wells.⁽³³⁾ While these accounts differ in some respects, their basic thesis remains the same.

The basic premise for the product life cycle is that when a new product is introduced in the international market, the originating country has a clear competitive advantage. Potential manufacturers abroad face the initial capital investment necessary to become competitive in either their domestic markets or the international market. Over time, the initiating country will lose its initial advantage as the technology involved becomes readily available and imitated, and as the world market for the product increases .

Competitors first take over positions in their domestic markets and then expand into the international market. An expanding world market also permits large scale production relying on standardised technology inputs. Such standardised production facilities and products permit economies of scale. As a consequence, the comparative advantage for the innovating country is lost, and its market share will even eventually decrease in both absolute and relative terms, as countries with lower cost labour or other inputs take advantage of standardisation possibilities. Eventually, the country of original export may even lose its domestic market to imports from other countries.⁽³⁴⁾

According to the international product life cycle concept, many products follow a pattern which could be divided into four stages:-

Stage One:

The development stage. This stage occurs almost inevitably in an advanced country, In fact, it might be argued that all significant technical breakthroughs tend to occur in a handful of the developed countries. It is these countries which can

afford extensive expenditure on research and development and in which the whole culture tends to operate on the premises that any product can and will be improved. Innovation then results from the combination of wealthy markets and intense competition.⁽³⁵⁾

Onkvisit and Shaw⁽³⁶⁾ expressed a similar emphasis when they indicated that "while innovations can take place anywhere in the world, they are most likely to occur in highly developed countries". They add, "on the consumer side, such countries are characterised by affluent consumers with unfulfilled wants. In their need for a high standard of living, they are receptive to new and better product ideas. On the supply side, firms in advanced nations have both the technological know-how and abundant capital to develop new products".

Also, it is equally true that such countries are likely to be the place of introduction because of the firm's familiarity with domestic market conditions, in addition to which these firms will also be reluctant to introduce products overseas which may require modification in the early stage. Finally, because a businessman is more likely to supply risk capital for the production of the new product if demand is likely to exist in his home market than if he has to turn to a foreign market.⁽³⁷⁾

However, most authors begin by arguing that the U.S. is more likely than other countries to initiate production of certain kinds of items, namely those that appeal to high income consumers or are labour-saving. They extend the argument of the U.S. advantage beyond high income and labour-saving products to a claim that the U.S. will lead in relation to the majority of new products. As confirmed in one study, U.S. firms accounted for 63.8 percent of 500 significant innovations.⁽³⁸⁾

Consequently, as the U.S. is the largest market in the world, and has the greatest proportion of higher income consumers, it is expected that new products which might later have a market elsewhere will face a better chance of initial success in the U.S.

But what are the implications of this stage for international trade and competitiveness? Wells⁽³⁹⁾ gives an answer to this question when he indicates that the original producers, assumed to be Americans, are likely to have a virtual monopoly in the manufacture of new products which are introduced in the home market. Some foreigners demand the new product, and exports begin from the innovating country. A potential manufacturer in another country may face a technological barrier to entry and some fixed costs will be associated with acquiring or developing the production skills which the initial manufacturers have acquired. In addition, if the foreign producer faces an information barrier with regard to export markets and begins production based only on his home market, he will, for a time, have higher production costs than the original manufacturers who are producing big quantities.

The results of some studies which have examined U.S. export competitiveness showed that the U.S. export strength appears in industries which are associated with a higher research effort - and these industries are the ones with a high rate of new product development.⁽⁴⁰⁾

Stage Two:

This stage involves the general acceptance of the new product in other developed nations. The innovating country will look to other markets because the technological breakthrough creating the new product in turn creates a corresponding technological gap in other countries. A logical choice is to go to other advanced nations because of their similar needs and high income levels. Not surprisingly, countries such as the U.K., Canada and Australia account for about half of the initial overseas introductions of U.S. innovations.⁽⁴¹⁾

As the product moves through this stage, there will be increased exports from the innovating country, and correspondingly increased imports by other developed countries. However, at some points a market abroad is large enough for manufacture to begin there. The length of time involved before foreign production begins is dependant on the economies of scale, tariffs, transport costs, the income elasticity of demand for the product, the income level and the size of the foreign market. (42)

Thus, during this second stage, the original innovator's exports still supply most of the world's markets. However, as foreign producers begin to manufacture, the exports of the innovating country to certain markets will decline.

Stage Three:

In the third phase of the cycle, the innovating country's exports to non-producing countries begin to be displaced by exports from other nations. In general, it is recognised that as the early foreign manufacturers become larger and more experienced, their costs of production should fall. They will begin to reap the advantages of scale economies previously available only to the country of innovation. But, in addition, they will often have lower labour bills. Hence, their costs may be such that foreign products become competitive with the products of the innovating country in third markets where goods from both countries have to carry similar freight and duty charges. (43)

The role of the "middle countries" in the product life cycle have been the subject of numerous studies. The results have shown that these countries typically export products that are in earlier stages of the product life cycle to countries which are less developed and products which are later in the cycle to more advanced countries. (44)

It has been said that, during this stage, the producers of the innovative country will be protected from imports in their domestic market where they are not faced with duty and transport costs. However, foreign goods will gradually take over the markets abroad which were previously held by the original producers.

Stage Four:

This stage closes the circle. The less developed countries are now the main manufacturers and suppliers whose technology development has slowed down. The originating nation, no longer the main exporter, may be forced to become an importer instead.

The major functional characteristics of this stage are "product standardisation" and "comparative disadvantage". The product is no longer a novelty and, in the absence of further modification, it becomes sufficiently standardised for most less developed countries to produce simple versions of the product. Comparative disadvantage arises because the product is no - longer capital-intensive or technology-intensive but becomes labour-intensive.⁽⁴⁵⁾

The recent influx of standardised textile products and electronic components from less developed countries into the U.S., for example, indicates the increasing importance of this phase.⁽⁴⁶⁾ Another example is the case of black and white television sets which are no longer manufactured in the U.S. because many Asian countries, for instance, can produce them much more cheaply.

Also, it is pointed out that at this stage foreign production in some countries reaches a scale sufficient for costs to be enough to overcome the transportation and tariff protection which the originating country has, so it may become a net importer of the product.

Table (2.1) shows the major characteristics of the distinctive changes in the international product life cycle as discussed above, with simple modification in the number of stages, in terms of the U.S. which has developed a particular innovation.

Figure (2.1), on the other hand, shows three life cycle curves for the same innovation, one for the initiating country, one for other advanced nations, and the third for less developed countries. The figure demonstrates the view that, as the innovation moves through time, the direction of all three curves changes, and correspondingly the competitive position of each group ' so, it could be argued that these changes bear strong implications for international competitiveness for all groups.

The differences between the product of life cycle model and other Trade Theories

The product life cycle explanations of international trade are based on assumption that are quite different from those of traditional trade theory. While that theory is based on such assumptions as free availability of information and stable production functions, the product life cycle model is based on assumptions that the flow of information across the national borders is restricted and that products undergo predictable changes in their production and marketing characteristics over time. ⁽⁴⁷⁾

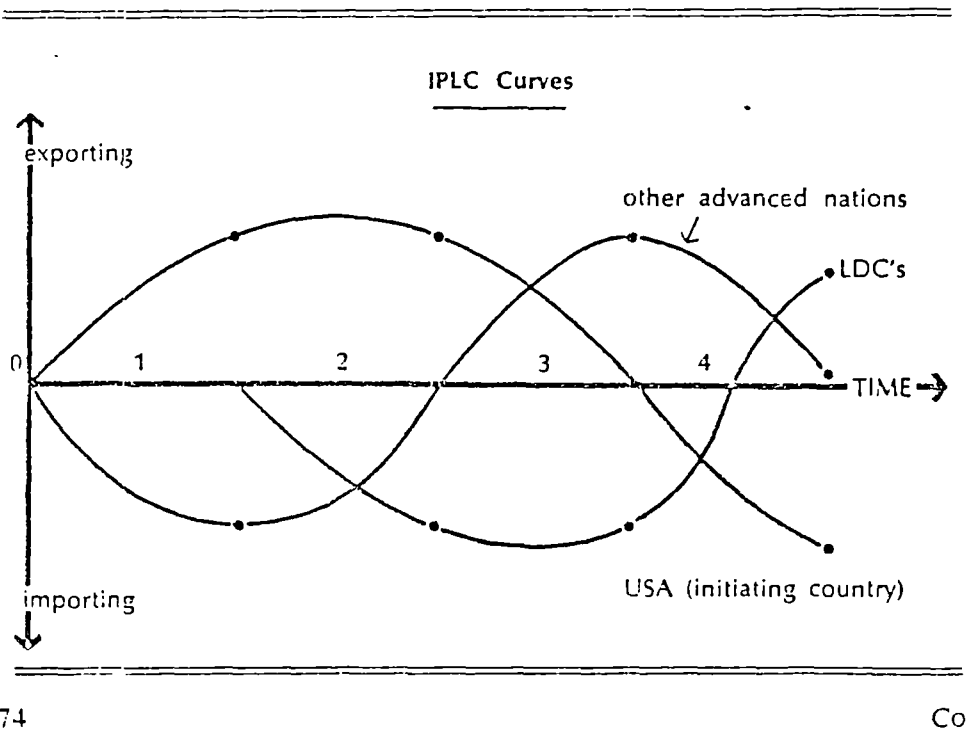
The product life cycle model is also based on the assumption that the production process is characterised by economies of scale, that it changes over time, and that tastes differ in different countries. These differences could be best explained through listing the assumptions underlying the Heckscher-Ohlin model and the product life cycle concept. Differences are listed in table (2-2) which reveal how basic these differences are.

Table 2.1: International product life cycle and characteristics
for the initiating country

Main Characteristics Stage	Import/Export	Target Market	Competitors	Production Costs
0) local innovation	none	U.S.A	few: local firms	initially high
1) overseas innovation	increasing export	U.S.A and advanced nations	few: local firms	decline due to economies of scale
2) maturity	stable export	advanced nations and less DCs	advanced nations	stable
3) worldwide imitation	declining export	less developed countries	advanced nations	increase due to economies of scale ^{lw}
4) Reversal	increasing import	U.S.A	advanced nations and LDCs	increase due to comparative disadvantage

Source: Sak Onkvisit and John J. Shaw, "Examination of the international product life cycle and its application within marketing". Columbia Journal of World Business, fall 1983, p. 74.

FIGURE 2.1 : International product life cycle curves



Source; Sak Ankvisit and John J. Shaw, "Examination of the international product life cycle and its application within marketing", Columbia Journal of World Business, Fall 1983, p.74

Table 2.2: A comparison of the product life cycle model with Heckscher-Ohlin theory

HECKSCCHER-OHLIN	PRODUCT LIFE CYCLE
1. Identical production functions in all countries for each commodity, or differences due only to a neutral efficiency differential.	1. Production function changes with time, early in the life of the product it is more labour - and skill - intensive than later.
2. Linear, homogeneous production functions with diminishing marginal productivity for each factor.	2. Increasing returns to scale.
3. Non-reversibility of factor intensities.	3. Reversibility not excluded. Some authors argue that reversal will not occur late in the cycle. Such authors assume essentially identical production functions in all countries in the late phase.
4. Identical consumption patterns in all countries at any given set of international prices, ie., all commodities are consumed in the same proportions regardless of income level.	4. Consumption patterns differ by income levels. Some goods account for a higher proportion of consumption for countries at higher levels of income.
5. Perfect markets, free trade, and no transportation costs.	5. The transmission of knowledge across international boundaries is assumed to have a cost. Trade barriers and transportation costs are allowed to exist.
6. International immobility of productive factors.	6. Capital is assumed by many authors to be at least partially mobile.
7. Qualitatively identical production factors.	7. No assumption.
8. Full employment, static.	8. No assumption, dynamic.

Source: Louis T Wells, Jr, International Trade: The product life cycle approach, op. cit., p. 16.

It is evident that, through its concentration on various aspects of product development, production and marketing, the product life cycle model predicts definite changes in comparative advantage over time as a product evolves through its life cycle. This aspect of the product life cycle model contrasts sharply with the static nature of the Heckscher-Ohlin theory, which does not discuss how comparative advantage might shift from one country to another over time as a result of changes in either supply or demand parameters.

In addition, the Heckscher-Ohlin theory is offered as an all encompassing model, while the product life cycle model is offered only as explanation of trade in manufactureres. ⁽⁴⁸⁾

Futhermore, the product life cycle theory in its basic premises, deviates from the assumptions of perfect competition and identical production functions among nations, which are essential for the traditional trade theory. It also recognises the multiplicity of other institutional rigidities and real-world imperfections. As a result, it accords more satisfactorily with prevailing ideas about, and observations of, the factor of competition in and between modern industrial states. ⁽⁴⁹⁾ On the otherhand, it is argued that the product life cycle model does not provide an explanation of trade in products other than "foot-loose" industrial goods. For trade in agriculture products, for example, one must usually return to the factor endowment approach. ⁽⁵⁰⁾ However, this contrast between the traditional trade theories and the product life cycle approach, should not be interpreted to mean that the two theories provide mutually exclusive explanations of comparative advantage.

In fact, the product life cycle model was originally viewed as an alternative to the Heckscher-Ohlin explanation of comparative advantage. Early empirical tests and comparisons of the two models tend to emphasise their differences, and the conclusions reached through these tests supported one or other model. However, more recent empirical work has attempted to answer a broader question which is:-

What are the determinants of comparative advantage?

Gruber and Vernon,⁽⁵¹⁾ Haufbauer,⁽⁵²⁾ and Baldwin,⁽⁵³⁾ among others, tried to find an answer to this question. The results indicate that both factor endowment and technology variables influence comparative advantage. This would indicate that both theories have something to contribute to international trade theory.

The implications of the international product life cycle model for international competitiveness

As already noted, the product life cycle concept is a dynamic process for the industrialising countries. Taking this characteristic into account, the following implications for international competitiveness can be observed:-

- 1) The attractiveness of the product life cycle theory lies in its ability sequentially to predict which group of countries are likely to enjoy a competitive advantage at a particular stage of the life cycle of a product. In essence, the product life cycle view suggests that international competitiveness, for any one industry, is not likely to be constant over time.⁽⁵⁴⁾ A country which has a strong competitive position may now lose that position when the industry enters a new phase. The production of semi-conductors, for example, started in the U.S. before diffusing to the U.K., France, Germany and Japan. Production facilities are now in Hong-Kong, Taiwan, as well as in other Asian countries. Similarly, at one time the U.S. used to be an exporter of typewriters, adding machines, and cash registers. But with the passage of time, simple versions of this equipment are now being imported, while U.S. firms export only the sophisticated electronic modles.⁽⁵⁵⁾
- 2) Depending on the above, it can be said that a nation's industrial character and competitiveness is therefore constantly changing. Advanced countries generally have a greater demand for sophisticated products and are better able

to produce them. However, less developed countries have a greater need for basic commodities and can often produce these at lower cost than developed countries. The scientific and material resources needed for the invention and commercialisation of new products are concentrated in a few advanced countries. A wide range of innovations is stimulated by these countries' domestic demand and supply conditions: high wage rates promote labour-saving innovations; high personal income stimulates demand for new products; large capital and skilled labour availability permits development to occur. These demand and supply conditions do not occur in less developed countries until income levels rise. Therefore, less developed countries lag behind the advanced countries in a product's development. (56)

- 3) According to the product life cycle concept, if a country wants to remain relatively competitive in the world markets for a certain product, it will either build on its early lead in a particular product line by bringing out second or third generation products and related items, or continuing research and development will lead to new products and export possibilities in unrelated areas. In other words, for a country to sustain an overall competitive advantage in "technology-intensive" goods, the nation would have to renew its advantage continually by innovating new technologies. Also, innovation in the process of production will increase productivity and extend the country's cost advantage in markets abroad, thus increasing the length of its competitive advantage across the product cycle.
- 4) Although the important relationship between the technological superiority of a country and the advantage it derives from this superiority in international trade across the life cycle of a certain product is widely recognised, yet it is argued that a country cannot take this technological superiority for granted or enjoy the resulting competitive advantage forever. A given innovation, through one means or another, diffuses

abroad sooner or later, making this advantage transitory. Thus, the rate at which technological innovations occur in a product area, and the rate at which they diffuse abroad, together determine the competitive advantage of a country through the product life cycle.⁽⁵⁷⁾

Livingstone⁽⁵⁸⁾ perhaps summed up this point best when he pointed out that "no matter how technologically and innovative a country is, it cannot hope to maintain a monopoly of its own products concepts". He adds, "It can limit the leakage of its own concepts, thus remaining relatively competitive, by co-operating with the inevitable either by licensing, instead of waiting for its technology to be pirated or evaded, or, even more powerfully, by introducing the process through its international enterprises into new markets, as and when time is ripe, phasing down production at home and relying on these enterprises to supply its home markets with the now technically stabilised stock products".

- 5) The theory can aid the government and policy planners in both the advanced and the less developed countries. For the government agencies in the advanced countries, the model already provides a framework that can be of assistance in scanning for products that are likely candidates for exports. Products that are relatively new have a high technological content, appeal to high income consumers, or are labour - saving can achieve competitive advantage in the market place.⁽⁵⁹⁾ More important, the government officials who hope to address the key economic issue facing these countries, i.e., the long term decline in competitiveness, must understand the dynamics of their products' cycle, the element of successful strategic planning required at each stage of the cycle, and appreciate how these strategies must change as conditions across the cycle change. In addition, the model helps the government agencies to make decisions regarding differential support schemes for industries, and to predict

import competition for standardised products where foreign markets are large enough to provide opportunities for large scale manufacture.

For the government policy planners in less developed countries, the model is also already of value. It gives useful clues as to the identity of products which are moving into the mature phase, and whose technology is stable enough to be exportable to areas where engineers, scientists, managers, and skilled workers are scarce.⁽⁶⁰⁾

Through a combination of both experience and analysis of the product cycle stages, the country can develop an understanding of the nature of competition in the markets it serves and devise corporate strategies to improve its competitive position.

- 6) Finally, the theory can aid the multinational firm in designing a dynamic, global production, export and direct investment strategy. It can also help a local firm decide on product policy priorities for import substitution and potential export.⁽⁶¹⁾

In conclusion, while the modern trade theorists are dis-satisfied with the static nature of the Heckscher-Ohlin theory as the empirical evidence indicates that relative factor endowments cannot completely explain trade patterns, the product life cycle presents a broad scenario of dynamic comparative advantage based on product and process innovation. Moreover, the product life cycle model includes a number of variables which have an impact on comparative advantage, including factor endowments, technology, and returns to scale. A further advantage is the product life cycle hypothesis' prediction of international factor movements in the later stage of the cycle.

Indeed, it can be said that the product life cycle approach is rich in detail and implication. However, it is indicated that the major

fault to be found with the theory as it now stands is its emphasis on low wages as an incentive to transfer the production location of an innovation to another country. The international transfer of technology may be motivated either by the availability or relatively low capital costs or by access to a protected large market for the product. (63) The theory also, it is argued, lacks the rigour and elegance of the H-O trade theory and tends to lend itself to a number of differential interpretations, depending on how the observer desires to define terms such as "Product", "innovation", etc., which can complicate attempts to verify the product life cycle model empirically (62) .

Finally, it is observed that the theory focuses on "when" but not "how" technology migrates abroad. In other words, it does not specify the various channels through which technology migration can take place. (64)

The validity of trade theories as indicators for understanding trends in international Competitiveness.

Having discussed the various conceptual models that can be of use in predicting or explaining trends in international trade and competition, giving more attention to the traditional trade model and the product life cycle model which represent the major models of interests, one question remains about the usefulness of trade theories in explaining trends in international competitiveness, namely, to what extent can trade theories be useful in explaining trends in international competitiveness for a specific product or industry?

It is fairly clear from the preceding discussion that, despite the merits of the received theory of international trade as a logical starting point for understanding trends in international competition, it has been subjected to much general criticism. The general criticism can be outlined as follows:

First

As discussed earlier, there have always been criticisms of the static framework of analysis employed in the theory. This static nature is reflected in the assumptions of fixed technology and fixed factor endowments that are part of both Ricardian and Heckscher - Ohlin theory. The theory treats the determinants of factor endowments as exogenous and overlooks the important fact that technologies are not the same among nations producing the same goods. Scott ⁽⁶⁵⁾ clarified this point when he indicated that "Technologies are embodied in equipment, know-how and patents. Companies jealously guard them to develop competitive strengths".

I.B.M. is considered as a striking example. It is also noted that the adoption of new technologies helped the Japanese industries to rise to market leadership. While reluctance to change in America as well as Western Europe was a key factor in the decline of what were Superior industries.

Thus, traditional trade theory is a misleading guide to policy questions that do not fit its static orientation or its assumptions of perfect competition. As soon as technological change and market imperfections are allowed to enter the picture, both the theoretical models and their implied policy prescriptions become confused. ⁽⁶⁶⁾

As a consequence, certain critically important policy issues are placed beyond the reach of theoretical analysis.

Second

There have always been both popular and professional questioners of the validity of the other assumptions on which trade theory has been built, and accordingly its validity as a tool for understanding and analysing trends in interantional competitiveness.

In this respect, it is relevant to observe that there are some major issues in international economic relationships which have concerned public opinions and the policy makers in recent years, all involved divergence of the facts of experience from the assumptions of the H-O model.

- 1) One such issue is the impact of government policy on both physical and human capital accumulation overtime. This issue is discussed in Tyson and Zysman's ⁽⁶⁷⁾ comment on this issue. They argue that government policy can gradually turn a comparative disadvantage in capital-intensive commodities into a comparative advantage. They said that there are only a few sectors in which comparative advantage is given in the form of fixed natural resource endowment. In most sections, comparative advantage rests on relative capital endowment, and these are the result of accumulated investment. They continue to point out that "The influence of government policy on the dynamics of comparative advantage over time becomes even more pronounced once one allows for the possibility of differing production technologies across countries. Both new product and process technologies are usually embodied in fixed capital. Embodied technological progress implies that policies to stimulate investment will change comparative advantage overtime both by changing relative factor endowments and by changing technological conditions".

Scott ⁽⁶⁸⁾ expressed a similar view when he indicated that Japan's remarkable postwar economic growth is based, in considerable measure, on the Japanese government's rejection of static, conventional economic theories. Japanese leaders recognised that Japan could create competitive advantages by mobilising technology, capital, and skilled labour to attack problems or identify

opportunities in selected sectors. In short, they created a strategy of a diversified company as it shifts resources from less promising to more promising areas.

- 2) A second issue which is overlooked by traditional trade theories is the question of what can be called the "adjustment costs" (69). It is possible to claim that the decline of some major industries in America and Western Europe is the result of their comparative disadvantage vis-a-vis the developing countries in the production of labour intensive goods or that the decline of the U-S and British car industries is the result of the H-O disadvantage vis-a-vis Japan in the production of capital-intensive goods produced with standard technology. Such arguments, however, do not address the question of the adjustment costs countries like U-S and Western Europe, for example, must bear as a result of the decline of important industries.
- 3) A more fundamental weakness of traditional trade theory is its belief in the law of rising costs, according to which increased use of limited resources brings diminishing returns and higher costs. It is argued that, while the proposition holds in the short-run, abundant evidence indicates that in the long-run costs decline, partly from increasing returns to scale and partly because users learn to be more efficient.

This brings to mind the effect of both economies of scale and the learning curve in the dynamics of comparative and competitive advantage which is ignored in the traditional trade theory explanation of trade.

According to international trade theory, international unit cost differences arise from national differences in factor endowments. Industrial structure and performance have no place in the scheme of things. Industries are

assumed to be perfectly competitive and to operate in their entirety in the most efficient way. According to this account of international trade, no benefits can be yielded from economics of scale. However, it is commonly recognised that significant competitive advantages may be gained by the firms of a particular country if their domestic market is protected and they are allowed to develop a scale large enough to capture cost advantages. Under these protected conditions, a greater portion of market demand will appear stable to each domestic producer, greater market predictability should lead to faster standardisation and automation of production to capture maximum scale economies. (70)

Gorden (71) expressed a similar emphasis when he indicated that "Industries develop in a country because of the existence of potential home markets and an industry is able to export once the home market has expanded to enable the industry to attain a sufficiently large scale to become competitive in world markets." Nevertheless, it must be always recognised that the potential for the firms of one country to reap scale advantages can depend on that country's ability to recognise and operate large scale production, finance, and marketing systems. Caves (72) for example, suggested that the trade ascent of Japan and the trade decline of Britain are in part linked to their relative abilities to produce at large-scale output levels.

- 4) Another issue which has been overlooked by the traditional trade theory is the effect of the learning curve on the patterns of trade and competitive strategies in the world markets. According to the concept of the learning curve, sometimes called the experience curve, unit costs in many manufacturing industries as well as in some service industries decline with experience or a particular company's cumulative volume of production.

The causes of the decline in unit costs are a combination of elements including economics of scale, the learning curve of labour and capital labour substitution. The cost decline creates a barrier to entry because new competitors with no experience face higher costs than established ones, particularly the producer with the largest market share, and have difficulty catching up the entrenched competitors, thus creating imperfect markets, unlike the assumptions of perfect competitions which the traditional trade theory rests on (73).

So, learning curve economies, like production economies of scale, can be the source of competitive advantage in imperfect markets. It may be argued that, in the presence of learning curve economies in rapidly changing final products, quick market entry and an initial dominant position may provide a producer with a market advantage during a long phase of the product's life cycle, or early entry may provide an advantage through a long phase of an industry's development (74). The reason behind this, of course, is that as production volumes increase, and modifications in product and process technology occur, costs decline. This situation applies most powerfully to the rapidly expanding advanced technology industries.

Also worthy of mention is the fact that, in sectors where learning curve economies are likely to be significant, government policy can play an important role in stimulating or hindering their realisation in domestic firms, and hence in affecting the competitive advantage of these firms in international markets (75).

SECTION THREEMeasures of international competitivenessIntroduction

In recent years, the considerable differences between countries in the growth of productivity, rates of inflation, and movements in nominal exchange rates have affected the ability of manufacturers in one country to compete in domestic and world markets with manufacturers in other countries. Thus increasing attention is being given to the measurement and analysis of international competitiveness.

However, it has already been mentioned that there is no unique way of measuring competitiveness. There are rather a number of complementary measures, each with certain advantages and disadvantages. The usefulness of any single measure will depend on the particular aspect of competitiveness being studied and it will also depend, at least in part, on the view taken of the relationship between relative costs and prices and the pattern of international trade ⁽⁷⁶⁾. It is also pointed out that each of these measures has its weakness, either statistical, because of the statistical difficulties involved in compiling them, or conceptual, and it has also advantages and drawbacks with regard to other measures.

More important, and to the point is the fact that all of these measures relate to price or cost competitiveness, which means that they do not take account of non-price factors, such as quality, design and delivery dates. While these factors are a very important aspect of a country's competitive position, it is argued that they cannot be measured in a comprehensive way ⁽⁷⁷⁾.

However, before examining the main measures of competitiveness, it is perhaps useful to mention the main characteristics of the appropriate measure of competitiveness. In this respect one study proposed that such a measure should: ⁽⁷⁸⁾

- 1) Take into account developments in all sectors of actual or potential competition among industries without, however, including in its coverage sectors of the country which do not compete with those of other economies i.e., it should cover all traded or tradeable goods and services but nothing beyond this.
- 2) Be based on data which are rigorously comparable across countries.
- 3) In addition, an appropriate measure of changes in competitiveness should take account of the fact that we live in a world of floating exchange rates. Hence, relative changes in a Country's prices or costs must be adjusted for changes in the exchange value of that Country's currency in terms of the currencies of competing Countries over the relevant period ⁽⁷⁹⁾.

Enoch ⁽⁸⁰⁾ adds that the appropriate measure of competitiveness should depend on the nature of the market i.e., the type of competition which predominates in practice. He suggests, for example, that if international markets are characterised by imperfect competition, the relative export price data can be expected to shed light on trade performance. However, for other markets in other types of competition, the price at which the exporters of a particular country sell in relation to the prices at which other countries export will give little indication as to how much will be sold and so will reveal little or nothing about competitiveness.

It should be added, however, that for measuring a country's competitive position in the world market, we will use aggregate measures such as relative export prices, relative wholesale price, and relative unit cost of manufacturers. Admittedly, aggregate measures of price and cost competitiveness do not indicate the conditions relevant for individual commodities and markets, but they provide a broad indicator of changes in the price or cost environment within which the Competing Countries operate. ⁽⁸¹⁾

Also, in the course of this section, investigation into the nature of non-price measures and some macroeconomic indicators of competitiveness will be presented.

Accordingly, this section will review the main measures of competitiveness that can be derived from the available literature, discuss the strengths and weaknesses of each and presents those that might be useful for the purpose of the study.

The various measures and indicators which are used to examine and assess changes in competitiveness can be distinguished under the following headings:

- (1) measures of price competitiveness
- (2) measures of cost competitiveness
- (3) measures of non-price competitiveness
- (4) some macroeconomic indicators of competitiveness

1. International price competitiveness

(A) Importance of price competitiveness:-

The importance of the role of prices in competition and the allocation of resources is unquestioned. Prices reflect the operation of supply and demand, which are in turn determined by the availability of resources, the state of technology and incomes, tastes and awareness of buyers. The effect of prices on the competitiveness of products is as important in international markets as in domestic ones. The argument about international price competitiveness centres largely on the economic concept of price elasticity of demand, that is broadly whether buyers are sensitive to, and respond to, price differences between suppliers and price exchanges.

In this respect, one study indicated that "although there are other factors which will affect the competitiveness of certain products in the international markets such as the aggressiveness of marketing, delivery time, financing, after-sale services and the like yet, it remains true that the most important single factor affecting competitiveness continues to be price" (82)

There is a considerable body of literature which suggests that price variables do indeed have significant explanatory power in trade analysis. One of the more important and detailed works in this field is the study of Junz and Rhomberg.⁽⁸³⁾ They considered the effects of changes in the relative prices of imports of manufactured goods on the shares of suppliers in particular markets. Their analysis indicates that relative prices are a powerful determinant of export volumes and market shares. They found that, for eleven Countries, over a period of some eight years, forty three per cent of the variation in export market shares could be attributed to relative export prices.

Also, in an earlier and widely recognised study, Macdougall⁽⁸⁴⁾ showed that there was an inverse correlation between the relative prices of the U.S. and British products. Thus, if U.S. export prices rise relative to British export prices, U.S. exports will fall relative to British exports. The converse is also true.

Similarly, Houthakker and Magee⁽⁸⁵⁾ in their study of the effect of price changes on export competitiveness of certain countries, found that price changes were important in influencing the amount of imports and the amount of exports and accordingly in influencing the competitive position of these countries. For instance, for the U.S. they showed that a one per cent increase in U.S. prices will lead to 1.5 per cent decline in U.S. exports, other things remaining unchanged.

Others have found that devaluations in non-industrial Countries were largely responsible for increasing volumes⁽⁸⁶⁾ and that exchange rate changes have brought changes in export volumes, which are so substantial as to suggest the existence of high export price elasticities⁽⁸⁷⁾.

Looking to the British situation alone, we can find much to say.

Parkinson (88) considers the relationship between changes in unit values of exports and volumes of exports for twenty four commodities exported by the U.K. in the years 1953-1963. His results show that the relationship varies considerably from one commodity to another, but generally they tend to confirm the association between price and export performance. He concluded "much of the explanation for the United Kingdom's poor performance in export markets might be found in a tendency for her export prices to rise more rapidly than those of other countries". He adds "There is good reason for thinking that exports are price sensitive".

Consistent with this view, Wells (89) examines the unit value of exports of manufacturers for a number of Countries in relation to the pressure of demand. He considers that British prices are less responsive to demand changes by comparison with the position in other Countries studied. He believes that it is this relative inflexibility of British prices which may account, in some degree, for the loss of sales on international markets in the period under research.

Responsiveness of trade flows to relative price changes is also implied by Krause (90) when he argued that almost two-thirds of the U.K.'s loss in world export shares between 1959-1960 and 1965-1966 was due to a loss of price competitiveness.

Moreover, there is other evidence which indicates that price flexibility is still an important aspect of competitiveness for British exports. In Eastern Europe, at least, Ray (91) in his study on competitiveness of British exports in this area, reports that importers in these Countries consider that British suppliers are too inflexible in their prices compared with other suppliers.

Also significant are the results of the study by Coldstein and Khan (92) who found that import demand was sensitive to relative prices

in eight Countries, while in a single industry study Artus and Sosa (93) found that changes in price competitiveness had a significant effect on trade volumes for various exporting Countries including Britain.

Finally, it has been claimed that the floating yen has pushed Japanese export prices with dramatic results (94).

[B] Methods of measuring price competitiveness:

There are five basic measures of price competitiveness which can be briefly outlined as follows:

1) Relative export prices: One of the most widely used indicators of the competitive position, which is defined as "the ratio of export prices of certain Country's manufacturers, say the U.K., to a weighted average of the export prices of manufacturers of that Country's i.e., the U.K.'s main competitors, expressed in a Common Currency" (95).

So, other things being equal, a fall in relative export prices of the products for a particular Country's producers, might be expected to raise the volume of demand for these products, which means at the same time that these products become more competitive in the world market.

The most important advantage of this measure is that it relates exclusively to goods which enter into international competition. Moreover, this measure does seem a natural way to measure competitiveness in world markets.

However, the measure suffers from some major limitations: (96)

(a) It relates only to relative prices of the Country and its competitors' exports, which means that the measure does not take account of how profitable exporting is for the Country at this price. So, an assessment of relative competitive position based on export prices does not take into account the effects of changes in the profitability of exporting industries.

(b) It relates only to exports, and so does not take account of competitions in the home market between imports and domestic production.

(c) It measures competitiveness only in relation to exports of the Country's competitors. That means that the measure does not, therefore, take into account competition with their domestic production in their domestic markets. In other words, commodities produced domestically but not exported are omitted from export price indexes, yet these may have an important bearing on competitive strengths. If the domestic price of a commodity falls, it may then be exported or may replace a foreign product previously imported. So, an index of export prices describes only one side of the story of a Country's international competitiveness. The competitiveness of its domestic products in comparison with imports, which is equally important, escapes notice.

(d) It measures each Country's delivery prices and not quotations and so does not take account of unsuccessful quotations for exports.

(e) Another difficulty in using relative export prices as a measure of competitiveness derives from the fact that responsiveness of demand to changes in price varies between products, so a given change in average export prices could have a different effect on the overall volume of manufactured exports, depending on which particular product prices within the aggregate have changed. (97)

(f) Also, it might be noted that, if a Country's competitiveness in a specific commodity weakens too much, this may not be reflected in relative export prices as the commodity may drop out of the index.

In short, relative export prices have evident drawbacks which limit their use as indicators of competitiveness.

(2) Relative profitability of exports

Apart from export price competition, it is likely that trade performance will depend on what is happening to profits, and hence some measure of relative profitability is also instructive.

Indeed, changes in relative profitability may signal important changes in basic competitive position. The OECD ⁽⁹⁸⁾ studied the importance of such a measure by stating that "If a Country's relative export price position were to improve without a concomitant improvement in its relative costs of production, implying a squeeze on profit margins, this could considerably manifest itself in the short-run in strengthening of its trade performance. But eventually, falling profitability would lead to a shift of resources away from the export sector, with potential negative effects on the competitive position as a consequence".

Accordingly, as competition is not solely in terms of relative prices and as relative export prices take no account of how profitable exporting is at a certain price, a measure of relative profitability is needed.

One measure which attempts to capture relative profitability is what can be called "Relative profitability of exports". This measure reflects "the ratio of a certain Country's wholesale prices. Say the U.K., to the same Country's, the U.K.'s, export prices of manufacturers" ⁽⁹⁹⁾

The assumption behind this measure is that the higher export prices are relative to wholesale prices, the more likely it is that producers will wish to export rather than to sell in the domestic market.

Although the measure attempts to avoid some of the limitations of the relative export prices measure, and tends to be attractive in the sense that data are rapidly available and no information on other Countries is needed yet, it suffers from the following defects ⁽¹⁰⁰⁾:

(a) While the wholesale prices refer to current production, export prices are prices at the Customs post and thus refer to production at some time in the past.

(b) In so far as wholesale prices are prices of traded goods, the prices of which move in line with export prices under all circumstances, variations in the ratio may reflect only the different composition of the component indices, and have no implication for competitiveness.

(c) Moreover, the wholesale price index incorporates some indirect taxes, and is generally considered a poor proxy for the incentive to produce for the domestic market.

The above limitations lead some studies to consider relative profitability of exports as a complementary guide, and not as a measure in itself, that reveals to what extent changes in export prices, and hence in export price competitiveness for a certain Country's products reflect changes in the profit margins on exports against sales in the domestic market⁽¹⁰¹⁾.

(3) Relative wholesale prices

An alternative indicator which covers more of the tradeable goods sector, including the import competing sector, is the relative wholesale price index. Which in theory, measures output prices of industry.

The measure of relative wholesale prices is defined as "the ratio of a certain Country's, say the U.K.'s, wholesale prices of manufacturers to a weighted average of the Country's Competitors' wholesale prices of manufacturers"⁽¹⁰²⁾. The measure does compare prices in the Country's domestic market with the prices with which the exporters of this Country will be competing in other countries domestic markets, and the reverse, it compares prices in other Countries' domestic markets with the prices which their exports will be competing with in the given Country's home market.

It is indicated that the relative wholesale prices do not include services. So this measure is not influenced in general, by domestic services as are price indexes. Moreover, the relative wholesale indexes do not include retail selling costs and are therefore more likely to reflect international prices which were charged for any goods in the wholesale price index which may have entered international trade. In addition, wholesale price indexes include prices of raw materials, semi-finished goods and finished goods and to that extent are more likely to resemble the stage of manufacture of the largest part of international trade than does the consumer price index ⁽¹⁰³⁾.

However, different Countries wholesale price indexes vary as to the amount of internationally traded goods they include. Also, the wholesale prices collected are domestic prices, which may be quite different from international prices of the same goods. Thus, since the degree to which different Countries wholesale price indexes reflect the international price is unknown, comparisons of these wholesale price indexes will not yield readily understandable estimates of changes in relative international prices ⁽¹⁰⁴⁾.

Comparisons between relative wholesale prices are ambiguous for yet another reason, namely, that these indexes are plagued by a variety of statistical problems; coverage varies considerably in different Countries as does the method of construction and weighting. Even on an individual Country basis, there are, in practice, very few genuine output price indexes. ⁽¹⁰⁵⁾ In general, the measure does perhaps shift too much emphasis onto the domestic markets.

(4) Relative Consumer prices

This is one method which attempts to measure competitiveness through comparing changes in the price level of one economy with changes in the price level of other economies. Such comparisons, often involve the implicit pair-wise comparison of changes in consumer price indexes. According to this measurement, if the ratio of the consumer price index of Country (A) to that of Country (B) rises, then it is concluded that Country (A) has suffered a relative decline in price competitiveness.

The main disadvantage of this measure as it stands is that its coverage is too wide. Consumer price indexes typically contain large domestic service-related components which are not traded internationally such as housing, transportation, medical services and other non-tradeable services. Moreover, for the remaining categories of food, clothing, and durable goods, the proportion arising in international trade varies widely as between pairs of Countries or, conversely, the proportion which is the result of purely economic activity varies greatly.

So, because consumer price indexes contain different and often large components not influenced by international trade, comparisons between consumer indexes of the different Countries do not have clear meanings for trends in international price competitiveness for one country in relation to others.

(5) Import price competitiveness

Another alternative to measure the competitiveness of a certain Country's exports against those of other countries is to measure the competitiveness of home production against imports. The most commonly used index is import price competitiveness. Import price competitiveness is defined as "the ratio of the Country's wholesale prices of manufacturers to the price of imports of manufacturers to that Country".⁽¹⁰⁶⁾ The measure does provide a guide to import competitiveness and looks attractive in that it is not necessary to obtain data from other competing Countries. However, it is in most respects analogous to that for relative export prices, which we discussed earlier, and suffers from similar drawbacks. Also, it is argued that both components of the ratio can vary with the composition of demand which limits its usefulness as an indication of trends in competitiveness. Furthermore, if the price of import substitutes moves very closely with the world price of imports in all circumstances, then the ratio will give little information about the competitive situation. In addition, import unit values are calculated at the customs post and so cannot reflect unsuccessful attempts by foreigners to export to the country under

consideration. Enoch⁽¹⁰⁷⁾ in this respect adds that the index may be distorted by differential effects of tariffs, besides the fact that the wholesale price index is not import weighted and so includes the prices of many goods which do not compete with imports. Finally the import price competitiveness measure does not take account of the profitability of the domestic firms on their domestic sales and of foreign exporters on the sales to the imported markets⁽¹⁰⁸⁾.

2. Relative Cost Competitiveness

A. The importance of cost competitiveness.

Price is only an approximate measure of competitiveness. It is suggested that if we are to understand the problem of competitiveness more fully, we must look at costs and their determinants.⁽¹⁰⁹⁾

So, it should be recognised that prices are not the only possible focus for a study of international competitiveness. Kravis and Lipsey⁽¹¹⁰⁾ suggest that, for more understanding of trends in international competitiveness, one might go farther back in the chain of causation towards cost, or beyond that to the factors affecting costs. Stern⁽¹¹¹⁾ confirms this view when he states that "the identification problem in the interplay of demand and supply factors might be smaller when costs rather than prices are compared". He adds "The reason given is that export prices adjust to changed conditions more rapidly than costs, and thus price comparisons may not reflect as clearly as cost comparisons the causes for shifts in the flow of trade."

Furthermore, it is indicated that, irrespective to the type of the market in which goods are sold, prices need to be sufficiently above direct costs, at least in the long run, to provide an adequate return on capital employed. The difference between price and some suitably defined measure of cost will provide an indication of profit, and thus, perhaps, of willingness to carry on supplying. That means that costs faced by an industry constitute,

therefore, a critical factor in its profitability, i.e., competitiveness and accordingly the survival of the industrial base as a whole⁽¹¹²⁾.

One study expressed a similar view when it indicated that "although costs might not have a direct influence on foreign trade performance, in conjunction with prices they affect the profitability of production and by extension, the potential for investment and for increasing productivity and, ultimately, the industry's chances of survival and of competing on world markets in the long term⁽¹¹³⁾.

Perhaps the most significant evidence about the importance of relative costs emerges when we approach the productivity question. The subject that has captured the attention of policy makers everywhere as they seek to determine why their economics in recent years have achieved such low overall productivity growth. The answer to this question and the question of competitive strength generally, can be approached partly by looking at those elements that constitute a key to price competitiveness in international commerce. One major element is the costs of production⁽¹¹⁴⁾.

On the other hand, a number of studies have been conducted to analyse changes in costs and their components, and their relevance to the competitive position of the competing Countries.

Lomfalussy⁽¹¹⁵⁾ for example, looks at changes in costs and their components overtime, hourly earnings and output per man-hour for the U.K. and the Community of the six over the period 1953-1960. He found that over this period, unit labour costs rose more rapidly in the U.K. than elsewhere and the reason for this variation between the Countries under research can be explained largely by national differences in the growth of productivity. Ray⁽¹¹⁶⁾ gives some support to the above conclusion when he states that "It has been asserted that labour costs in Britain are high and that

they have been increasing too rapidly." He adds, "some may even be inclined to find a casual link between the rise or level of wage costs and the relatively unsatisfactory British export performance."

O'Cofaigh⁽¹¹⁷⁾ in the same spirit, explained the importance of costs to the Irish Producers' Competitiveness when he indicated that product prices are largely determined by reference to costs of production abroad. The local producers will be facing a given price structure, and will be attempting to make a profit while selling at this given price. He continues to point out that whether or not they can produce and sell profitably, therefore, depends critically on their costs of production. So, in brief, no producer can price competitively if costs are uncompetitive.

Taking into account the major drawbacks of price competitiveness measures and the role of costs in determining the competitiveness for a particular economy, Considerable importance is generally attached to changes in unit costs, and thus the need for an appropriate cost measure of competitiveness becomes clear.

B. Measures of cost competitiveness

The above considerations suggest that the evolution of relative cost measures, rather than relative price measures, is likely to be a more comprehensive single indicator of the basic competitive position.

In fact, using cost measure for competitiveness rather than price measure could give several advantages⁽¹¹⁸⁾:

- A cost indicator covers all manufacturing industries; those which are exporting, those which are potential exporters and those which are facing competition from imports.
- A cost indicator is not affected by whether changes in costs are reflected in prices or in profit margins.
- A cost indicator would in principle relate better to quotations for exports, both accepted and rejected, than a series of export prices.

- Finally, as indicated earlier, a measure of competitiveness based on costs seems, on the whole, to give us more information. It will do more than a price measure to pinpoint the origin of economic difficulties and to highlight their repercussions.

However, before explaining the measures that could be used in assessing competitiveness according to a cost-base, it is imperative to mention from the outset that, a measure of cost competitiveness should cover all costs, but, in practice, comparisons are restricted to labour costs.

The reasons for this are twofold: on the one hand because of the statistical difficulties associated with measuring total costs of production on a comparable basis; on the other hand, the contributions of disparities in non-labour inputs prices to differences in total costs, it is argued, appears to be generally small, since labour is usually both the main factor of production, and the one which varies most in price⁽¹¹⁹⁾. Also, it might be argued that even in industries where labour costs appear to account for a low portion of the selling price of the product, the costs of raw materials and other intermediate products used in production tend to include a sizeable element which reflects labour costs⁽¹²⁰⁾.

The Economic Progress Report⁽¹²¹⁾ extended the argument when it indicated that "The omission of some raw material inputs may in any case be of little consequence because their cost may not vary much between industrialised Countries since goods are homogeneous and the price is likely to be fixed internationally"

O'Confaigh⁽¹²²⁾ shares the same opinion when he states that "in comparing relative cost development across Countries only labour cost data are available on a comparable basis. Non-labour costs of production are clearly relevant to producers' competitiveness, but labour cost is often both the largest and most variable element of total costs".

British data may give some support to the above views. If we look at the British costs of production in 1981, we find that the prime element arises from payments to employees with approximately 48 per cent of total final output being paid out as wages and salaries. Another 30 per cent arises from imports and taxation on goods and services. Allowing for this, 69 per cent of all gross domestic production goes in payments to employees.⁽¹²³⁾

These figures allow for the fact that many costs or expenditure on components reflect labour costs in the industries supplying these inputs.

But in starting to compare labour costs across Countries, a distinction must be made between:

- a) labour costs, which represent the full cost of employment to an employer and
- b) wage and salary costs, which are only one component of labour-costs.

The difference between the two, which represents non-wage labour costs, include statutory items such as employers' national insurance contributions, contractual liabilities, such as dismissal indemnity payments, payments in kind and other expenditure on, for example, training and staff facilities.

However, from the point of view of international competitiveness, unit labour costs represent the base of comparison. So, because unit labour costs depend on the total labour costs, on the one hand, and labour productivity on the other hand, the comparative labour costs have to be adjusted for productivity if they are meant to be used as an indicator of competitiveness.

Table 2.3 shows total labour costs, productivity and unit labour costs in manufacturing in the U.K. the U.S.A. and Germany for the period 1971-1983.

Table 2.3: Total labour costs and productivity and unit labour costs in manufacturing in U.K., U.S.A. and Germany 1971-1983 (1)

	U.K.				U.S.A.				GERMANY			
	1971	1976	1981	1983	1971	1976	1981	1983	1971	1976	1981	1983
(1) Total labour costs	100	100	100	100	236	209	146	186	151	208	145	160
(2) labour product: ivity	100	100	100	100	294	289	302	298	133	147	157	153
(3) Unit labour costs	100	100	100	100	80	74	48	62	114	141	92	105

Source National institute review. no. 110, November 1984 p. 64.

The above table demonstrates that whilst labour costs per hour in the U.S.A. were much higher than in the U.K. throughout the whole period, if adjusted for the even higher level of productivity, costs per unit of output were consistently lower than in Britain. German unit labour costs varied but by the early 1980's they too fell below those of the U.K.

With regard to measures of cost competitiveness we can find two main measures, namely, relative unit labour costs and normalised unit labour costs.

1) Relative Unit labour costs.

One of the cost-based measures of competitiveness is the relative unit labour costs. The measure represents "The ratio of the home Country's to the Competitors' unit labour costs in the manufactured

sector, expressed in a common currency "(124)". So, to obtain the index of relative unit labour costs, the home Country's index is divided by a trade-weighted average of the indexes of the other competitors. A rise in the ratio signals a deterioration in the home Country's relative position, while a dip in this ratio indicates improvements in the Competitive position.

However, productivity and unit labour costs in turn, tend to vary cyclically with the level of capacity utilisation. These variations are probably not as relevant to a measure of competitiveness as are changes in the trend of productivity, where producers are more likely to take decisions on pricing and marketing on the basis of a trend of productivity rather than in shorter term variations. In other words, to take comparisons in competitiveness according to a cost-based measure a step further, it pays to take a look at a short-term analysis of unit-labour cost trends, using quarterly data. In this context cyclical productivity movements may give misleading impressions of a Country's international competitiveness⁽¹²⁵⁾. It is generally recognised that in the early stages of recession, as demand slackens, the numbers of hours worked usually falls, but less rapidly than output. When that happens, productivity is likely to suffer, causing unit labour costs to rise. Conversely, as the recovery gets under way, output tends to rise faster than labour input and unit labour costs will stabilise. It is thus preferable to base the measure on "normal" or "cyclically adjusted" unit labour costs.

2) Relative normalised unit labour costs

To eliminate these short-term deviations in productivity, the international monetary fund (IMF) developed its relative "normalised" unit labour costs.

Relative normalised unit labour costs is defined as "The home Country's normal labour costs per unit of output divided by a weighted average of competitors normal labour costs, both series being expressed in a common currency and adjusted for variations in productivity about its long-term trends".⁽¹²⁶⁾

Here again, arising ratio signals deterioration in a Country's competitiveness while a fall denotes improvement in the competitive position for the country.

This widely used indicator complements the labour-cost indexes, providing another, although often lagging, guide to evolving trends in competitiveness. The lag arises when cost increases are temporarily absorbed in profit margins, rather than passed on in higher prices⁽¹²⁷⁾.

It is claimed that unit labour costs, as a measure of competitiveness possibly provide most advantages where trade is conducted by multinational firms. In this case it is argued that technology and capital are likely to be relatively mobile internationally and raw materials can be obtained at approximately the same cost in different Countries. Thus, unit labour costs will be a principle cause of cost variation between countries and in this case, a unit labour cost index, accordingly, might be considered as the best measure of competitiveness.⁽¹²⁸⁾

However, a cost-based measure of competitiveness has certain drawbacks which can be outlined as follows:-

(1) It is argued that the main disadvantage of such a measure lies in the problems of constructing a suitable index. Ideally, as mentioned before, a measure of cost competitiveness should cover all costs and although the movements in relative labour costs can be considered as a suitable guide to movements in total costs, yet they will tend to overstate them, since labour costs represent only a part of total costs⁽¹²⁹⁾. More to the point also, is the fact that costs are difficult to measure. The problem is that there is no way of measuring unit cost of output across the rank of a Country's industrial activities. For instance, material costs are usually excluded from any estimated index because of the limited internationally comparable data. This, in turn, introduces an immediate limitation in that the exclusion of other costs means

that, on the other hand, any differences in the composition of factor inputs and their relative productivity trends may detract from the value of the index as reflecting overall competitiveness (130).

(2) As with average measures of price competitiveness, unit labour costs in sectors which are not, by their nature, subject to extensive foreign competition, should not be given equal weight with those that are. (131)

(3) In recent years however, it has been particularly difficult to discern the trend rate of productivity growth. This has led both to difficulties in constructing a reliable measure of normalised unit-labour costs and to some doubts about its continued validity. For instance, the recent improvement in productivity in the U.K., if spread evenly throughout industry, and if sustained in the years to come, should improve competitiveness in a way not yet recognised in the normalised measure. (132)

In general, whatever their importance, labour costs constitute only one among the many factors that influence the competitive position of any Country's products in the international market, and thus, the importance of any measure based on it, should be evaluated in this context.

Non-price measures of competitiveness

Introduction

Though the preceding survey of research literature provides light on price and cost as measures of export performance, which offers some confirmation of the view that price and cost are considered a major weapon in international competitiveness, yet, what is equally interesting is the suggestion that, while relative prices and relative costs may explain part of the changes in international competitiveness, they do not explain all the variations in export competitiveness. At the same time it is apparent that non-price factors play an important role in the determination of the Country's overall competitiveness.

That does not mean, of course, that price is ever unimportant, or has less importance, in international competitiveness, since it normally makes up a significant element in the total package bought by customers, but it appears equally dangerous to assume that price explains all differences in competitiveness⁽¹³³⁾.

In this respect, The Economic progress report⁽¹³⁴⁾ indicated that "international competitiveness will depend in part on the kind of factors reflected in the usual relative price or cost-based measures of competitiveness, but it will also depend on a host of less tangible factors". It added that "Except in the case of homogenous products, quality and design matter to purchasers, as well as price. For capital and other durable goods, delivery dates and after sale service will be important. For non-durable goods and services it may be reliability and continuity of supply. Effective marketing may also have a significant influence on performance."

However, it is commonly argued that, although non-price factors are undoubtedly an important aspect of a Country's competitive position, yet they cannot be quantified in a comprehensive way.
(135)

The importance of non-price factors in international competitiveness.

The term "non-price competitiveness" has been used to describe these other aspects of competitiveness which, unlike relative prices or costs, are not readily quantified.⁽¹³⁶⁾ So, non-price factors are, strictly speaking, all the influences other than price and cost which affect competitiveness.

As a starting point, it is to be noted that, while it is not easy to assess quantitatively the impact of non-price factors on international competitiveness, there is awareness that their relative importance varies between commodity groups and that in certain instances this influence is particularly strong.

The importance of non-price factors is documented in Wilson's article on this topic.⁽¹³⁷⁾ He stated that "press comment and much industry thinking tends to identify competitiveness with price but all marketers know that price is only one factor influencing buying decisions, and this applies no less in export markets than at home. A high pound and high inflation dictate that we should sell on factors other than price." He continues by asserting that "Good marketing is a matter of establishing, maintaining and exploiting competitive advantage."

Supporting this view, O'Cofaigh⁽¹³⁸⁾ argues that, although non-price elements of competitiveness can make significant contributions to the Country's performance in world markets and against foreign competition in the home market, yet this is an area which is often ignored in assessing competitiveness because improvements can be achieved only overtime. He continues by pointing out that it would be regrettable if there was not a continuous effort to improve all facets of competitiveness. The implications for the nation of failure to achieve this potential are clear.

In another article, O'Cofaigh⁽¹³⁹⁾ outlines the importance of non-price factors when he indicates that, "while the standard of products is of paramount importance, the Country's competitive position in the market place will also be determined by the efficiency with which she delivers the goods, the reliability of backing up services and a host of other factors specific to different industries with which we are familiar". He adds "the image of the Country as a trading nation and the perception others will have as to the reliability of her products will depend on these broad aspects of business management".

According to the NEDO⁽¹⁴⁰⁾ study about price and non-price competitiveness there are two broad aspects of non-price competitiveness. The first includes the act of selling which would encompass advertising, the use of agents or subsidiaries, personal selling and public relations. The second aspect relates

to the product e.g., its design or fashion, ease of maintenance and operations, quality, including reliability and technical specification and after sales services.

In another study, the full range of non-price factors are divided into three main groups⁽¹⁴¹⁾

- 1) Factors associated with the product itself which include design and quality particularly as they relate to the performance and reliability of the product in use. It was established that quality is one of the most important factors contributing to export success in world markets. Countries which supply products that are more reliable, well designed, and offer high performance, were found more competitive in the foreign market.
- 2) Services which include advice and assistance to customers in making product choices, user education and training, after sales services and maintenance, speed and reliability in delivery and the like. Quality is not the only factor affecting competitiveness in foreign markets but it is proposed that it is a necessary condition for export success. Efficient after sales service, reliability in delivery, and selecting and motivating overseas agents, were also established as contributors to competitiveness in the foreign market.
- 3) Marketing intangibles, which are related to creating values which add to the customers perception of the worth of the product. These include the image associated with the Country's or Company's name, the act of advertising and sales promotion, the brand image, and the other values created through the marketing policies adopted.

In fact, a number of surveys and studies have been conducted to determine the role and importance of non-price factors in international competition. The results of most of these studies explain the currently popular view that non-price competitiveness is the secret of gaining competitive advantage in the international markets.

An earlier study of the relative performance of British goods in the home market, concluded on the basis of users' opinions that technical performance was the decisive factor for most imports of mechanical engineering products, electronic capital goods and scientific instruments.⁽¹⁴²⁾

In another study Kravis and Lipsey⁽¹⁴³⁾ came to the conclusion that relative export prices lost their force in the real market place because of the surrounding factor. They argued that "tariffs and quotas, division of markets, tendency to maintain customary trade channels, technical know-how and other factors operate to varying degrees to reduce the impact of price on trade flows".

In a further study by the same researchers⁽¹⁴⁴⁾ they found that two-thirds of successful U.S. exporters relied on non-price factors in achieving their success. They reported that "in many cases price is secondary to delivery date and the ability of U.S. firms to offer faster delivery is an important non-price advantage."

Also, considerable research has been undertaken in recent years to examine how British firms compare with overseas competitors in the provision of non-price factors. The results of some major studies by Ray⁽¹⁴⁵⁾ CPRs⁽¹⁴⁶⁾ ITI⁽¹⁴⁷⁾ Industrial Market Research⁽¹⁴⁸⁾ and Connell⁽¹⁴⁹⁾ among others, have demonstrated that the decline in Britain's market share in manufacturers over the post-war period is largely attributable to a deterioration in non-price competitiveness.

A more detailed analysis of the Power of non-price aspects in achieving competitiveness will be dealt with in the next chapter when discussing the role of marketing.

Measures of non-price Competitiveness

As mentioned earlier, one major aspect of non-price factors is the difficulty of quantifying them in a way that could be used in an econometric analysis. In fact, most of the evidence presented is

based on case studies which may be difficult to generalise. But in the meantime, it is indicated that only with respect to waiting time is there reliable history of evidence.

The first study to determine the role of delivery lags on export demand was by Steur et al⁽¹⁵⁰⁾. In their study of the effects of waiting time on foreign orders for machine tools, they found delivery lags to be highly significant variables. In more recent work, one study⁽¹⁵¹⁾ found that a fifty per cent increase in waiting time was equivalent to an eight per cent increase in actual price. In the same vein, another study determined that a one month increase in a Country's waiting time, when delivery terms in other Countries remain unchanged, is equivalent to an increase in the ratio of quoted prices of up to five per cent for most commodities.

However, this does not prevent researchers from trying to analyse the role of non-price factors in real terms. One of these attempts is that made by NEDO study⁽¹⁵²⁾, which used the average value per tonne as a measure of non-price competitiveness.

Average value per tonne comparisons:

One way of measuring the effect of non-price factors on the relative competitiveness of different Countries is by comparing the average value per unit weight of different Countries' exports. It is indicated that the rationale behind this method follows directly from the view that in a given market situation there is little room for differences in price between identical goods. So, apparent differences in price which persist beyond the short-term therefore represent differences in the non-price elements of the product packages being offered⁽¹⁵³⁾. The study continues to point out that, one would generally expect products of higher level of technological sophistication to have higher values per tonne than more basic items. Accordingly, where two Countries' exports of a particular product group have substantially different values per tonne, this may indicate that either they export a different mix of products or that there are across-the-board differences in non-price characteristics, or both.⁽¹⁵⁴⁾

Of course, differences in non-price factors will be obvious in products where those factors form an important element in its overall competitiveness such as mechanical engineering. Table 2.4 compares the average value per tonne of most of major industrial Countries' exports of non-electrical machinery for the period 1962-1975.

Table 2.4: Average value per tonne of non-electrical machinery exports.

Country	Average value per tonne of exports. \$ thousand/tonne			Shares of main industrial Countries exports.	
	1962	1975	Change	1962	1975
U.K.	1.75	4.24	142%	17.5	11.2
West					
Germany	1.99	5.94	198%	23.8	24.4
France	2.00	5.11	156%	5.9	8.8
Italy	2.30	4.74	106%	5.5	7.1
Belgium/Lux.	na	4.04	na	2.2	2.6
Netherlands	2.08	5.77	177%	2.2	2.7
Sweden	2.20	5.99	172%	4.0	3.7
Switzerland	na	10.49	na	4.1	3.8
Japan	1.40	4.11	193%	2.7	8.8

Source David Connell, The U.K.'s performance in export markets: Some evidence from international trade data, National Economic development Councils 1979, p.17.

From the above table it can be seen that the U.K. had lower value per tonne than the majority of its competitors both in 1962 and 1975. But more significant are differences in the percentage increases between the two years. Only Italy increased its export earnings per tonne more slowly than the U.K. Also, the table indicates that the U.K.'s share of industrial Countries' total exports of these products fell sharply from 17.5 per cent in 1962 to 11.2 per cent in 1975. None of the other Countries experienced such a marked decline. One would have expected shares to have moved in quite the reverse direction if variations in the average

value per tonne represents price changes alone.⁽¹⁵⁵⁾ Moreover, the study confirms that it seems unlikely that such large apparent price differences could have been sustained for very long if they were not indicative of real underlying variations in product mix, quality or other non-price factors.

The detailed analysis by product groups introduced a further indication that differences in non-price factors were involved.

However, the value per tonne comparison as a measure of non-price competitiveness has certain defects; one major disadvantage is that most Countries, including the U.S. for example, do not publish data on the whole range of product exports both in value and tonnage terms so that value per tonne comparisons are not always possible. Another shortcoming of this measure is that in many cases, the coverage of products entering the international trade changes from year to year, thus limiting the possibility of making reliable comparisons⁽¹⁵⁶⁾.

(4) Some Macro-economic indicators of competitiveness.

It is evident that the preceding measures of competitiveness are used in trying to assess the relative trading performance of different countries according to certain aspects of competitiveness i.e., price, cost, non-price, although no one measure could be considered as a fully adequate indicator of the overall position for a particular Country. It is therefore necessary to examine the trading situation of an economy by means of other methods which reflect the overall position rather than to rely on a single unique mathematical statement as being sufficiently representative.

In this respect a number of measures of relative performance in international markets are used to assess changes in a Country's position in world trade. Among these are the following indicators:-

1. The share of foreign markets.
2. The trade balance

3. The absolute level of exports and export growth
4. Terms of trade, which measures the rates at which a particular Country's exports may be exchanged for imports.

Each of these measures can be aggregated across all industries to obtain a single, macroeconomic equivalent.

The problem is that these various measures can, and often do, change independently and in opposite directions. Consequently in the absence of clear understanding of what competitiveness means, there is no simple, unambiguous answer to the question of what is happening to a given Country's international competitiveness.⁽¹⁵⁷⁾

(1) Export Market Shares: A Country's share of world exports is a commonly used indicator of a Country's competitiveness.

It is argued that in the absence of analysing these price and non-price determinants of changes in competitiveness, one could analyse changes in a Country's export shares as ex post reflections of changes in competitiveness⁽¹⁵⁸⁾.

On the other hand, it is indicated that changes in shares are the product of changes in relative prices, including costs, and non-price factors. So competitiveness in the sense of market shares, may rise or fall as a result of an increase in a Country's relative prices or non-price factors depending upon whether the elasticity of substitution between its exports and those of other Countries is less or more than one⁽¹⁵⁹⁾.

Also, it is claimed that, although the changes in a Country's share in the foreign markets are not entirely determined by changes in competitiveness, changes in market shares are also influenced by changes in demand conditions in the world market as well as by domestic supply conditions, an analysis of these shares can none-the-less be taken as a good proxy of overall changes in a Country's competitiveness compared with its partners in the world markets.⁽¹⁶⁰⁾

The assumption underlying an examination of export market shares is that in the absence of changes in competitiveness a Country's share should remain constant. At the individual product level, such an assumption is conceptually valid. However, any change in a Country's aggregate market share is but an average of the changes in these individual shares.

According to the principle of comparative advantage, as discussed in the previous section, a Country cannot become more or less competitive in all products simultaneously since trade involves the exchange of those products that a Country can produce most competitively for those in which it is least competitive. Consequently, to achieve the gains derived through trade, a Country will reduce its output and increase its imports of those commodities in which it has a comparative disadvantage. Correspondingly, it will increase its output and exports of those commodities in which it has a comparative advantage. That indicates that changes in a Country's export market share are, in part, influenced by changes in the Commodity Composition of its trade. Therefore, a decline in export market share may only represent the natural shift in the composition of the Country's trade needed to take advantage of the gains from trade. (161)

Changes in export market shares are also affected by both the developments within particular foreign markets and by changes in the Country's competitive strength relative to that of competing Countries. The former includes shifts in the consumer demand within the export market, import substitution production, and import restrictions. While the latter is affected particularly by price and cost competitiveness or changes in the comparative advantage structure of the Country's exports, it might also be a result of the role of Government towards exports. For instance, it is argued that the relative deterioration of U.S. export market shares could be explained partly by the fact that U.S. Government taxation, export credits and other policies and programmes relating to exports are less favourable than those found in competing Countries (162).

Furthermore, changes in export market shares, are also influenced by differences in growth among Countries. In this case, a decline in market share might only indicate that the Country is becoming smaller relative to the world market and need not imply any loss in its competitiveness.

The critical feature of changes in export market shares is that they most likely reflect changes in the composition of a Country's trade due to underlying structural factors. If so, then an understanding of these changes in a Country's export market share requires a detailed study of the changes in these structural factors⁽¹⁶³⁾.

It is recognised that the analysis of competitiveness according to the market share measure can help in revealing the areas of weakness and strength in the Country's export performance relative to that of its major competitors and accordingly to suggest the causal factors in the deterioration of export performance.

In addition, the use of market share analysis can help in finding answers to such questions⁽¹⁶⁴⁾ as in which commodities and which regional markets did the Country lose or gain export shares? Which competing exporting countries gained and which ones lost as measured by their export shares? What were the production characteristics e.g., technology-intensity, physical capital-intensity or human-intensity, of commodities for which the Country export share showed substantial shifts? and how much of the year-to-year changes in the export shares can be explained by changes in relative prices or costs?

Generally speaking, an analysis of a Country's market share provides a measure of whether a Country has been able to maintain or improve its relative share of the industrialised world's exports or whether, on the contrary, its share has fallen. Table 2.5 shows that there has been a steady decline in the U.K.'s share of total world trade of manufactured goods since 1980. While the share

of the U.S. in total world exports has fluctuated throughout the period, France seems to be in the same situation as the U.K. The shares of other competitors have been either roughly maintained, e.g., Italy and Germany, or increased, e.g., Japan.

It has been suggested that for the U.K. there is abroad association between Competitiveness measured by relative prices and costs and the share of world trade. However, what remains more difficult to analyse is the relative influence of price and non-price factors on market-share. (165)

On the other hand, it is indicated that any analysis of changes in market shares based on trade data alone, suffers from a major shortcoming, that is, that the measure can take no account of changes in trade which arise from the developments of local

Table 2.5: Market share of exports of manufactured goods.

Year	Total \$ billion	U.S.	Japan	France	Germany	Italy	U.K.	Others
1974	363	17.2	14.5	9.3	21.7	6.7	8.8	21.8
1975	392	17.7	13.6	10.2	20.3	7.5	9.3	21.4
1976	442	17.2	14.6	9.7	20.5	7.1	8.8	22.0
1977	509	15.5	15.4	9.9	20.7	7.6	9.4	21.4
1978	607	15.1	15.6	9.8	20.7	7.9	9.5	21.4
1979	726	15.9	13.6	10.9	20.7	8.4	9.7	21.3
1980	839	17.0	14.8	10.0	19.9	7.9	9.7	20.6
1981	819	18.7	18.0	9.3	18.3	7.8	8.6	19.3
1982	768	17.8	17.9	8.8	19.6	7.8	8.5	19.6
1983	759	17.2	19.0	8.8	19.1	7.8	8.0	20.1
1984 1	203	16.9	20.1	8.3	19.0	7.7	7.8	20.2
11	204	17.1	20.7	8.8	18.0	7.2	7.7	20.5
111	207	17.5	20.3	8.6	18.8	7.7	7.2	19.9

Source: National Institute Economic Review, No. 110, November 1984, p.119.

production in other Countries. (166).

Also, the market share measure is a single value assessment and does not take into account factors which generate the market share such as productivity, capital investment and the like. In brief, although the market share measure seems to be simple and effective, its assessment is too general.

(2) The Trade Balance. The trade balance is perhaps one of the most carefully watched indicators of competitiveness. It is understood quite clearly, that a Country must either earn enough from its exports to pay for its imports or go increasingly into debt to the rest of the world. However, attention is all too often focused on the balance of merchandise trade. But the balance of payments item that measures the change in a Country's net indebtedness is the current account, which measures the balance of goods and services⁽¹⁶⁷⁾.

A current account surplus is widely regarded as a desirable national goal. However, what is usually not recognised is that most Countries in the world have little control over their current account balance. It is claimed that the reason behind this is that both imports and exports are determined to a significant extent by the exchange rate, and that the exchange rate, from the other hand, is strongly influenced by current account balance. As a result of this circular causation, the current account for a particular Country has a natural tendency to return to balance whenever an imbalance occurs, either surplus or deficit, the exchange rate changes to a new level, relative to what it would otherwise have been, until the imbalance is corrected.

It is indicated that several important conclusions follow from the tendency of the current account to balance⁽¹⁶⁸⁾.

- a) Given the acceptance of floating exchange rates, a current account imbalance does not necessarily imply that some public policy response is required. A current account deficit will correct itself. Likewise, a trade surplus would constitute an elusive public policy goal.

- b) An improvement in the international competitive performance of one industry, because of its effect on the exchange rate, may contribute to deterioration in the international competitiveness of other industries. Thus, the competitiveness of any one industry cannot be understood solely by comparing it with its counterpart abroad. Each industry must also be viewed in comparison with the other domestic industries with which it competes for resources such as land, labour, and capital.
- c) A trade balance caused by other factors such as investment, productivity growth, foreign trade barriers and the like, affect the composition and the level of trade, but not whether trade is balanced.

Dorubusch and Fischer⁽¹⁶⁹⁾ argue that the competitiveness of British exports and domestic production plays a role in explaining the behaviour of the current account. In their view, there is a close, almost one-to-one, link between the budget deficit and the current account deficit because:-

- a) To a large extent, the actual budget reflects the operation of automatic stabilisers. If the external shock worsens the current account, thereby reducing the level of income, budget will also go into deficit.
- b) Expansionary fiscal policy that raises income will worsen the current account.
- c) An expansionary fiscal policy will raise aggregate demand and thereby worsen competitiveness. The deterioration will arise in part from the behaviour of domestic wages, but could arise from anticipatory exchange rate movements.

In short, the international performance of a particular economy could be measured according to the position of trade balance as represented in the current account situation.

(3) Net Exports and export and import growth.

It is argued that the most correct method for comparing trade performance and for assessing comparative advantage is to examine net exports on a disaggregated level. Changes in the sign of net exports can be a strong indication of changes in comparative advantage⁽¹⁷⁰⁾.

In fact, there is a link between net exports and export market shares as indicators of competitiveness. The link derives from the fact that a certain country's export success depends on both the demand for its goods and services and the ability of the local firms to meet these demands. However, because the level of the Country's imports helps to determine the value of its currency, and because the value of the currency is an important determinant of the supply abroad for its goods and services, it follows that a necessary condition for a high level of exports is a high level of imports and that to gain market shares abroad it is necessary to concede market shares at home⁽¹⁷¹⁾.

A similar indication of the changes in the Country's competitive position is the rate of exports to imports in a commodity class. The ratio is a simple way to summarise relative changes in the growth of exports and imports.

However, it is argued that although the ratio of exports to imports can be indicative of changes in competitiveness, it may also reflect differences in trade barriers. Accordingly, it becomes difficult to determine what effects can be attributed to changes in competitiveness and what can be attributed to trade barriers.⁽¹⁷²⁾

(4) Terms of Trade At the macro-economic level, one might also be interested in a fourth indicator known as the terms of trade, which measures the rate at which a Country's exports can be exchanged for its imports. In other words, it refers to the price of a Country's imports in terms of its exports⁽¹⁷³⁾. For example, if the U.K. exports machinery and imports cars, an increase in car prices relative to machinery prices would cause the U.K. terms of trade to

worsen. That is, it would take a greater amount of machinery exports to pay for the same quantity of car imports. For the manufactured commodities, terms of trade represents "The ratio of the unit value of manufactured exports to the unit value of manufactured imports".⁽¹⁷⁴⁾

While other indicators of competitiveness are measures of how a certain Country's goods compare with similar foreign made goods with which they compete, the terms of trade indicator compares the Country's goods with the relatively dissimilar goods for which they are exchanged in world markets.

Although the terms-of-trade measure is not often used as an indicator of competitiveness, it is recommended by the fact that it is probably the measure most closely related to national welfare. On the other hand, the fact that the terms of trade measure is only loosely related to other indicators illustrates the danger of using any single one of the other measures as a policy objective.⁽¹⁷⁵⁾

SUMMARY AND CONCLUSIONS

The objective of this chapter was to shed light on the concept of competitiveness, its meaning, evolution and measurements. The study began by defining competitiveness. It was evident that there is no precise definition of competitiveness. However, as a working definition, competitiveness was defined as "The ability of a Country's producers to create, sustain and develop advantages for their products in domestic and international markets by means of price and non-price qualities which form a more attractive offer than that presented by competitors".

With regard to the evolution of the concept, traditional trade theories were seen as a useful starting point in understanding trends in international competitiveness. However, it was concluded that the policy prescription implied by international trade theories is no longer adequate and informed policy discussions must be extended further in order to analyse policy questions over-looked in their theoretical framework.

Lastly, attention was drawn to the issue of measuring competitiveness. Four main groups of measures were identified including price-based measures, cost-based measures, non-price measures and macroeconomic measures. From all these measures, it has already been concluded that there is no single way of measuring competitiveness and whatever the basis for different measures, any given measure describes only one facet of the economic structure or development and may be misleading unless viewed as part of wider picture.

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CHAPTER THREE

THE MAIN FACTORS AFFECTING COMPETITIVENESS
IN INTERNATIONAL TRADE

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INTRODUCTION

From our brief consideration of the structure of comparative and competitive advantage in the preceding chapter, it becomes apparent that comparative advantage is not static but dynamic. There is a wide variety of factors that influence the international trade position of individual firms and industries in a country competing in the world markets.

Thus, to analyse the dynamics of competition between firms and industries in the industrial world, it is necessary to go beyond the simple Ricardian and H-O theories, which focus on relative factor endowments and static technology, to consider the role of the Government policies, economics of scale, technological innovation and marketing, among other factors, in shaping the comparative advantage of individual countries and the competitive advantage of individual industries and firms in the world market. For instance, it is commonly accepted nowadays that in many sectors important to trade between the industrial economies, such as automobiles and steel, economies of scale give firms in rapidly growing, highly protected domestic markets a competitive advantage in international markets.

In fact, it is difficult to cover fully the long list of factors having some impact on competitiveness which are wholly under or outside the influence of management at company or national level. Our main attention, however, will be directed at those factors which are tied mostly to shifts in the structure of comparative and competitive advantage.

For the purpose of our study, the full range of factors affecting competitiveness will be divided into two distinct groups. The

first includes the analysis and description of those factors of a "Macro" type, that is, those concerned with issues relating to the role of Government policies, exchange rates and the role of infrastructure. The second group includes those factors of a "Micro" type, that is, having to deal with such factors as technological innovation, economies of scale, marketing, management skills and philosophies and so forth, which relate to the management of a particular industry or firm.

Although the distinction between the two groups is a rough one, it is nonetheless useful. In practice, this distinction is often neglected which may lead to the impression that the industrial difficulties are composed equally of problems in the two groups. So, the division may be useful in diagnosing difficulties and prescribing appropriate remedies which, in turn, may be helpful in relation to the recovery of certain industries.

To examine the above issue, it is necessary to divide this chapter into two sections:

The first will be devoted to exploring the role played by some factors at the macro level and which have an impact on competitiveness. Three factors will be examined, namely,

- . The role of Government
- . The role of exchange rates and
- . The role of infrastructure.

The second will focus on examining the role played by some factors at the micro level which also have some impact on competitiveness. These include:

- . Technological innovation
- . Economies of scale
- . Marketing factors
- . Managerial skills and philosophies and
- . The role of productivity.

Thus, the main purpose here is to investigate to what extent these factors, either at the macro or the micro level, can affect the competitive position of a given country's firms or industries in the international markets.

SECTION ONE

The Macro Factors Affecting International Competitiveness

(1) The role of Government

INTRODUCTION

There surely can no longer be any question in an industrial Society concerning the major role government has to play in the problem areas which face industries within an economy.

In fact, the eroding market share of most of the developed economies, the rapid development and export growth of some of the developing countries, the emergence of eastern European countries in world trade and the rapid progression of other nations, especially Japan, up the ladder of technological competitiveness, pose a fundamental challenge for the US and other slower-adjusting economies in Europe. The scope and intensity of competition is growing in terms of the number of competitors, the quality of products offered and the financing arrangements available to buyers⁽¹⁾ .

In these circumstances, a number of governments have felt compelled to become more directly involved in trade and in dealing with problems of changing comparative advantage and competitiveness.

Magaziner and Reich⁽²⁾ outlined the importance of this role for American industry when they stated that "without government support American business will find it increasingly difficult to achieve competitive leadership in today's international environment". They add that "this does not mean that government can effectively supplant or second-guess the strategic decisions of business, nor does it mean that all firms are or should be dependent on the government. It simply means that the competitive strength of the economy as a whole requires a coherent set of public policies for improving competitive productivity in industry."

In a similar vein, Stever⁽³⁾ was quoted as saying "when you look abroad at some industries competing for world markets, they work hand in hand with governments. Very often we, the U.S., do nothing to help our own companies. We are not well equipped to carry this battle." He further stated that "if the U.S. is to maintain the ability to grow, more and more intervention will be necessary in the private sector".

Along the same line of thought, it is recognised that government in Britain must play an active and direct role in encouraging and improving industrial competitiveness. The reason given is that free market forces alone will prove insufficient to enable Britain to achieve the necessary application of advanced technologies. As Taylor⁽⁴⁾ put it "it is quite unrealistic to expect such new industries to grow in the market place without government promoting and assistance".

Apart from the issue of directing the economic forces, it is generally acknowledged that governments play a major role in accelerating the movement of the new products across their life cycles. In many cases, it has been noticed that the geographic dispersion of the new product through its life cycle is government sponsored by such encouraging policies as protective tariffs, liberal taxation and depreciation policies or direct subsidies to research and production; thus creating new competition, supplying an increasing share of the world market that originally had been supplied solely from the originating country. In this context Thumbry and Crawford⁽⁵⁾ argue that the existence of foreign-government subsidies, either directly or indirectly is one major reason behind the replication abroad of U.S. based R. & D. which, in turn, helps to produce more investment worldwide in the particular growth industry than would otherwise have taken place, thus affecting the profits of U.S. participants in this industry.

On the other hand, it has been pointed out that many American and European firms in order to improve their competitive positions world wide and to benefit from lower foreign taxes and other

incentives offered to the industry by foreign governments have preferred to establish foreign subsidiaries to produce their products in the foreign markets.

The above situation leads some writers to suggest that the declining international competitiveness of an increasing array of domestic industries in some developed nations is not due only to the inevitably more rapid growth of some newly industrialised countries resulting from improved educational facilities, resource development and access to capital. Rather, it is due in greater measure to the expansion of efforts to improve their competitiveness especially through the greater encouragement and support provided by their governments⁽⁶⁾.

In fact, there is clear evidence that the developing nations and the centrally planned economics are placing growing emphasis on the public or government role in furthering economic well-being and improving competitiveness.

So, as a result of these developments, it is not surprising to notice that governments in many of the industrialised western economies, after decades of gradual liberalisation of markets, are again being drawn into a growing range of trade-related activities including:⁽⁷⁾

- . government cooperation and coordination with both producers and banks in selling military supplies, establishing large turnkey projects and supplying material and services for infrastructure and other development projects.
- . aggressive innovations in public financing, guarantees, and insurance schemes for exports;
- . selective domestic intervention to promote R. & D and production in new areas of technological promise aimed at achieving global competitiveness
- . Domestic intervention to assist troubled sectors in dealing with import competition.

- . Domestic intervention to assist industries to develop plants with export capabilities.

In general, it could be said that the most important of the government's role is to get the economic framework right. This involves more than getting the overall balance of resources in the economy right, more than the expansion of employment and the maintenance of a healthy balance of payments position. It involves providing the kind of stable policy framework which is vital for a healthy and profitable industrial base⁽⁸⁾. The government can also influence industrial efficiency through policies designed directly to assist firms and whole industries to become better organised, more innovative and more competitive.

The subject is vast and it is difficult to cover fully. So, I shall mention at the outset that the purpose here is to examine and attempt to deal with those broad aspects of government activities which affect the competitive side of the industry.

However, to approach and analyse this role, two questions will be raised.

1. Why should government have a role?
2. What are the alternative forms of government policies which are usually formulated to stimulate economic growth and competitiveness?

So, we first examine the evolving role of governments in economic stimulation in the context of the conditions in which government interference is justified in the national interest. Then we shall examine the alternative forms of government influence and support for industrial competitiveness.

Reasons for government support for industry

Government support for national industries is justified on one or both of two grounds, for economic reasons and for national security reasons⁽⁹⁾.

(A) Economic reasons; In an ideal world where all transactions are governed by market forces and competition, with no government interference, administered prices, or monopolistic control, there would be an economic justification for government support solely in terms of the so-called infant industry argument. In such a case, the government could improve the future economic well-being of the country by temporarily subsidising the output of a newly established industry while it is still operating at relatively high cost, compared to foreign competitors, because of lack of experience and a limited domestic market. So, the logic behind government support is that initial output costs for an industry in a given country may be too high to be competitive in world markets, but that over a period of time, the costs will decrease sufficiently so that efficient production is achieved. Given adequate management and a labour force capable of acquiring the necessary skills within a foreseeable time span, the industry would be likely to reach maturity. Upon maturity, the subsidy would be discontinued.

What is worth mentioning here is that, as a consequence of the period of government support the industrial structure of a country's comparative advantage would have been altered in such a way as to have raised the productivity of its capital and labour in the recently established industry, thus enhancing its competitiveness and raising the gross national product and average per capita income to a new, higher level than would have been true without such government support.

Another economic reason that is sometimes presented for justifying government assistance to industry relates to so-called industrialisation objectives. (10)

In recent years, many countries have sought to increase their domestic industrialisation because they feel this will increase output more than by emphasising agriculture, that an inflow of foreign investment in the industrial area will promote growth.

Diversification away from traditional sectors is necessary to stabilise trade fluctuations and the prices of manufactured goods tend to rise more rapidly than the prices of primary products.

Awareness of a major need for industrialisation has emerged from observing that industrial countries are better off economically than non-industrial ones, and that a number of countries have developed an industrial base while largely preventing competition from foreign based products. This was, at least, the experience of U.S. and Japan.

As in the infant-industry argument, the premise here is that cheaper products from abroad would prevent the establishment of domestic industry if free market conditions were allowed to prevail. However, the industrialisation argument differs from the infant-industry argument in that objectives will be achieved even though domestic prices do not become competitive in the world market⁽¹¹⁾.

(B) Social and national security reasons; In addition to economic reasons, governments may decide to intervene in economic and industrial affairs for other reasons related to Social and National security considerations.

On the one hand, it is pointed out that many governments establish import restrictions and give subsidies to certain industries as a means of protecting or improving domestic employment in those industries. For example, Japan and several European Countries whose economies are much more dependent on imported oil and exporting, have systematically adjusted programmes to encourage exports to pay for imported oil and to help maintain domestic employment that may be curtailed by anti-inflationary monetary policies. It is also claimed that one major reason behind the British government's support for British Leyland is the desire to maintain employment. In several cases, government orders were placed much in excess of current requirements, with the object of maintaining the level of employment.

In addition to the employment question, governments may decide to support industrial base for national security reasons. National Security can be said here to reflect "the ability of a nation to pursue successfully its national interests as it sees them in any place in the world, including at home, using all the instruments of national policy available to it."⁽¹²⁾.

In the light of this view of national security, one might argue that national security for a particular country is highly dependent on the vigour of the performance of its economy and its innovativeness. Although a strong domestic economy is necessary, it is seen as insufficient for national security purposes. In addition, it should also be an export-oriented economy, perceived as competing successfully in world markets. It follows that the establishment of a Country's power, prestige and influence in the world requires national and governmental policies that support an export-oriented economic recovery.⁽¹³⁾

Forms of Government involvement in industry:

Having explained the rationale of government involvement in industry, it is appropriate at this point to seek an answer to the second question: what are the main alternative forms of government policies that could affect the competitiveness of a given industry in a particular country? In fact, the Government can influence competitiveness in a number of ways; for the purpose of our study, these ways will be examined under three broad dimensions, as follows:

- The Government as regulator.
 - The Government as entrepreneur, and
 - The Government as a promotor, which will be our main focus.
- It is this area that light could be shed on the real role of Government in affecting competitiveness.

(1) The Government as regulator: This part is concerned with the role of Government as regulator, placing legal obligations or restrictions on the conduct of trade and industry: authorising, directing and forbidding certain behaviour. This role includes some of the oldest government functions but is the subject of much controversy today, and seems likely to be in the forefront of change.

Some of these regulations are embodied in Company Acts, legislation related to Consumer Protection in the matter of advertising, the description of goods, etc., legislation dealing with monopolies and restrictive trade practices, legislation for the protection of employees, and more recently, legislation for protecting the environment.

In other words, this part of the government's role relates to the government as a provider of a working framework for the orderly operation of business enterprises; with the government as "umpire" holding the ring between the competing interests of employers, workers, consumers, investors and so on. There is also the Government's role in relation to the various types of economic organisations and the important subject of the control of restrictive trading agreements⁽¹⁴⁾.

It has been demonstrated that all of this legislation affects industry's competitiveness as it imposes costs on Companies, not only the administrative overheads of keeping track of the legislation, making sure that the management of the firm is aware of it, but also taking the specific action required, which nearly always means, at any rate in the first instance, that the costs of any operation are made greater than they were originally assumed to be⁽¹⁵⁾. One example is the growing cost of meeting government regulations paid by General Motors. The number rose from 938,000 U.S. Dollars in 1975 to nearly two million dollars in 1979⁽¹⁶⁾.

These regulations mainly deal with energy costs, environmental, or health, safety and consumer protection aspects.

In the same vein, it is argued that government regulations can cause industry to focus on protecting its existing product lines, rather than creating new ones, thus inhibiting innovation. Also, it is said that the uncertainty created by some regulatory Schemes can discourage the long-term commitment that major innovation requires⁽¹⁷⁾.

On the other hand, government regulations in certain situations could enhance competitiveness. In this respect, it is mentioned that the regulatory system relating to automative emission devices, for instance, was designed to force change and thereby act as a spur to innovation⁽¹⁸⁾.

So, it might be concluded that government regulations have both a negative and positive impact on competitiveness.

(2) The Government as Entrepreneur: The second aspect of the government's role in its relation to competitiveness is linked with its role as an entrepreneur. In this regard, the government can directly participate in the stimulation of the economy through its role as an important purchaser of goods and services for its own use, as a large employer, and less importantly, it also competes on a limited scale with industry as a producer for its own use and as a trader in goods and commerical services.

Taking as an example the role of government as a purchaser, it has been shown that this role can be put to fruitful use especially in the military field. A good example is the inclusion in U.S. Airforce Contracts of the "Technology Utilisation Clause", that is, a clause requiring companies to manufacture in specified ways. Similarly, the U.S. Airforce has spent large sums on demonstration projects in computer-aided manufacturing and in computer-aided design. The prupose is not only to obtain better military equipment, but also to improve the efficiency of U.S. Industry⁽¹⁹⁾.

Also, at government level, large scale public purchasing of new technologies can carry products through the first difficult phase to profitability. And finally, the role of government as a large purchaser enables government buyers in many cases to sit down with manufacturers in order to adapt to official specifications so as to make the product attractive in foreign markets.

(3) The Government as a Promoter: This part deals with the more positive role of the government as promoter and sponsor: encouraging, assisting and supporting.

It has been demonstrated that the government's role as a promoter can assume a variety of forms that is almost infinite in number. Here we consider only those dimensions that have a direct impact on competitiveness. Among these aspects are the following:

- . The promotion of scientific research and innovation.
- . the provision of finance.
- . The promotion of overseas trade.
- . Assisting productivity and efficiency.
- . Improving employment skills.
- . Buisness - government relations.
- . Other policies designed to promote industry and trade.

a) The promotion of scientific research and innovation: The first dimension of industrial promotion, which is important and where government can act, is in the field of research and technological innovation.

Such innovation is clearly an important factor in explaining different levels of performance in international trade in Capital Goods, and this role of technology in increasing growth and competitiveness has provided governments with additional justification for involvement.

Historically, governments have taken direct action to encourage innovation in those areas where it has assumed an executive action. For hundreds of years this was almost entirely in the defence field⁽²⁰⁾. In the last half century, the cost of risk of developing weapons or weapon systems has increased so that government in the main has to fund not only the purchase and the development of the weapon, but also much of the advanced applied research on which new systems increasingly depend.

Outwith the defence field, direct intervention by governments has grown rapidly since the last world war. This period has been one of rapid change in the economies of various Countries. It has also seen the diminution in Western Europe of the traditional tools of national industrial policy, represented by control over the levels of external tariffs and incoming foreign investment.

Rapid and uneven development has meant that national firms and industries have sometimes found themselves to be uncompetitive, while the elimination of protection has meant that insufficient time has been available for both management and labour to make the necessary adaptations and changes. In such circumstances, there has emerged an active and selective industrial policy composed of a combination of government activities involving subsidies of various kinds⁽²¹⁾.

The efforts of governments are not restricted to assisting strategic industries and those which face difficulties, but it has become obvious that governments, especially in developed countries, are heavily involved in planning, financing and managing large programmes in promising technologies. The extent of the involvement is unprecedented in several advanced countries, including many which normally are among the least interventionist.

There are several sound reasons for this large and growing government involvement in this field such as:⁽²²⁾

- . The huge disparity between Countries and their ability to exploit the new technologies and the belief that wide "Technological gaps" are developing. These gaps could lead to a permanent state of technological dominance and dependence if governments do not intervene to reduce these gaps.
- . Some Countries may have little choice but to turn to government-led programmes which marshal their limited capabilities and focus them on technological targets.
- . Some governments are concerned about the overall competitiveness and financial conditions of their industry and about the need to restructure.
- . The increasing financial intervention by some governments leads others to do the same.

In general, the assistance of Governments to national research and innovation could take the form of direct intervention in selected fields or acting indirectly through the creation of a sympathetic environment by fiscal and other means.

Perhaps the most apparent and vital role played by Government to encourage technological innovation is by assisting R & D activities. Subsidies for basic R & D can be justified as being in the national and world interest, because they are means of improving human well-being as well as providing a strong base for economic growth and international efficiency.

Governments also finance basic research in other situations including: ⁽²³⁾

- . Situations where the benefits to R & D accrue more to society at large than to any individual private investor - "The Social Return to R & D".
- . It can also happen that R & D addresses a collective need, which makes it impractical for private firms or individuals to invest in it.
- . Finally, those R & D projects that are too large and too risky to be undertaken by individual firms and may nevertheless be of potential benefits to a collection of firms or to the nation. Here a governmental role in their funding is justified.

Having introduced the important issue of governmental support for R & D activities, it might be useful to make some comparisons between particular countries in this regard to see to what extent they carry out this role.

We take as our example the E.E.C. Countries. Table 3/1 shows the amount of government R & D financing in the E.E.C. Countries according to the amount devoted to various objectives.

We can see that the portion of government expenditure on R & D differs from one country to another, also the distribution of these funds among different sectors also varies. As Table 3/1 illustrates, Britain comes in the third place after Germany and France in terms of the amount given by government to support R & D activities. At the same time a higher proportion of the British Spending on R & D is devoted to defence compared to other E.E.C. Countries. This disproportion can also be expressed in percentage terms. In this context it will be seen that while government expenditure on R & D related to defence amounted to 55 per cent for her total R & D budget, only 4 per cent is directed towards industrial productivity and technology compared to 10 per cent in both Germany and France.

It has been pointed out that the discrepancy between the smaller allocation of the U.K. Government expenditure directed to industrial productivity and the relatively higher spending of Germany and France arises from the fact that Germany and France seek to emulate Japan, where industry follows government signposts, while the U.K. does not.

A more detailed analysis of the deficiencies of the U.K. vis-a-vis her main European Competitors regarding government policies toward R & D Support Programmes shows that:⁽²⁴⁾

- The amount spent by government on Civilian R & D is far less, due to the belief in the innovative nature of industry when left to itself.
- The role played by government in facilitating the transfer of knowledge from the Universities to Industry is a modest one.

- . Such help as is given by Government through Finance Companies, such as the NRDC and NEB, does not directly help in the diffusion of new technologies, though both organisations have a financial stake in the diffusion.
- . The Government's civilian procurement does not appear to aim at the diffusion of innovation.

An additional criticism is that the distribution of government research funds among different industries is seen as eccentric and does not correlate with the size and significance of the sectors involved. (25)

Table 3.1: E.E.C. Countries - Government R & D Financing by Objectives, 1979 (Millions of European Units of Account)

	Germany	%	France	%	U.K.	%	Other E.E.C.	%
1. Earth and atmosphere	149	2	135	3	32	1	58	2
2. Human Environment	233	4	184	4	58	2	103	3
3. Human Health	370	6	247	5	93	3	278	9
4. Energy	853	13	359	8	212	7	376	12
5. Agriculture	121	2	171	4	115	4	180	6
6. Industrial Productivity and Technology	606	10	443	10	135	4	239	8
7. Social and Sociological	290	5	61	1	37	1	208	7
8. Space	249	4	208	5	75	2	160	5
9. Defence	370	12	1,592	35	1,779	55	68	2
10. General Promotion of Knowledge	2,718	43	1,081	24	684	20	1,463	47
11. Other	-	-	19	-	35	1	6	-
Total	6,318	100	4,500	100	3,220	100	3,138	100

Source: Aubrey Jones, "Governments and Industrial Innovation",
Policy Studies, Vol.2, Part 1, July 1981, p.3.

What is worth mentioning here is that, although the amount of government spending in the U.K. on civilian R & D is small, yet it has significant impact in some sectors. Rothwell⁽²⁶⁾ in one of his studies concluded that seven out of fifteen radical innovations, and three out of ten incremental innovations in the textile machinery industry had direct government support in the form of direct financial and technical assistance.

These comparisons suggest the need for greater public expenditure in the U.K. on R & D for industrial purposes, if any degree of industrial competitiveness in the world markets is to be maintained.

In addition to government policies designed to support R & D Programmes, governments, especially in market-oriented countries, also adopt policies and programmes to stimulate industrial innovation in general. The most common activities in support of innovation could be listed as follows:⁽²⁷⁾

- Support for the development of the technology believed to be basic and important to future industrial progress and economic development, through a widespread system of industrial research associations that develop technology commonly used in the industrial sectors and that provide training, advice and information to their member firms.
- A variety of institutions concerned with broad technical fields that connect science to the needs of industry and perform some of the technical work to advance technology.
- Specific programmes to aid the individual inventor or new firm through grants provided for the support of the early stage of the innovative process, the demonstration of feasibility, the provision of managerial and financial advice, and support for early manufacture.
- Activities that are aimed at easing labour displacement resulting from innovation, new patterns of industrial activity, and foreign trade by means of retraining and relocating of workers.

- Direct subsidies to industries to reduce the cost of innovation through grants or contracts that favour projects that are technologically risky, lead to products for foreign markets, or ameliorate the adverse effects of industrial activity.

Governmental efforts could, therefore, make major, and certainly necessary, contributions to reinvigorating the technological development efforts of many industries. Specifically, a comprehensive national efforts to strengthen the technological capabilities of domestic industry might be focused on two channels of improvement: First, by reducing the technological advantages of foreign competitors by more rapid and fuller domestic adoptions of available superior technologies and second, by seeking to generate significant technological advantages over foreign competitors through heavier commitments to long-term research and development programmes promising major advances. (28)

So, one might conclude that all these government efforts devoted to promote industrial research and innovation derive from the realisation that innovation and technology can help in meeting the needs of the public, improving productivity, competing in domestic and foreign markets and adjusting to changing world conditions.

At the same time, it is recognised that these trends are likely to spread, as governments attempt to accelerate the pace of technological innovation and its contribution to economic growth and development.

This, in turn, leads us to assert that the role governments play in financing R & D and stimulating innovation represents one of the major responsibilities of policy matters in different countries and affects to a great extent the health and competitiveness of the economies of these governments.

B) The Provision of Finance

The second dimension of the Government's role as a promoter relates to the process whereby funds are channelled to industry. Here again, the government has a critical role to play. In fact, the process whereby funds are channelled to industry is considered to be important in any strategy devised to promote industry, especially the emerging industries and those which are essential to the economic and social well-being, as there is a clear connection between investment and the up-to-dateness, technical specifications and design of products. In other words, to improve non-price competitiveness aspects of the products of an economy, a rapid rate of gross investment is required, given that capital equipment is to a great extent specific, not only in respect of the techniques of production, but also the range of products it can produce. (29)

Government activities designed to encourage investment in a certain industry are not limited only to financial supplies or grants but they extend to include certain tax allowances to encourage the investment process.

In Britain, for example, it is indicated that Governments have used two basic methods for influencing the level of capital investment by industry: Tax Allowances and Cash Grants. The former provide for a certain proportion of the cost of an asset to be deducted from the future taxable profit of a firm, and the benefits to the firm thus depend on its profitability, the tax rate and the amount and timing of deductions. While cash grants represent payments of a certain percentage of the cost of the asset to a firm at the time of investment, and thus differ from tax allowances most notably in that they benefit all firms equally, regardless of profitability (30).

In Germany, during the 1960s, a shift occurred in Germany's industrial assistance policy from assistance by trade barriers to domestic subsidies and tax allowances. Assistance was given to industries like aircraft and computers which were considered to be in a backward position compared to foreign competitors at that time. (31)

Also, it is well documented that industrial and economic development in Japan since the last war has been influenced considerably by government, which, in participation with large Commercial Banks, has actively encouraged loan rates to be held below their equilibrium level. Tax incentives are even used to translate the government's fiscal policy into relatively immediate and specific industrial effects, in accordance with the economic plans of the day. ⁽³²⁾

At the same time, it should be mentioned that as the government's aim is to ensure that as much finance as possible is available through the Private Sector, the role of government grants and assistance is directed mainly at providing support for the efforts of the Private Sectors in areas where worthwhile projects are being frustrated because private financial institutions consider the risks and administrative costs of financing such projects is too high. ⁽³³⁾

Another type of the Government's financial assistance are so-called export subsidies. The aim of an export subsidy is to assure the profitability of industries that would be likely to succumb if exposed to the full force of competition. For those industries, revenue is supplemented by subsidies, or costs are reduced by subsidies to certain input factors. Subsidies can be given by means of such tactics as lower taxes on profits attributable to export sales, refunding of various indirect taxes, lower transportation rates, and manipulation of the system of exchange rates. Moreover, a subsidy may take the form of direct grant, which enables the recipient to compete against products from other countries that enjoy cost advantages. ⁽³⁴⁾

One of the best examples of this kind of government support is the case of the Shipbuilding Industry. Since construction and operating costs vary considerably between the producing countries, in order to overcome cost disparities, many Governments grant various forms of direct and indirect assistance to their Shipping and Shipbuilding Industries. ⁽³⁵⁾

To sum up, this aspect of government promotional activities directed toward industry deals with government assistance to industry through lending, insuring or subsidising, to encourage industrialists to comply with the special objectives of economic and social policies.

C) The Promotion of Overseas Trade

Another field in which government plays a major role in assisting and promoting industry is represented by the activities of trade promotion in overseas markets. These activities include introducing services to exports such as credit insurance and market research activities, trade negotiations and commercial diplomacy and trade promotion through international agencies.

One means by which governments aid national industries in displaying their products in the international markets is by making available credit insurance and guarantees covering certain commercial and political risks that might be associated with any given international transactions. It has been demonstrated that success in today's more highly competitive market places greater emphasis on the availability of credit than has been the case in the past. Miracle and Albaum⁽³⁶⁾ give emphasis to this point by stating that "exporters throughout the world finding that in today's highly competitive international market place, the traditional factors which normally determine competitive advantage such as price, quality and speed of delivery, are playing a secondary role". They add, "The supplier who can offer better payment terms and financing conditions, is the one most likely to make a sale, even though his price may be higher or the quality of his product inferior to that of his competitors".

So, as credit terms are necessary to promote overseas trade while including risks that make many firms reluctant to assume these risks, the government can encourage the growth of national exports through offering the opportunity to shift the risk through credit insurance.

There is evidence that government credit insurance and guarantee programmes are available nowadays in most industrialised countries. However, the specific risks that are covered may vary from one country to another.

The second dimension of the government's role in the promotion of overseas trade relates to providing national industries and firms with information services. National Governments can play a vital role in providing much of the basic information upon which international marketing decisions are based. This role is obviously helpful to small firms which are not in a position to undertake overseas marketing research themselves nor can afford to hire outside research agencies, and for newcomers to international business.

Although the information provided by government sources varies from one country to another, the following types may be available.⁽³⁷⁾

- Economic, social and political data.
- Information about specific marketing and investment opportunities.
- Information on relevant government regulations.
- Individual reports on foreign firms.
- Lists of potential buyers, distributors and agents.

Finally, there are other government activities which are directed to stimulating the growth of overseas trade, including:

- Operating trade development offices abroad, either as a separate entity or as a part of the normal operations of an embassy or consulate.
- Operating trade missions that go abroad.
- Operating or participating in trade fairs and exhibitions.
- Operating permanent trade centres in overseas markets.

Taking Britain as example, we find that the government has set up various schemes to provide opportunities for U.K. firms to market their products abroad. One such case is the role played by the Industry Sector Committees of the National Economic Development Council (NEDC) which devote a major part of their work to improving

home and export marketing performance and encouraging the development of product ranges appropriate to world requirements.

Other aspects of assistance could be found in the following: ⁽³⁸⁾

- Guarantees and finance for export debts. The Export Credits Guarantee Department exists to protect firms against some of the risks involved in selling abroad through the provision of guarantees and finance for export debts.
- Export market entry. In this respect, the market entry Guarantee Scheme is designed to help small and medium sized firms to deal with the financial risks and problems associated with a venture to develop a new export market.
- The continuous and comprehensive services rendered to exporters by the Commercial Side of British Embassies abroad, directed from the Department of Trade.
- Export marketing research, which represents an export promotion service provided by the British Overseas Trade Board (BOTB).

Again, these various activities undertaken by government agencies could help in achieving growth and competitiveness for domestic industry.

D) Assisting Productivity and Efficiency

Productivity and efficiency have become political catchwords. It is commonly accepted that maintaining large-scale public spending on government services and defence, a high level of personal consumption, and a high rate of capital investment, can be achieved only through expanding output. Productivity is also necessary if prices of exports are to remain competitive in world markets without a continuous devaluation of the currency and if the rise in prices of goods for domestic consumption is to be restricted sufficiently to allow real incomes to grow and inflation to be held in check. ⁽³⁹⁾

For these reasons and others, the productivity question has attracted the government's attention and is considered a field in which government could have a vital role.

For many years it has been Government Policy to increase investment in the areas of expansion, to share in financing R & D, to set up different organisations which could help industry to improve its efficiency, to provide employment services such as training and technical education, and to encourage better management-labour relations. The aim of these policies in general is to improve productivity and efficiency and to place industry in a better position to compete effectively in both home and foreign markets.

In Japan, under the helpful government-business partnership known as "Japan-INC", the government gives companies direct and indirect support for productivity improvement. For companies in selected growth industries, the government provides direct support in the form of tax concessions, technology transfer, and preferential financing. The Government also provides indirect support to all companies by funding the Japan Productivity Centre (JPC), which was established as a means of involving management and labour unions in a national movement towards achieving higher productivity.⁽⁴⁰⁾

In the U.K. we can also find many Schemes designed to enhance productivity and efficiency in British Industry. Some examples are the following: ⁽⁴¹⁾

- National selective assistance for manufacturing investment. The selective incentives are designed to promote investment projects which will, through improved performance, yield significant benefits to the economy.
- Regional selective investment incentives: Here, selective financial assistance can be made available in the assisted areas for projects which have good prospects of viability and which will improve or maintain employment prospects.
- Small engineering firms investment scheme: The aim of the scheme is to help small firms in the Engineering Industry to modernise by investment in specific types of new advanced capital equipment.

In brief, it can be said that the competitiveness problem is essentially the problem of productivity, and to improve productivity much of government assistance is necessary.

E) Improving Employment Skills

This dimension represents the whole question of the intellectual attainments and skills of the labour force. It is commonly accepted that inadequacy of skilled manpower is regarded as a major weakness on the supply side of any economy, and one which by its nature affects decision making at all levels of industry.

In this respect, it is recognised that a major priority of the Japanese is the development of appropriate educational courses designed to produce able engineers and research workers. One secret underlying Germany's success is the extent and nature of her technical training programmes. In other advanced countries, it can be observed that the education system is complemented by a substantial and intensive training programme. Sainsbury⁽⁴²⁾ outlines the need for a qualified labour force in Britain by stating that "we should not seek to compete with the newly industrialising countries in labour-intensive industries, where their labour wages are bound to give them an advantage, but rather in knowledge-intensive industries, which by definition will depend on highly trained engineers". Freeman⁽⁴³⁾ extends the argument by indicating that inadequacies of skilled manpower have constituted the most crucial British weakness on the supply side, an area in which the government clearly has responsibility and the power to act. In his words, "Although industry has an important role in training, the provision of more and better education for the workforce at all levels, and for frequent refresher, retraining and post-experience education is the major single responsibility of government in relation to industrial efficiency".

In most countries, it is clearly understood that improving labour skills is an area in which the Government has a responsibility to act and the power to do so.

F) Business - Government Relations

Some influence on the competitive position of any economy is linked with the nature of the relationship between government and the business world. Differences among nations in the degree to which

governments and industry cooperate with one another can have an effect on the international competitiveness of the industry in these countries. This seems to be the case in Japan and Germany which have achieved the best trade performance in recent years and where Government and industry cooperate closely with one another.

Two points worth noting in those two countries are: In the first place, it is accepted that industry and government must work together in partnership to restructure the economy. The collaboration between the Ministry of International Trade and Industry, MITI, and Japanese industry is well known. In Germany also there is a flourishing partnership between industry and government. Not only do quite a few companies have the government as a shareholder, but there is also a wide range of publicly owned financial institutions which support industry. Also, there is the work of the "Bundesminster fur forschung und Technologie", which is the channel for increasing government support to high technology business, and which works closely with industry.⁽⁴⁴⁾

Secondly, in these countries the role that the Government is seen as playing in this partnership is a strategic one. Government is not seen as an alternative to industry, nor as having primarily a regulatory role, with implementation being left to individual businesses.

In Britain, we find a different approach. Kassem⁽⁴⁵⁾ best summarised the difference between Japan and Britain relating to the government-business relationship when he pointed out that "In Britain, Government and business are separate and independent entities; the relationship that exists between them is one of antagonism and hostility". He continues, "By contrast, in Japan, the parties are dependent on each other, in fact, they are two sides of the same coin. The relationship is one of harmony and collaboration, so much so, that some western observers feel that Japan may be playing the economic game under a set of rules different from that in Britain or the U.S."

In the U.S., an indication that an effort in cooperation between business and government has begun in the steel industry is shown by the formation of the Steel Tripartite Advisory Committee, which concentrates its efforts on community adjustment, productivity improvement and industrial modernisation. A similar effort is included as part of the President's economic programme for the automobile industry.⁽⁴⁶⁾

Needless to say, close cooperation between Government and business enables them to address problems which interfere with productivity growth, as it could help to smooth the process of adjustment to economic change.

G) Other Promotional Activities

There are many other fields in which governments can provide help in promoting industry. One of these fields is the area of industrial relations. There are at least four ways in which the Government can participate in creating a favourable industrial environment: By supporting and, when necessary, sponsoring collective bargaining, by assisting in the settlement of industrial disputes, by promoting joint consultation at a national level and at the place of work, and by encouraging better management-worker relations in general.

Also, Governments could help local industry through protectionist activities. By the use of such tools, a Government attempts directly or indirectly to make the country's products more competitive in the home market. These activities include deliberate attempts to restrict imports and support domestic prices, tariffs and quotes, and the imposition of other restrictions such as import licensing and public health regulations that may have a protective effect even though they are imposed for other reasons.

Also, there are other promotional activities including:

- Providing an economic climate in which industry can prosper, including a counter-inflation policy which aims in part at stimulating competitiveness.

- The provision of an adequate physical and social infrastructure: For example, adequate means of transportation and an efficient communication system are considered of utmost importance for the economy.
- Assisting manufacturers and exporters through creating a favourable institutional framework within which public and other agencies can provide specialised supportive services to industry.
- Supporting import substitution industries, making improvements in the availability of statistical data, and increasing government efforts in communicating the industrial strategy.

The above dynamic role of the government leads us to conclude that gaining competitive advantage for certain firms or industries in today's tough environment, does not depend only on achieving and maintaining competitive advantage in appropriate areas of its business, but is also determined by another factor over which these firms or industries have less control, that is, the role of Government.

In fact, national differences in policies to promote investment in human and physical capital, besides other policies adopted to promote national industries, could influence the pattern of comparative and absolute advantage over time and the international performance and competitiveness of individual industries as a result.

(2) The importance of exchange rates in affecting overall competitiveness

The exchange rate can be defined as the number of units of one currency that must be given to acquire one unit of a currency of another country.⁽⁴⁷⁾ In other words, it is the price one pays in the home currency to purchase a certain quantity of funds in another country. It is thus, the link connecting different national currencies that makes international cost and price comparisons possible.

In general, it has been pointed out that trade behaviour and exchange rate behaviour are affected by and in turn affect general macroeconomic developments and policy problems. The importance of this factor has led the authorities in different countries to intervene in one way or another to affect the exchange rate of their currencies.

In this regard there are essentially three arguments about the role in respect of exchange rate intervention⁽⁴⁸⁾; the first represents concern for financial stability, the second is related to control inflation, while the third argument is related to the competitiveness of industry.

The main point about the role of exchange rates in affecting competitiveness is that, if a nation devalues its currency and other nations do not follow, the price of the country's exports fall and prices of imports increase, thus affecting the sales volume of products and the competitive position in general.

It is also pointed out that through its interaction with the trade balance, changes in the exchange rate affect the overall competitiveness of a country's products.

For example, if for some reason the U.K. begins to import more goods and services than it exports, Sterling will tend to decline relative to other currencies. This decreases the price in foreign currencies of British exports and increases the Sterling price of imports in the U.K. The resulting overall increase in the international competitiveness of British exports tends to offset the trade deficit. Conversely, if the U.K. should begin to return a surplus, Sterling will increase in value and the overall price competitiveness of British Goods and Services will decline and will tend to offset the trade surplus. Thus, it could be said that the exchange rate helps to determine the trade balance and the overall competitive position of the country.

Also, movements in exchange rates could affect competitiveness through the changes in costs. In general, a fall in exchange rate improves cost-Competitiveness, provided the domestic costs do not rise to offset it.⁽⁴⁹⁾

The conventional case for believing changes in the exchange rate can lead to suitable changes in price and cost competitiveness is based on Meade⁽⁵⁰⁾ and has been adopted by others like Balogh⁽⁵¹⁾ and Posner⁽⁵²⁾.

In practice, using the exchange rate as a tool affecting competitiveness is widely accepted and applied. For example, it is pointed out that keen competition in international trade in the 1930s took the form of competitive currency depreciations. If one country makes its currency cheaper in terms of other countries, its exports will be stimulated and its imports retarded because of the resulting price changes.⁽⁵³⁾

Recently it was reported that British Commentators have remarked optimistically on the role of undervalued German and Japanese exchange rates in promoting exports in the 1950s and 1960s. In 1967, the main purpose of devaluation in Britain was to produce a rapid change in relative costs and prices at home and abroad, so that domestic expenditure was switched away from imports to home-produced import substitutes, and to ensure that because of lower export prices, export demand would also increase. The effect of devaluation was intended to be to produce, at a stroke, an off-setting factor for previous losses of competitive advantage⁽⁵⁴⁾.

It is also indicated that the early 1976 Sterling depreciation aimed at promoting competitiveness and in 1979, the continuing high unemployment and worsening of the competitive position in the manufacturing industry in the U.K. made a real depreciation appear desirable⁽⁵⁵⁾.

A recent study of the Shipbuilding Industry shows that the exchange rate had a significant role in affecting the competitive position of the Japanese Shipbuilding Industry during the period 1978-1980⁽⁵⁶⁾. In 1978, when the "Yen" was strong, the orders received by Japanese manufacturers fell to a low value of around 30 per cent. As the value of the "Yen" weakened in 1979 and the early 1980s, the Japanese share of orders rose rather sharply and reached the sixty per cent mark in 1980.

Further evidence about the effect of exchange rate movements on competitiveness, comes from the study by Higham⁽⁵⁷⁾. He came to the conclusion that the experience of Germany, Japan and Switzerland through the period 1970-1979 shows that appreciation can lead to a significant decline in international competitiveness. On the other hand, it has been pointed out that, although a devaluation offsets the effects of losses of competitiveness, there is nothing intrinsic to a devaluation that affects the trend in competitiveness. A devaluation simply provides a temporary respite which it may be possible to tackle the underlying causes of the decline in competitiveness⁽⁵⁸⁾.

In this respect, recent writers have questioned whether any change in the exchange rate can influence the competitiveness indicator for long enough to produce the required effect on output and net exports. They claim that domestic wages or price levels will adjust so quickly that the profit incentive to exporters will be wiped out before the quantity response has occurred⁽⁵⁹⁾.

Furthermore, it is argued that exchange rate depreciation does not guarantee that a country's products will be kept automatically competitive. For instance, despite a nominal devaluation of nearly 40 per cent between rates in late 1971 and mid 1976, British relative wage costs per unit of output only reduced by 5 per cent in dollar terms. Similarly, relative export prices improved by only just over 10 per cent and the ratio of export prices to domestic prices, which indicate relative export profitability, only improved by about 4 per cent⁽⁶⁰⁾. Thus, despite exchange rate

depreciation, relative wage costs per unit remained at a high level.

Finally, it is suggested that if the purpose of the devaluation is only to affect export market shares, depreciation may have an effect but only if the price depreciation generated is sufficient to increase export market shares. The problem, it is argued, is that price is not the only factor that buyers in foreign markets take into consideration.

Ray⁽⁶¹⁾ highlighted this point when he mentioned that, if Britain cannot sell because her competitors produce goods of better design or at much better credit terms and so forth, the price cut in the form of devaluation will not be effective. In his words, "only if we, i.e. Britain, are competitive otherwise in the full sense of the word, can we expect returns from devaluation".

Howe⁽⁶²⁾ added strength to the above view. He mentioned that there are two ways of improving price competitiveness; either to have a lower exchange rate or to keep unit labour costs low. In his view, the exchange rate policy has a passive nature, while securing an improvement in relative unit labour costs has an active nature. This leads to the view that an ever descending exchange rate is not in the long run the best way to become competitive. He extends his argument by saying that "It is true that a falling exchange rate in the short term improves relative costs. It is true that the fall which has occurred recently, in Britain, does offer an important opportunity to firms, but in general, a falling exchange rate only improves competitiveness as long as people are prepared to accept lower real wages and lower living standards, which result from the higher cost of imports".

In conclusion, it might be said that competitiveness is affected by exchange rates, at least in the short run, and a lower exchange rate may be beneficial if the non-price aspects of competitiveness are maintained. The case of the Japanese shipbuilding industry may be regarded as illustrating this view.

3) The Role of Infrastructure

Infrastructure in its wider meaning includes the traditional areas of transport and communication besides some significant areas such as scientific and technological infrastructures, national culture, endowments in natural resources and government support for overseas raw-material procurement.

There can be no argument but that the quality of infrastructure has a direct and significant impact on competitiveness. For instance, an adequate and efficient transportation system will facilitate quick and cheap distribution of products, abundant and cheap raw materials will contribute to lower production costs, while effective communication networks are vital to the dissemination of information on new products. ⁽⁶³⁾

Taking as an example the role of scientific and technological infrastructure, we shall find that in most of the advanced market economies the scientific and technological infrastructure plays an important role in the performance of national research and development work. Universities are one aspect of this scientific and technological infrastructure, and are considered as an important source of innovative ideas, especially for the small and medium sized firms. It is that role of the Universities which led governments to encourage them to play an increasing part in helping industry to meet future technological requirements. Steps currently being taken by Governments and Universities in several countries to achieve this aim include the establishment of the following: ⁽⁶⁴⁾

- Industrial liaison offices, whose function is to increase the use by local industry of university facilities and expertise.
- University innovation centres, which are conceived of as vehicles within universities for stimulating technological innovation and for increasing the entrepreneurial tendencies of graduates as they pursue their careers.

- University Companies. In some countries, universities have begun to establish companies or commercial activities relating to industry. According to one study, at least 33 Universities or University Colleges in the U.K. have declared interest in specific university-industry liaison activities as a formal part of the function of the university.

In the same vein, a pioneering study by Gribbons and Johnston⁽⁶⁵⁾ on R & D Projects in British industry, has shown that universities and government laboratories did produce what is described as "Public Good", since they provided a significant portion of the inputs of knowledge and information necessary for industrial scientists and engineers working on development activities to solve their practical problems.

An overall analysis of the role played by infrastructure in affecting the competitive position for most of the advanced economies and some of the newly industrialised ones, is found in the study by the European Management Forum⁽⁶⁶⁾. The results of the study show that the U.S. takes first place in terms of this factor as it performs well in most aspects of infrastructure especially the criteria related to transportation. Japan is also favourably placed; transportation networks are well developed and this makes Japan rank first on both road and railway-line density criteria. In this context, it should be mentioned that Japanese Steel industry position does not depend on cheap labour, but rather on a carefully developed infrastructure and market position⁽⁶⁷⁾. Port facilities, for example, give Japan cheap access to the imported raw-materials required for industry. According to this factor, Britain also ranks highly. Great Britain benefits from its North Sea oil wealth, and scores well also on road and railway-line density. It is true to say that Britain was one of the first countries in the world to become industrialised, and its industrial infrastructure is therefore well established.

Finally, Zysman and Tyson⁽⁶⁸⁾ perhaps explain best the role of infrastructure in international competitiveness. They see that accumulated investment, whether in physical infrastructure or in

the infrastructure of related markets and firms, is crucial to determining both competitive and comparative advantage over time. In their words "A nation creates its own comparative advantage by the efforts of industries and government to establish comparative advantage in the market. Where the eroding competitive position of individual firms unravel a web of infrastructure, the outcome can be a long-term loss in competitive advantage which amounts to a shift in national comparative advantage". They add, "Although there may be no comparative disadvantage underlying the initial competitive difficulties of a particular firm, these difficulties can have a cumulative effect that leads to a national disadvantage. The costs of recapturing a lost market share will go up if the infrastructure is undermined".

Therefore, as a conclusion it might be said that the quality of infrastructure has a direct impact on the competitive position of the different economies in the world market place.

SECTION TWOFactors Affecting Competitiveness at the
Micro or Industry LevelIntroduction

Examining the nature of those factors that have an impact on competitiveness at the macro level has been the main purpose of the preceding section. In this section our aim is to investigate other factors from the viewpoint of their relationships or their potential influences on competitiveness at the micro or industry level. Such factors include technological innovations, economies of scale, marketing, management and labour-management relations and finally, the role of productivity.

To do so, this section will be divided into the following sub-sections.

1. Technological innovation and competitiveness.
2. The role of scale economies.
3. Marketing factors and competitiveness.
4. The role of management and labour-management relations.
5. The role of productivity in determining international competitiveness.

(1) Technological Innovation and the Nation's Competitiveness in International Trade.

Technology is considered to be an important component in international trade. It is "the state of the art" in socio-economic environment and in many instances, relative technological efficiency or unique technological skills become the basis of growth and competitiveness.

Technology is the product of invention and innovation. Together they play a critical role in the international competitive strategies of developed nations and in the efforts of emerging countries to increase the health and strength of their economies.

It is recognised that most of these countries, especially the developed ones, have relatively high wage economies, most of whose exports are manufactured goods. Competitiveness therefore depends heavily on the ability to incorporate new technology into products and production methods.

A high level of innovation, reflected in cost-reducing investment, and in international competitive advantages in capital and consumer goods, is likely to keep exports high and the balance of payments healthy. While a low level of innovation is likely to be associated with low export competitiveness, high import penetration, and a consequent need for reflation without the possibility of practising it.⁽⁶⁹⁾

Accordingly, there has been growing acceptance of technological innovation as one of the primary determinants of competitive strength, and this has led to pressures for increasing heavier expenditure on R & D programmes by individual firms and nations. Gold⁽⁷⁰⁾ has identified five kinds of primary benefits derived from investment in technological development:

- Realising competitive advantages through new and often better products and process.
- Obtaining know-how and knowledge which can also be subsequently sold.
- Portraying images of innovative and progressive management.
- Maintaining competitive position.
- Minimising disadvantages of input factors.

Furthermore, it has been demonstrated that technological innovations might play a key role in altering significantly the economies of all countries and modifying international relations in several ways;⁽⁷¹⁾

First, They can provide a new technological base for a large part of the economy; base that is more productive, more parsimonious in its use of resources and more relevant and appropriate to contemporary economic needs and social goals.

Second, They provide the means for revitalising some old industries, creating new ones and, more generally, for restructuring and diversifying the economies of different countries.

Third, Such changes are likely to alter the relative competitive standing of individual countries, change their comparative advantage and creat new trading patterns.

Finally, in the realm of economic cooperation, specialisation of different countries in different areas of technology can help the world as a whole to advance rapidly, avoiding a return to protectionist policies.

However, in examining the role of technology and innovation in international competitiveness, it might be useful to review the role of technology in influencing international trade through focusing on these theories that suggest that technological superiority is a source of comparative advantage in world trade and then identify the position of some of the major technology producing countries in the light of this role.

The Role of Technology in International Trade: The Theoretical Evidence

Despite the analytical richness of traditional trade theories, much criticism has been generated in relation to their practical application. This criticism concentrates on two major points:⁽⁷²⁾ first, the assumption of perfect competition which includes access to technological knowledge without cost and ignores the role in international trade of the large modern corporation and the monopolistic possession of technology. Second, it has a static analytical formulation and ignores dynamic changes in production technology.

However, it is argued that if the technological capabilities of nations are unequal, one would expect nations with greater capabilities to have a comparative advantage in those goods which embody advanced technologies. And accordingly, the factor endowment model can be adapted to deal with the case of differing technologies among countries, provided that the technological differences are manifested in the costs of production of traded goods and not in the design of goods themselves.⁽⁷³⁾

In other words, if knowledge is considered to be an input into the production process, just like capital or any other input, then technological knowledge, as a determinant of trade structure could be adapted to factor abundance theory and this resource will be taken into account when considering a country's resource availability.

In fact, economists have for long been aware of the importance of technological change as a factor influencing the international flow of trade.

Hicks⁽⁷⁴⁾ emphasised the role of technological progress in international trade and presented a theoretical structure that promoted a substantial literature on trade and growth. In the 1950s, Kravis⁽⁷⁵⁾ emphasised the advantages to the innovating country which came from the possession of the newest products as opposed to advantages accruing from lower costs.

In addition, there are various theories which can put more emphasis on the technology factor and consider technological change and technological superiority as a source of dynamic comparative advantage. They pay more attention to the innovation process and/or market structure, which have been largely ignored in the traditional trade theories.

One of these theories is Posner's technological gap.⁽⁷⁶⁾ He, as pointed out earlier, demonstrated how an innovation in one country

could create a comparative advantage which had not previously existed and how the trade accordingly generated would gradually be eliminated by the recognition and imitation of innovation in other countries.

An extension of the explanation for the actual trade patterns in technology-embodied products has been found in the product life cycle theory, which received detailed attention in the preceding chapter. Briefly, according to this theory, if a country is the first to develop a new technology, that country will possess an advantage in the market place over its rivals. The innovating country's exports, accordingly, would be heavily concentrated in new technology-intensive products, because of these products' superior performance or unavailability elsewhere. However, the country cannot take this technological superiority for granted or enjoy the resulting competitive advantage forever. A given innovation, by one means or other, diffuses abroad sooner or later, making this advantage transitory. Nevertheless, the country can regain its competitive advantage in the same or an alternative product through a succession of new innovations.

While product life cycle theory looks primarily to the characteristics of demand in explaining the rate of innovation, Klein⁽⁷⁷⁾ focuses on the characteristic of supply. He hypothesises that the firm, when confronted with the decision concerning whether or not to invest resources in innovation, faces two types of uncertainty. The first is the uncertainty relating to innovation. In this respect, a would-be innovator is uncertain of levels and elasticities of demand for a new product. This innovator is also uncertain of the costs involved in perfecting the new product. Besides, if the product represents a major departure from existing products, the innovator might even be uncertain of the design and performance characteristics of the product. These uncertainties pose risks to the firm since there is some possibility that the investment in innovation will yield unsatisfactory or negative returns. These uncertainties act as disincentives to innovation. Offsetting these uncertainties is the potential of reward should the innovation prove to be successful.

The second type of uncertainty relates to the actions of competitors. If a rival firm is the first to develop a new technology, that firm will possess an advantage in the market place over its rivals. The possibility that a competitor will pre-empt a new technology acts as an incentive for other firms to engage in innovation.

Klein argues that the potential economic reward from overcoming both the first type of uncertainty and a great measure of the second type of uncertainty is a pre requisite for innovation to occur at a rapid pace in a market economy.

Finally, another explanation of trade patterns in manufactured goods has come from a different direction, as proposed by Linder⁽⁷⁸⁾. Linder's demand similarity is regarded as an alternative to the product life cycle theory as an explanation of international trade. The essence of the model is that trade among nations in manufactured goods derives from product differentiation.

According to the model, international trade in manufactured goods will be most actively conducted between nations having similar tastes and levels of per capita income. Thus the determinant of a nation's comparative advantage is not relative cost advantage, but rather fine differences in consumers' preferences. Also, under Linder's assumption, trade in new technology-intensive goods would take place among all nations with advanced technological capabilities⁽⁷⁹⁾.

What is worth mentioning here is that various studies support both the product life cycle and demand similarity explanations of trade in manufactured goods, although they are based on different assumptions. Hufbauer⁽⁸⁰⁾, for example, in a detailed econometric analysis of the composition of world trade in manufactured goods reached a conclusion that the data employed support both the product life cycle and demand similarity models.

According to this analysis, it could be concluded that the important relationship between the technological superiority of a country and the advantage it derives from this superiority in international trade is now widely recognised by economists.

Technology and Competitiveness in International Trade:

The Empirical Evidence

During the 1960s and early 1970s, researchers amassed a vast amount of data pointing to technological innovation as a significant determinant of international competitiveness. In particular, Douglas⁽⁸¹⁾ showed that innovation in the U.S. motion picture industry was frequently followed first by a surge of exports, and later by foreign imitation. Hirsch⁽⁸²⁾ demonstrated a similar phenomenon in the electronics industry.

In the same vein, Freeman⁽⁸³⁾ showed that countries tend to enjoy a strong competitive position in world markets in plastic products developed by indigenous firms. These findings were confirmed by Hufbauer⁽⁸⁴⁾ in his study of synthetic fibres and by Gruber, Mehta and Vernon⁽⁸⁵⁾, who studied the relationship between investments in research and development in a number of industries and the competitive position of the countries where this kind of investment took place. They demonstrated that U.S. exports tended to be concentrated in industries in which the ratio of research and development expenditures to value added was high.

Furthermore, in a detailed study of a single sector of engineering, namely agricultural implements, Rothwell⁽⁸⁶⁾ has used both patents and unit value data to show that technical quality, or innovation, is a prime determinant of export competitiveness.

Support for the above conclusion is to be found in the study by Soete⁽⁸⁷⁾. Using patent activity as a proxy measure to technical sophistication, Soete tried to investigate the importance of technical change on export performance in manufactured goods. The

results showed that, for most capital goods industries, where technical change is relatively strong, significant results are obtained, while for most consumer and intermediate goods, where technical sophistication is weaker, non significant results are obtained.

Further evidence for the relationship between technological innovation and competitiveness in international trade is to be found in the study by Balassa⁽⁸⁸⁾. In examining the so-called "revealed comparative advantage" of some industrial countries for the period 1963-1971, he developed an index which ranked the export competitiveness of manufacturing industries by nation. The index for a particular product and nation was calculated by dividing that nation's share of exports of a particular category of manufactured goods by its share of total exports of manufactured products. One finding was that the U.S., the biggest innovative country, had actually increased its trade advantage in most categories of technology-intensive goods.

Finally, an interesting test of the importance of new technology in international trade and competitiveness was recently made by Pavitt and Soete⁽⁸⁹⁾. They found that, for many classes of products, a country's share of world exports was strongly related to a measure of its innovativeness in that industry. Exceptions to their findings were products of the material sectors and non-durable consumer goods.

All these researchers tend to confirm the assertion that countries which pioneer new products and which have more technical capabilities tend to enjoy a relatively, or sometimes absolute, advantage in respect of these products in the world markets at least for a certain time of period. It is argued that they enjoy this position even in those cases where they have no obvious comparative advantage in the inputs contained in these products.

Thus, according to this analysis, it might be concluded that for a large number of industries, international competitive position is based to large extent on their technical abilities and innovativeness.

Some International Comparisons in Technology-Intensive Trade:

Having illustrated the importance of the technology factor in international trade and competitiveness, it might be justifiable, in order to complete all aspects of the picture, to shed light on the recent position of trading partners regarding this factor.

Based on international comparisons of total productivity and on data indicating which countries have developed and exported new and improved products, there appears to have been a substantial gap between European and American technology. This technology gap received considerable attention in the 1960s when many Europeans claimed that superior technology has permitted American firms to get large shares of European markets in such areas as aircraft, space equipment, computers, and other electronic products.⁽⁹⁰⁾

In fact, it has been documented that technology-intensive industries have traditionally been a source of strength in the U.S. trade balance. Most of the empirical evidence on U.S. comparative advantage supports the view that, at least in the past, the U.S. has had a unique advantage in trade in technology-intensive products and disadvantages in sectors which employ relatively more unskilled and semi-skilled workers.⁽⁹¹⁾ Table 3.2 illustrates this point.

However, there is some evidence that the U.S. position in many technological products is being reduced and, in some areas, eliminated. Aho and Rosen⁽⁹²⁾ in a recent and comprehensive study of trade in technology-intensive products, come to the conclusion that there has been a noticeable shift in recent years in the pattern of trade in high-technology products. They demonstrate that although the U.S. still maintains a strong position and

comparative advantage in technology-intensive products, yet her competitive position in those products in world markets has been deteriorating.

Table 3.2: The U.S. trade balance in technology-intensive and non-technology intensive products 1960-1980 ⁽¹⁾

Years	Technology-intensive	Non-technology intensive
1960-64 ⁽²⁾	6.8	- 0.5
1965-69	9.0	- 4.5
1970-74	14.7	- 13.2
1975	29.3	- 9.5
1976	29.0	- 16.5
1977	27.1	- 23.5
1978	29.6	- 35.4
1979	39.3	- 34.8
1980	52.4	- 33.5

(1) Billions of dollars

(2) Annual average

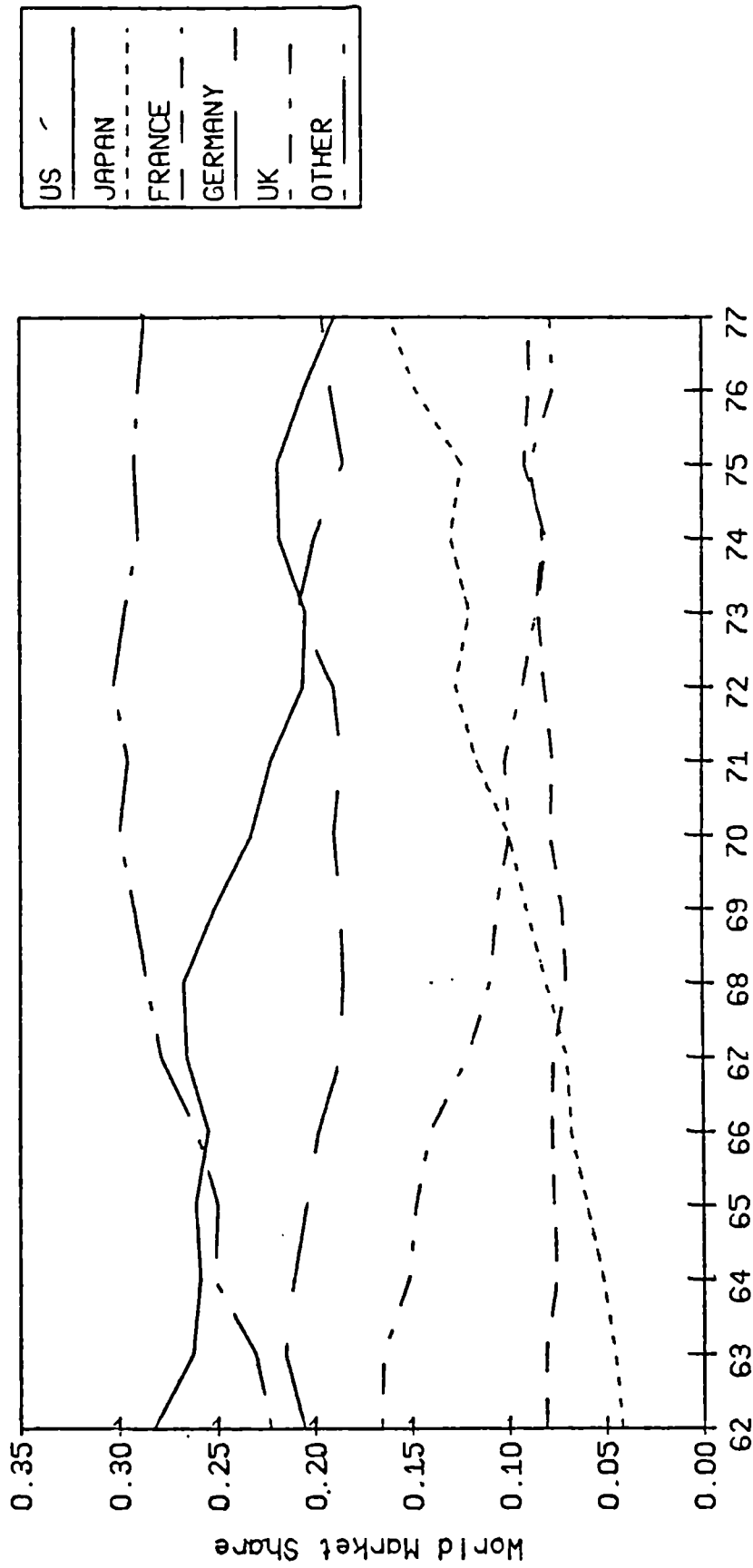
Source: J. David Richardson, U.S. international trade in world of Change, National Bureau of Economic Research, working paper No.1228, November 1983, p.18.

The shifts in the pattern of trade in high technology products for the major producing countries are illustrated in figure 3/1 and Table 3.3.

Figure 3/1 shows that the U.S. export market share in technology-intensive products has fallen over time. In 1977 the U.S. share fell to second place behind Germany whose share has remained roughly constant over the period of research.

FIGURE 3.1

World Market Share
of Technology-Intensive Goods
for Selected OECD Countries



Source: M. Aho and H.F. Rosen, "Trends in technology-intensive trade: with special reference to U.S. Competitiveness", op. cit.

It is worth noting that Japan's share during the same period had risen to a point where it was just behind the U.S. and Germany. On the other hand, the U.K. lost over half of her market share over the same period, while France, like Germany, had almost constant shares throughout the period.

In the same vein, Table 3.3 displays the average annual growth rates of export market shares for the above mentioned countries over different periods.

Table 3.3: Average annual compound growth rates of market shares of technology-intensive exports

	1962-64	1964-74	1974-77	1962-1977
	%	%	%	%
U.S.	- 1.7	- 2.8	- 4.6	- 2.6
Japan	11.6	7.4	7.5	9.3
France	- 1.6	2.1	3.6	0.7
Germany	- 1.3	1.3	- 0.7	- 0.3
U.K.	- 6.2	- 5.0	- 1.6	- 4.9
Other OECD	3.9	- 0.2	- 0.4	1.7

Source: M. Aho and H.F. Rosen, Trends in technology - intensive trade, op. cit, p.28

It is obvious that the U.K. suffered the greatest deterioration in her average compound growth rates of market shares in these commodities, followed by the U.S., while, by contrast, Japan has achieved the most marked progress in this area, according to this measure.

Another indicator that could be used to indicate the changes in international technological activities and in the competitive position of the producing countries for technology-intensive goods is the record of patents.

Patents are regarded as an indication of a country's innovativeness and, as such, relate to the country's ability to introduce innovative goods and services to the commercial market.⁽⁹³⁾ Indeed there appears to be some relationship between a nation's patent activity and its international competitiveness as measured in its share of manufactured exports.

As shown in Table 3.4, comparing the international patent activity of major OECD countries and their respective share of manufactured exports during the same period, shows a definite correlation between them.

Table 3.4: Trends in international Patent application and manufactured exports for selected OECD Countries 1965-1975

	Share of World patent applications		Share of OECD Manufactured exports	
	1965 - %	1975 - %	1965 - %	1975 - %
France	7.2	7.4	8.6	10.2
Germany	18.3	19.2	19.3	20.3
Italy	2.5	3.2	6.9	7.5
Japan	3.0	8.7	9.7	13.6
U.K.	11.7	7.7	13.4	9.3
U.S.	36.5	29.3	20.1	17.7

Source: Sherman Gee, Technology transfer, innovation and international competitiveness, New York: John Wiley & Sons, 1981, p.62

As is readily evident, a declining trend for manufactured exports prevails in the U.S. and the U.K., where the international patent activity is also on a downward trend.

By contrast, for the remaining countries, especially Japan, a rising trend in manufactured exports accompanies a similar trend in their international patent activity.

In discussing the reasons behind this shift in technology-intensive trade and how the position of certain countries like the U.S.A. and Great Britain has dramatically changed, Graham has identified four major reasons including the following:⁽⁹⁴⁾

- (a) The growing technological capabilities of other advanced nations. In this regard there is evidence to indicate that the technological capabilities of a number of industrialised nations such as Japan and West Germany have advanced very rapidly during the past few decades and in certain sectors, these countries are the leading sources of new technologies.
- (2) Industrialisation of developing nations. It has also been established that the industrial sectors of a limited number of the so-called developing nations have grown very rapidly in recent years, and several of these nations are beginning to emerge as important exporters of certain types of manufactured goods.
- (3) The transfer of technology by multinational firms. The ability of multinational firms to transfer new technologies across international lines has been growing. Additionally, the ability of local firms in a number of foreign nations to quickly imitate new technologies has increased markedly.
- (4) Slowdown in international innovation. In the last few years, there appears to have been a worldwide slowdown in the rate of development of new industrial technology.

Other reasons have been proposed as being responsible for the American technological slide including reduced research and development activities; shrinking pure research budgets, low capital investment and fewer new ventures.⁽⁹⁵⁾

With respect to the British position, we find that a number of recent studies of British industrial problems have put forward lack of technological innovation as a major reason behind the poor British performance.

The justification for imputing lack of innovation to British industry was typically put forward by Pavitt⁽⁹⁶⁾, using shares of industrial R & D patenting in the U.S. for seven OECD countries as an index of their relative activities. On this basis, by 1975, innovative activity in the U.K. was calculated to be about 50 per cent of that of Germany and Japan and only 20 per cent more than that of France.

In another study, Pavitt & Soete⁽⁹⁷⁾ showed that in 1974, differences in export shares amongst those countries which are advanced in terms of technology-intensive product groups were closely correlated with national differences in levels of innovative activities. British industry was well behind Germany, Sweden, Switzerland and the Netherlands in relative levels of innovative activities and export shares in many technology-intensive sectors. Military-related equipment was an exception. Further evidence of the lack of British innovative activities is to be found in Rothwell's⁽⁹⁸⁾ Studies on agricultural and textile machinery. He suggests that, in sectors where British imports have grown rapidly, like agricultural and textile machinery, part of the reason may have been the technical inferiority of British Capital Goods. Rapid growth of import penetration in Capital Goods, in his view, may reflect in part the purchase of foreign technology to compensate for British deficiencies in design, development and innovation.

Support for the above view comes from Baker's⁽⁹⁹⁾ article on "export myopia". He indicates that "While Germany, Japan and others may be approaching the end of their surplus resources of agricultural labour, they would seem to have put the surplus arising from past transfers to good use by ploughing much of it

back into investment in technological innovation. By and large U.K. industry is not doing this and the competitiveness of our output is declining steadily".

Other studies by Branett⁽¹⁰⁰⁾, Allen⁽¹⁰¹⁾ and Saunders⁽¹⁰²⁾, among others, have also stressed the relative lack of professional and technical competence of British industry as one of the most important constraints to improving the competitiveness and growth of U.K. industries.

Among the reasons mentioned as responsible for the British lag in innovative activities, the following can be cited:

- 1) Although U.K. R & D expenditure was in line with that of other major competitors as a percentage of GNP, at around 2 per cent in 1978. The level of total U.K. R & D expenditure is considerably less than theirs in absolute terms. Table 3.5 illustrates this point.

Table 3.5: International Comparisons of expenditures on R & D.
1964 and 1978

	Absolute expenditure £M		Expenditure per head £		% share of GNP	
	Total	Civil	Total	Civil	Total	Civil
<u>1964</u>						
U.K.	767	506	14.2	9.4	3.2	1.5
U.S.	5,338	2,816	27.8	14.7	2.9	1.5
France	449	327	9.3	6.8	1.6	1.1
W. Germany	538	484	9.3	8.4	1.4	1.3
Japan	490	486	5.1	5.0	1.4	1.4
<u>1978</u>						
U.K.	3,622	2,618	6.5	4.7	2.2	1.6
U.S.	22,610	16,600	10.1	7.4	2.4	1.7
France	3,150	2,527	5.9	4.7	1.8	1.4
W. Germany	4,715	4,440	7.7	7.3	2.2	2.1
Japan	6,892	6,856	6.0	6.0	1.9	1.9

Source: National Economic Development Council, innovation in the U.K., London: NEDC, October 1982, p.10.

- 2) Related to the above point, it is also pointed out that U.K. R & D expenditure is heavily oriented towards defence and R & D is more dependent than in other competitor countries, apart from the U.S.A. and France, on government funding. In 1978, 32 per cent of U.K. industrial R & D was financed by government, and 55 per cent of government R & D expenditure was directed to defence objectives.⁽¹⁰³⁾

These related features of U.K. R & D expenditure result in a heavy concentration of industrial R & D expenditure on defence-related industries, such as aerospace and electronics, while competitors like Germany, Japan and the U.S. are spending considerably more than the U.K. outwith the defence-related industries, both in absolute terms and as a proportion of GNP.

In fact, R & D is one of the factors which affect the long-run competitive position of a country. To the extent that the country devotes less resources to R & D than its competitors, the long run international competitiveness of that country's industry will be reduced. Britain is a case in point.

- 3) It is argued that the low importance given to graduates in engineering and management is seen as another reason for the inefficiency in the innovation process in the U.K.⁽¹⁰⁴⁾ The education system in the U.K. has not put sufficient emphasis on applied science, engineering and technology for industry. There is a much lower incidence of technical education and qualifications throughout the workforce in the U.K. than among its major competitors.

One proxy which is used to measure national involvement in science and technology is the number of scientists and engineers per 10,000 workers in the labour force.

Data in Table 3.6 confirm the trend suggested by the data on R & D.

Table 3.6: Scientists and engineers per 10,000 in the labour force in some countries

	1965	1968	1972	1975	1977
France	21.0	26.4	28.1	29.3	29.9
Germany	22.6	25.4	35.7	39.4	40.5
Japan	24.6	31.1	38.1	47.9	49.9
U.K.	21.4	17.2	27.8	30.6	N.A.
U.S.	64.1	66.9	58.3	56.4	57.4

Source: National Science Board, Science indicators 1978, Washington, D.C. 1979 . Table 1.3

The table demonstrates that there has been considerable growth in the number of scientists and engineers in both Germany and Japan since 1965. In the U.K. and France there is an increase in the proportion of scientists and engineers in the labour force but at slower rate. The U.S., although still maintaining the lead in this field, is the only country among those under consideration which experienced a decline in the proportion of scientists and engineers in the labour force.

- 4) The limited role of Purchasing. It has been demonstrated that, despite recent progress, the public sector in Britain is still not realising its full potential for encouraging innovation and developing internationally marketable products through its purchasing. There is wide agreement that Public Purchasers in Britain could do much more to support innovation by outlining the performance characteristics required and leaving the industrial sectors to develop new products which satisfy world markets. This is especially important in relation to encouraging the improvement of manufacturing technology, the evolution of new high technology, and the "Pulling Through" of a policy to use standards to improve the U.K.'s competitive position. Public purchasing could also be

used more effectively to bring about the construction of pilot plants and demonstration projects of technological significance, either where the scale of the project is too large for the supplier to build such a plant within its own resources, or because there is export-potential but home demand is still limited.⁽¹⁰⁵⁾

5) The management of innovation is another area which has been subjected to much criticism in its relation to British performance in the field of technical innovation. This criticism can be illustrated as follows:

(a) Less commitment of Senior Management to innovative projects and policy. International comparisons in some key engineering sectors indicate that many U.K. companies have given less prominence to innovation in their strategic thinking than elsewhere, tending to regard R & D as an adjunct to current mainstream activities rather than as the key to satisfactory anticipated market needs.⁽¹⁰⁶⁾

(b) Less integration of R & D with the production and particularly the marketing function. Survey evidence suggests that a number of British innovations have not come up to commercial expectations because they have been excessively based in "Technology-Push" forces from technical departments and have made insufficient assessment of market needs as a starting point for product development.⁽¹⁰⁷⁾ In addition, some new products have failed to be exploited because of inadequate marketing back-up, e.g. not supplying customers with sufficient technical information, user education, or after-sales service.

(c) Weaker links between innovating firms and their potential customers, particularly technologically advanced ones. The history of the textile machinery industry in the U.K.

and West Germany indicates that the latter developed higher performance products through close cooperation with a technologically-oriented user industry that did not exist in the U.K. (108)

6. Last, but not least, it is claimed that much of Britain's subsequent decline in innovation in particular and manufacturing competitiveness in general can be traced to her earlier tradition of trading in less technology-demanding markets. Historically, the majority of British exports were in textiles, raw materials and agricultural produce, that is, areas of low technical activity. Even in the new industries like machinery, transport equipment and chemicals, a large part of U.K. exports went to markets outside the industrial block, in other words, to areas where the demand for the technically more advanced products was relatively low. (109)

Accordingly, it is commonly recognised that if Britain is to restore her earlier lead in international trade and to match those of her recent competitors, the rate of technological innovation in U.K. industry will need to increase.

On the other hand, Germany and Japan represent a success story. It is well documented that Germany has had a rapid and dramatic recovery from the ravages suffered during the Second World War.

The government has channeled effort into building a formidable science and technological base in selected commercial fields. She has fostered development in high-technology industries through a variety of subsidies. Interface among government, industry and educational institutions has been promoted in order to develop leadership in selected technologies.

It is pointed out that the redeveloped economy of Germany is in many respects similar to that of the old Germany. Sectors in which she has been historically strong re-emerged as those in which she has become a leading innovator, such as Chemical and Pharmaceutical

industries, precision and heavy machinery, heavy electrical goods and surface transport equipment.⁽¹¹⁰⁾ Although West German firms generally have not yet emerged as leading innovators in very high technology industries like aircraft, aerospace and advanced electronics, yet some German firms have achieved a sound performance in certain high technology sub-sectors especially in chemicals, pharmaceuticals, nuclear power and tele-communication.⁽¹¹¹⁾

It is difficult to leave the discussion about technology without referring to Japan. The previous analysis indicates the rapid growth of Japanese exports of technology-intensive goods and the growing share of Japanese exports to markets that were traditionally dominated by producers from the other countries like the U.S. and Great Britain. This, in turn, reflects the growing competitiveness of Japan's technology-intensive goods in international markets.

Japan has perhaps been the major technological success story of the latter half of this century. In the early postwar period Japan rebuilt her traditional industries like textiles, steel, shipbuilding and heavy machinery industries, and in these sectors Japan became a very efficient producer and exporter during the 1960s. The automobile and consumer electronics industries were built up rapidly during the 1960s and early 1970s. At the same time Japanese firms were making advances into such high technology industries as semi-conductor and computer manufacture. The Japanese Ministry of International Trade and Industry now expects that a major source of future growth in the domestic economy will come from the most technologically advanced sectors.⁽¹¹²⁾

One of the keys to this success has been the education policy. Upgrading the skills and know-how of the entire population has been the Japanese Government's major goal for more than twenty-five years. Technological handbooks were distributed on a large scale, and other measures were taken to promote a broad type of technical education.⁽¹¹³⁾ It has been shown that the Japanese R & D effort

is seen as highly productive, considering that approximately only 1.5 per cent of gross national product is spent on R & D. This comparatively low percentage may be misleading in that this expenditure is almost exclusively concentrated on consumer products, with very insignificant sums being allocated to military R & D. It is estimated that about two-thirds of R & D in Japan is performed within the private sector.⁽¹¹⁴⁾

In addition, a coherent industrial policy has also played an important role in building up the competitiveness of Japanese industry. Industrial policy in Japan is clearly aimed at the structural adjustment of problem sectors and at the promotion of new ones like computers. Technological innovation is part of a wider effort to recognise the industrial structure, establish a national R & D capability and promote productivity. Research policy has been closely coordinated with industrial policy, R & D programmes have been designed to create a technological capability in the key sectors identified by industrial policy as important for the future, and national laboratories have been the focal point for catalysing efforts of universities and firms and disseminating research results.⁽¹¹⁵⁾ Furthermore, the Japanese science policy has been consistent with its economic objectives. Japan has very few natural resource, therefore to survive economically a vigorous export system must exist; the Japanese science policy has fostered such a system. According to Inose⁽¹¹⁶⁾, the major factors contributing to Japan's rapid industrial expansion have been technological innovations, government policy and a motivated labour force.

It is true to say that Japan, with Germany, has joined the U.S. in having a competitive advantage in a number of high technology products, and competition between them will probably increase in the future.

Finally, of greater interest are the results of a recent survey based on the judgements of managers from more than two hundred large companies in Europe, which reflects the disparity between

countries in their ability to exploit the new technologies and the belief that wide "Technology gaps" are developing. The results of the survey also correlate with the previous analysis relating to the competitive position between the major producing countries of high-technology products.

Table 3.7: Ranking in high technology: An assessment by Chief Executives of more than 200 European Firms

	U.S.	Japan	Germany	Scandinavia	U.K.	France
Computing	1	2	3	4-5	6	4-5
Tele Comm.	1	2	3	4	5-6	5-6
Biotechnology	1	2	3	4	5	N.A.
Chemicals	1	2	3	4	5	6-7
Metals/Alloys	2	1	3	4	5-6	5-6
Engineering	1	2	3	4	5	6
Manufacturing	1-2	1-2	3	4	5	6
Robotics	2	1	3	4	6	5
Electronics	1-2	1-2	3	4	6-7	6-7
Mean Rank	1.3	1.7	3	4.2	5.4	5.8

Source: Jean-Eric Aubert, "Innovation policies: a three way contrast, OECD Observer, No.131, November 1984, p.3.

In Summary

One of the most noteworthy developments in economics after the Second World War has been the interest in technological change. One major reason which accounts for this attention is awareness that a nation's rate of economic growth and competitiveness depend heavily on the rate of technological change.

Technological change becomes a key element in the competitive strategy of firms and countries. The extent of quality of an industry's or country's research and development programmes can make it a leader in the world markets. There is considerable evidence to suggest that, in most industries, new products account for a significant share in both home and world markets.

Recognising the importance of technological change as a prime factor in determining competitiveness, governments in most of the advanced market economies have become increasingly involved in instigating measures to stimulate, and assist with, technological innovation in manufacturing industries.

(2) Economies of Scale and Competitiveness

Introduction

Whether or not there are economies of scale in the production of various goods has long been a subject of debate. Some have demonstrated that larger amounts could apparently be produced at lower unit costs. Many others, however, pointed to the survival of plants and firms of different size in the same industry, implying that the advantage of larger scale plants could not be all that commanding.

According to traditional trade theory, international unit cost differences arise from national differences in factor endowments; countries in which one factor of production is relatively abundant are able to produce relatively cheaply those commodities whose manufacture makes intense use of the abundant factor. Industrial structure and performance have no place in this account of things. Industries are assumed to be perfectly competitive and to operate as a whole in the most efficient possible way.

According to this account of international trade, integration between different countries, like the EEC for example, yields no benefit from economies of scale whatever, these are assumed to be already achieved within national boundaries. ⁽¹¹⁷⁾

However it has been demonstrated that this approach contains several weaknesses:

- a) Given the existence of barriers to trade created by both cultural and commercial policies, differences in the relative economic sizes of countries could give rise to differences in comparative advantage based on differences in the allocation of capital among alternative forms.⁽¹¹⁸⁾
- b) Difference in the sizes of national markets may create differential opportunities to exploit economies of large scale in the production of particular goods or in particular industries.
- c) It is argued that significant competitive advantage may be gained by firms of a particular country if their domestic markets are protected and they are allowed to develop a scale large enough to achieve cost advantages.

In the light of the above criticism, recent theoretical developments have succeeded in reworking trade theory to include economies of scale. In this respect, Krugman⁽¹¹⁹⁾ and Ethier⁽¹²⁰⁾ have demonstrated that not only are the familiar trade theories preserved in the face of economies of scale, but similarity of factor endowments tends to promote intra-industry trade. Moreover, they showed that this trade derives ultimately from economies of scale.

2.2 The Role of Scale Economies in achieving Competitive Advantage

There is clear evidence that economies of scale played a major role in America's economic growth. As Lyton⁽¹²¹⁾ put it, "For roughly a hundred years, or since the end of the American war, the long-term trend of growth in the U.S. economy was faster than that of Western Europe as a whole". He continues, "one major reason was economies of scale. For the first time in history modern industrialism developed within a continental economy". He argues that in the last few decades there has been a whole new range of American economic developments that are a function of scale. In his view, the result of supporting advanced technology on a large scale has

been the creation of a new range of industries like computers and data processing, semi-conductors and integrated circuits, and communication satellites.

Denison⁽¹²²⁾ added support to this view when he calculated that about ten per cent of America's economic growth rate can be attributed to scale economies during the period 1929-1969. It is also indicated that the search for economies of scale was a major reason behind the foundation of the European Community. The policy makers have considered the scale factor to be a fundamental economic reason for integrating the markets of the community. They looked to the U.S., the world's largest integrated Common Market, and judged that the size of the American market has fostered the development of large-scale production technologies which, in turn, were partly responsible for American productivity levels being the highest in the world at that time.⁽¹²³⁾

Generally speaking, economies of scale occur as growth opens up opportunities for greater specialisation of workers, machines and plants which permits the spreading of overhead type functions over more units of output. Economies of scale could be achieved under the following conditions:⁽¹²⁴⁾

- Producing on a large scale which may enable lower costs per unit of output to be achieved.
- Economies are associated with a large cumulative output because management and work people learn on the job.
- Economies may arise with a large rate of output because set-up costs do not need to be repeated, large numbers increase predictability, area-volume relationships make larger constructions cheaper per unit of capacity, and indivisible equipment may be used in the best proportions.

What should be emphasised here is that the economies of scale phenomena apply not just to physical production but all elements of the business system from R & D to after-sales service.⁽¹²⁵⁾

Furthermore, economies of scale are not necessarily confined to the

operations of individual enterprises, but are often potentially present on an industry-wide basis. We may consider, for example, the duplication of R & D efforts in certain industries.

In his assessment of the competitive environment in which the firm or the industry operates, Porter⁽¹²⁶⁾ considers the role of scale as an entry barrier. According to his analysis, a potential entrant will face barriers if the industry is characterised by economies of scale. Scale economies discourage entry by forcing the prospective entrant either to come in operating on a large scale, risking strong reaction from existing firms or to accept a cost disadvantage, both of which are undesirable options. Scale, as an entry barrier, is enormously important in industries like steel, automobiles, computer frames, and others.

In fact, the role of scale economies has been analysed by a number of studies. Cross-sectional studies of international productivity differences at the national level found that market size contributed to expectations of these differences.⁽¹²⁷⁾

More recent studies support this finding, indicating the causal link between scale and productivity. Chenery⁽¹²⁸⁾, for instance, in his study of the patterns of industrial growth, came to the conclusion that the greatest variations in output levels in the different countries under research, are found in industries producing machinery, transport equipment, and intermediate goods, where economies of scale are most important.

Further support is to be found in Pratten's⁽¹²⁹⁾ study of the operations of multinational companies. Comparable manufacturing operations by both American and European Companies suggested that the average length of production runs in the American Companies' operations were between two and three times greater than in the European operations. Thus, even when the same manufacturing experience is applied by the same company in the U.S. and Europe, a substantial scale difference is apparent in its application.

Significant results which confirm the role of scale also emerge in the study of the size of the plant employed. In this regard, a study by Sherer and others⁽¹³⁰⁾ of the plant sizes in twelve industries in six major industrial countries, including the U.S., Canada, Sweden, Germany, France and Great Britain, calculated the minimum efficient plant size in each country with these minimum sizes. The research concluded that whereas the average American plant size was 74 per cent of the minimum efficient size in ten industries, the corresponding figures for three major European Community countries were 50 per cent for Germany, 40 per cent for Britain and 35 per cent for France. In explaining the variations in national plant size in the sample, Sherer found the most important explanatory factor was market size. Also, the study found a significant relationship between plant size and productivity.

The motor industry is regarded as a classical case for such economies of scale in manufacturing. In one study of the British car industry, it is pointed out that the volume of production per model, the capital per man and the output per man of the British motor industry were far behind the American level.⁽¹³¹⁾ It was found that General Motors, for example, although it assembles different models in different places, constantly seeks to maximise economies of scale in components, in order to achieve an optimal balance between the variety of market needs and the scale employed. By contrast it is indicated that the British motor industry still produces as many different models as the U.S. industry and this, in turn, feeds back diseconomies into the component industry.

In another study, Jones and Prais⁽¹³²⁾ found that the difficulties of the British car industry have inevitably been clearly demonstrated in international comparisons regarding plant size, a factor which hinders production on a large scale. They pointed out that the size of the plant features as a critical element in the success of this industry. However, according to them, "it would be mistaken to assume that large size by itself is a sufficient

condition for success". It is as much a symptom of success as its cause". In this respect, it is mentioned that seeking economies of scale is the most important reason that leads the British motor industry to turn towards Europe.

It is the role of scale in achieving competitive advantage that led some researchers, especially in Europe, to suggest the idea of "shared scale".

The idea is documented in Vitorovich's⁽¹³³⁾ article on "Higher productivity through shared scale". In his words "Intense competitive pressures are forcing many European manufacturers to concentrate their resources on the factors that differentiate their products in the market place, while collaborating with suppliers and competitors in non-differentiating areas in order to profit from combined scale".

It is well documented that Japanese steel makers, after relying initially on borrowed technology in building their production capacity from scratch, began to experiment with scale. The object was lower production costs and sufficient capacity to participate in the growing world market. It was the low cost and available capacity, among other factors, that enabled the Japanese to gain and defend a large share of the world market.

Magaziner and Hout⁽¹³⁴⁾ give support to the above view. They see that the ability of Japanese enterprises to take advantage of a large domestic market and the aggressiveness of their marketing and investment activities, plus their aggressive exporting policy, enabled them to take full advantage of large scale production, thus becoming cost competitive.

It is also argued that western companies, being heavily undercut by Japanese firms, can only compete by an equal pursuit of economies of scale.⁽¹³⁵⁾

As a final note, it should be stressed that the potential for the firms in one country to reap scale advantage depends on that country's ability to organise and operate large scale production, finance and marketing systems.⁽¹³⁶⁾ Again, Japan is such a case.

The Japanese seem to have the managerial capacity to organise world-scale production and the marketing of standard production, while in Britain, it is claimed that the concentration of strikes in large scale facilities may represent an underlying disadvantage in maintaining large scale production.⁽¹³⁷⁾ That may, in turn, lead to the conclusion that the trade success of Japan and trade decline of Britain relates partly to their relative abilities to produce at large scale output levels.

According to Vitorovich, "In tougher market competition in the 1980s, scale has become a critical strategic and operational issue. Global competition in world markets, rapidly developing technology, and the high cost of money are forcing companies in technologically active industries and mature markets to pursue economies of scale, not only when investing in new capacity and new facilities, but also when exploring cost-reduction possibilities scale, in some cases, can be a key to survival".⁽¹³⁸⁾

Economies of scale are often linked with the "experience curve" concept. As economies of scale can give significant competitive advantage to larger business units, there is also frequently an experience curve effect. The longer a company or an industry has been in business, the more experience it has accumulated and the easier it may be to identify opportunities for production cost reduction and product improvement. This has been observed in many countries including the U.S., Japan, and Great Britain. For most industries and products, the unit cost decline is about 20 to 30 per cent for every doubling of accumulated experience. Cost declines associated with experience seem to be most significant in businesses involving a high labour content and/or complex assembly

operations such as aircraft and shipbuilding. They are nearly always greatest in the early and growth phases of product development, diminishing in later phases.

It appears that in most areas, cost resulting from experience operate in the same manner as scale economies. Experience can lower costs in marketing, distribution, and other areas, and each component of costs must be examined for experience effects. The causes of the decline in unit costs are a combination of elements including economies of scale, the learning curve for labour, and capital-labour substitution.

The experience curve effect is important as a competitive weapon because it enables one to calculate the changes in relative costs of the different competitors in any given industry. These costs are a function of: the initial production costs in every country, the rate of accumulating experience, the amount by which costs decline in each country for every doubling of accumulated experience, the relative rates of inflation and their exchange rate. So, the producers in a particular country can maintain, or increase, their price competitiveness in products they have introduced if the following conditions are met:

- The initial production costs are lower than that of other competitors.
- The accumulation of experience more rapidly than other competitors.
- For each doubling experience, costs decline by a greater percentage than other competitors.
- Lower inflation rate.

Each of these factors can be influenced by the decisions of the nation's businessmen and government policy makers. By controlling these factors, the country can alter its international competitive position and the product cycle development of its industries.

Similarly, it has been shown that the competitive advantage possessed by an experienced operator can constitute a considerable

entry barrier. New competitors with no experience face higher costs than established ones, particularly the producer with the largest market share, and have difficulty catching up with the entrenched competitors.⁽¹³⁹⁾ As a result, the experience effect can produce cumulative, important competitive advantages.

Economies of scale and experience curve, therefore, deserve our attention as they are associated with important economic policies, give rise to large economic problems, and help to explain some features of international competitiveness.

(3) Marketing Factors and Competitiveness

Introduction

The ability to produce technologically advanced products on a large scale does not constitute a sufficient condition for success in international markets. A number of inhibiting factors may act as deterrents to the realisation of the latent competitive advantage which a country may possess. Marketing is one of these factors.

Although some attention was given to marketing, in the preceding chapter, as a non-price element, its main role in achieving competitive advantage in the world markets still needs to be explored. This represents the main focus of this sub-section.

It is commonly accepted that success in business is success in the market. Competitiveness, in its basic meaning, refers to the ability to serve the customer better than one's competitors. That means making better provision for the customer's needs, identifying and developing the product and servicing packages, pursuing better policies in relation to the market's existing and emerging requirements, at a worthwhile profit. These activities, in fact, nearly constitute the core of marketing functions.

Marketing is uniquely able to assess consumer needs and the firm's potential for gaining competitive advantage, which ultimately must guide the policies and strategies followed by the enterprise towards achieving definite goals. It is the role of marketing in the analysis of consumers, competitors and other environmental forces, that makes it a vital part of business strategy.

The importance of marketing in achieving competitive advantage in the world market was appreciated many years ago. In the 1960s, even when the American producers were dominating the world markets, Eppert⁽¹⁴⁰⁾ confirmed the importance of marketing for American progress. He indicated that "more than ever before, the economic future of the U.S. is vested in the marketing process and future American progress will be determined largely by marketing management's success in the new frontier: the world market".

Despite their importance, some economists are apt to shortchange marketing techniques and assume that costs of production alone are important. Again, in markets that are competitive, low costs are a necessary but not sufficient condition for success. In the quest for competitive advantage, the foremost concern should be the probable market response to the product on offer. That means, in order to achieve success, the strategy, whether based on the cost, technology, service or other competitive advantage of the firms has to be consistent with consumer needs, perceptions and preference.

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Success is likely, therefore, to depend more and more on the ability to recognise the requirements of both local and foreign markets and speedily to ensure that the whole of the necessary resources are directed towards servicing these markets.

The following pages shed light on some aspects of the marketing role in achieving success in the market place.

Technological Leadership and the Role of Marketing

One major aspect of the marketing role concerns helping and assisting new products to achieve acceptance in the market place.

As was established earlier, new technology has a massive role in achieving competitive advantage in international markets. However, it is argued that technology without effective marketing can lead to disaster. Blackwell⁽¹⁴²⁾ emphasised this point when he stated that 'even in high-technology environments, the real source of advantage over competitors may come, not from technological leadership, but from mastering the basic skills of sales and marketing'.

Partial support for this view has been provided by Wilson⁽¹⁴³⁾. He indicated that, if the processes of innovation are to reach a successful conclusion, they must run in parallel with a deeper and consistent study of the target of the innovative concept or product, which is the customer, and this represents one of the major tasks of marketing functions.

In fact, poor marketing is regarded as a main cause of failure in new product innovations, while effective marketing is viewed as an obvious requirement for successful innovation in many studies.

One of the most comprehensive studies in this field is that by NICB⁽¹⁴⁴⁾. The study has identified eight main causes of failure in new product innovation, including inadequate market analysis, product defects, higher costs, poor timing, competitive reaction, insufficient market effort, inadequate workforce and inadequate distribution. At first glance, one might conclude that basically most of these factors reflect poor marketing performance.

A more recent study which supports the above finding is that by Cooper⁽¹⁴⁵⁾. The results of the study refer to weak marketing as a major cause of failure of new industrial products.

In this respect, it is pointed out that the lack of market orientation and breakdowns in communication are the most frequently cited reasons for British industry failing to complete the product innovation cycle and achieve full commercial exploitation⁽¹⁴⁶⁾.

A recent report from Acard⁽¹⁴⁷⁾ highlighted institutional problems, specialisation, lack of communication and neglect of market consideration as acting against innovation.

In the same vein, a NEDO⁽¹⁴⁸⁾ report on the pharmaceutical industry concluded that, while major companies relied heavily on research, there were few instances of marketing representation on R & D Committees and project teams.

On the other hand, other studies by Carter and Williams⁽¹⁴⁹⁾, Utterback and others⁽¹⁵⁰⁾, Baker⁽¹⁵¹⁾ and Rothwell⁽¹⁵²⁾, among others, concluded that successful innovations arise in response to market needs and successful innovators understand user needs and pay more attention to marketing.

The above situation leads into the assert that, if Britain is to have a manufacturing future, her innovative activities should be based on products for which a market exists or for which demand can be stimulated, which in turn reflects the importance of marketing activity in this process.

Marketing as a part of Business Strategy

It is also recognised that a sound business strategy should have a marketing perspective. That means, marketing should provide inputs to strategy formulation and the evolved strategies should be tested against the reaction of consumers, competitors and other stake holders.

The difference between a business strategy based on marketing perspectives and that based on non-marketing perspectives is the difference between Japanese and European and American business strategies.

In fact, marketing is seen as the next major factor explaining Japanese competitive strength. While most of the analyses of Japanese success phenomena attribute this success to their superior management techniques, Kotler and Fahey⁽¹⁵³⁾ speculate that the key to the superior performance of Japanese firms may rest in their outstanding marketing skills. They note that the Japanese market entry strategy generally involves:

- Segmenting the market.
- Targeting a segment that competition is not adequately serving.
- Designing the product for the market segment.
- Entering with a low price, offering high quality and services.
- Developing strong distribution.
- Backing the product with heavy promotion and advertising.

Moreover, it has been documented that the Japanese apply their marketing strategy with intensity. Typically they begin by noting general characteristics of the market before addressing the factors surrounding their product. Thus they are likely to devote their attention to the overall GNP growth rate, income and age distribution, and other general characteristics before taking up the competitive circumstances of their product. They also analyse prevailing purchase patterns and brand preferences in these markets, and analyse the import policies and procedures of various countries and the marketing implications of such policies⁽¹⁵⁴⁾. These and other steps seem to precede formulation of a marketing strategy specially designed to capitalise on the opportunities presented by various national markets and thereby overcome the entry barriers confronted.

Magaziner and Hout⁽¹⁵⁵⁾ may best explain the difference between the Japanese and western business strategies. In this regard they indicated that Japanese marketing strategy has the advantage of focusing upon the weak spots of their competitors in the world markets. In their words, "The market and product entry strategies of Japanese Companies have often targeted the weak spots of competitors. Japanese Companies commonly begin exporting to third world markets which are peripheral to their large U.S. or European competitors. These markets represent a small portion of western sales but can add significantly to the Japanese Company's volume base. When entering these markets, Japanese Companies generally cut prices". They continue, "often the western company's manager in these markets is concerned about his current profitability and does not look beyond a two or three year period after which he can return to the home office. He is likely to sacrifice market share to a new, aggressive Japanese competitor, who will replace western companies in these small but growing markets and gain a stronger overall volume base with which to enter European or American markets".

Further evidence of the difference between European and Japanese business strategies is documented in Wilson's⁽¹⁵⁶⁾ article, "when the export trade gets tough". He noted that while European accountants tell their companies which markets to abandon as unprofitable, The Japanese would do exactly the reverse. They have a set of priorities, incorporated in their business philosophy: first, to improve and maintain market share; second, to do what is best for the labour force; third, to do what is best for the company; and fourth, to make a profit.

Perhaps the classic illustration of the difference in marketing strategy between Japanese and European companies is found in the Boston Consulting Group paper⁽¹⁵⁷⁾ on the international motor cycle industry. The report summarises the British marketing philosophy as follows:

The fundamental feature is its emphasis on profit made, model by model. It is seen as necessity that throughout the life cycle of each model, in each market where it is sold, it should yield a margin of profit over the costs incurred in bringing it to the market.

With this as a primary goal, a number of subsidiary policies follows: ⁽¹⁵⁸⁾

- A) Products should be updated or withdrawn whenever the accounting system shows they are unprofitable.
- B) Prices are set at levels to achieve profitability and will be raised higher if necessary.
- C) The cost of an effective marketing system is only acceptable in markets where the British products are already established, and hence profitable. New markets will only be opened up to the extent that their development does not mean significant front end expense investment in establishing sales and distribution systems ahead of sales.
- D) Plans and objectives are primarily oriented to earning a profit on the existing business and facilities of the company, rather than on the development of a long-term position of strength in the industry.

It is asserted that these are the policies which have led to poor British performance and a falling share of world markets for this industry.

By contrast, the primary objectives of Japanese firms are set in terms of sales volume rather than short term profitability. To achieve that, the policies to be followed are:

Products are up-dated or redesigned whenever a market threat or opportunity is perceived, prices are set at levels designated to achieve market share targets and will be cut if

necessary, effective marketing systems are set up in all markets where serious competition is intended, regardless of short-term costs, plans and objectives aim at long-term results.⁽¹⁵⁹⁾

Baker⁽¹⁶⁰⁾, in his study of the steady decline in the UK's competitive position, added strength to the above analysis. His comment on the strategies pursued by both Japanese and British producers regarding the same industry was "it is the difference between a sales strategy based on short-term profitability, as conceived by traditionally minded accountants, and a marketing strategy based on the satisfaction of consumer needs".

This led to the conclusion that it is not simply low productivity that has all but destroyed the British motor cycle industry, it is also the ineffective marketing strategy pursued by the British producers.

In general, it is seen that the lack of effective marketing efforts is a main reason behind the alleged decline of British competitiveness in world trade. A recent overall analysis and assessment of the marketing efforts pursued by the British industrial sectors both in home and overseas markets has identified the lack of commitment to marketing as the single most important constraint against improvement in the U.K's market share.⁽¹⁶¹⁾

Another study supports with an impressive array of statistics that the neglect of marketing functions, including advertising, public relations and market research abroad, was one of the chief factors causing Britain to lose her share in world markets.⁽¹⁶²⁾

In the same vein, a more recent study by Johanson⁽¹⁶³⁾ came to the conclusion that Britain's lack of competitiveness is reflected not only in the production aspect of industry but also in marketing performance. He argues that in many industries British producers

made products which are comparable to their competitors, but that their marketing performance has not been as aggressive as that of foreign producers.

Finally, a widely accepted study by Turnbull and others⁽¹⁶⁴⁾, about marketing and purchasing practices in five European Countries, found that British firms are slow in offering new products, less likely to initiate joint product developments with their customers, cannot be relied upon to supply products of consistently high quality nor to provide customers with technical information, and finally they are regarded as slow and very unreliable in delivery.

There can be no argument but that marketing has emerged to the forefront of occupations in industry, commerce and services in recent years. The U.K. manufacturing industry now faces competition in all its markets, including the home market, from foreign competitors who have adopted a different business philosophy based upon long-term considerations of volume and market position and upon the impact of volume on production costs.

Under these circumstances, the priority to be given to sound marketing practice is becoming even more important in view of the U.K.'s need markedly to increase its exports and its share of world markets and to regain an even greater share of the home market by replacing imports. All this can only be achieved by meeting the needs of the market place.

The role of marketing factors in achieving competitiveness

Having discussed the role of marketing in general and how it is perceived as a key factor in affecting the positions of the competing firms and countries in the market place, it is appropriate at this point to explore the association between marketing factors and success in world markets.

In fact, considerable research has been undertaken in recent years to examine this relationship. Most of the results reveal the association between the marketing factors and competitiveness.

Some of the major factors in the marketing package will be examined next to determine to what extent they affect the relative position of the trading partners in the international market place.

The role of market research

In a tough environment, research activity is considered to be a base for company survival. Important as a marketing information system may be in the domestic market, it would seem to be even more essential in foreign markets where the risks are greater.

The necessity for market research represents one aspect of Japanese marketing philosophy. In order to identify consumer needs, depth interview or group discussions are utilised, large scale quantitative research is also frequently conducted, advertising testing is performed to some extent, and monitoring the result of new product launching is often carried out by the Japanese. (165)

The importance of market research has been explored by a number of studies. NEdo (166), in their study of mechanical engineering exporters found that four-fifths of all larger companies and two-thirds of smaller companies claimed to have undertaken market research overseas. The study expressed some criticism of the quality of this research as only one-fifth of the sample has used consultants and it was concluded that it may have consisted more of "Keeping an ear to the ground" than of systematic study of demand potential.

The ITI report (167) considered the lack of market research activities as a major constraint on export growth. Other studies by Tookey (168), Shankleman (169), and McFarlane (170) found that the inefficiency of the marketing research function is one of the major causes behind some companies lack of competitiveness.

On the other hand, the results of other studies showed that gathering detailed and reliable information about the export markets has been a major factor behind success in these markets. A NEDo⁽¹⁷¹⁾ report proved that identifying and selecting export markets and making use of available market information is considered to be an important factor behind export success.

This is a nearly identical conclusion to that reached by the ITI Study in 1979⁽¹⁷²⁾. The findings of the study demonstrate that the extent and quality of information about each export market was one characteristic explaining the success of German, French and British Companies in these markets.

Further support of the above findings is found in Pionton's⁽¹⁷³⁾ study on the information needs of exporters. He argues that the strategic planning process that fixes the steps to be taken regarding identifying and assessing market opportunities in foreign markets is perhaps the most critical factor contributing to success in exporting.

It is worth emphasising here that the rapid change in world markets and the growing intensity of competition, as well as the complexity of the environmental characteristics of these markets, make detailed knowledge and an appropriate marketing strategy essential key for those seeking a competitive advantage.

The role of the Product

A great deal of attention has been focused on the role of product factors, and product quality in particular, as main methods of achieving competitiveness. Our attention, however, will be limited to exploring the role of quality as it represents the most important aspect of product-related factors.

Concern with quality is not new, but more and more firms are restructuring their competitive approach to make it a load-bearing

element in their strategy. This revision of competitive strategy is partly the result of new evidence that quality has a direct impact on both market share and profit margins.⁽¹⁷⁴⁾

It has been stated that technological sophistications, shortened life cycles and more rigorous competition, combined with increasing awareness by consumers, are among those factors that argue for a strategy that includes quality as a competitive advantage.

A NEDO⁽¹⁷⁵⁾ study is the one to begin with. The study highlights the importance of quality to British producers by indicating that "price, though important, is not everything in today's international markets. What is just as important in world markets is quality. Our competitors, notably Japan and West Germany, have followed a quality strategy for years". It adds, "The most effective way of increasing our share of world markets is to give the customer the quality he demands at a price he is prepared to pay".

Another study of 2000 business units by the Strategic Planning Institute⁽¹⁷⁶⁾ shows that improving quality is an effective way to gain market share and that companies with high quality and high market share typically have profit margins five times greater than companies at the opposite extreme.

Garvin⁽¹⁷⁷⁾ in one of his studies claims that superior product quality has been one of the keys to Japanese success in American markets. Naisbitt⁽¹⁷⁸⁾ confirms this view, attributing the downfall of American competitiveness with Japan to high quality imports and relative lack of emphasis on quality by U.S. firms and managers.

Further support for the importance of quality comes from Peters and Waterman⁽¹⁷⁹⁾ in their highly successful book, "In Search of Excellence". They indicated that the excellent companies are obsessed with quality and reliability and that these

characteristics comprise an essential part of the value system and strategy of the organisations.

With respect to British experience, similar evidence of the importance of quality is documented in many studies.

Industrial Market Research⁽¹⁸⁰⁾ in one of their studies asked, "Which of the following factors are the most important for success in export marketing?". The list of factors selected revealed preferred priorities, with price, product quality and delivery all achieving a high rating.

Another survey conducted by ITI⁽¹⁸¹⁾ among successful exporters in the U.K., France and West Germany, in order to identify factors for success in export markets, came to the conclusion that quality is of prime importance in achieving success in these markets.

Further support comes from Rothwell's⁽¹⁸²⁾ study on the relationship between technical change and international competitiveness. The research findings showed that design and performance are key factors contributing to a higher competitive position in the world market for mechanical engineering sectors in the U.K. In another study of engineering products, Rothwell⁽¹⁸³⁾ claimed that product quality is considered to be the major factor affecting competitiveness. His analysis proved that Britain tends to import "dear" and export "cheap", in contrast to West Germany. He suggests not only that this situation hurts the balance of payment position, but also, it appears to constitute a long-standing trend which bades ill for the competitiveness of British engineering products in the 1980s.

Various other studies by Baker⁽¹⁸⁴⁾, NEDo⁽¹⁸⁵⁾ and Michell⁽¹⁸⁶⁾, among others, share the same view of product quality as a main factor in improving competitiveness.

The Role of Distribution Channels

It is widely accepted that whatever the quality and superiority of the product, it may prove a commercial disaster if the channels of distribution selected are unable or unwilling to provide the "utility of place" and the "utility of time" which the local consumer expects.

Thus, the choice of appropriate sales and service channels has also become an increasingly important determinant of competitiveness, and achieving competitive advantage in the market place has become dependent in part of the successful representation of the producer in this market.

However, the main problem in many international markets is to find suitable outlets which could help in penetrating these markets. To overcome this situation, the producer should initially present a marketing package that is attractive enough to make distributors "buy".

In this regard, it is mentioned that the Japanese, in order to recruit the large number of outlets required to sell the rapidly rising export volume, offer a good business opportunities package including the following: ⁽¹⁸⁷⁾

- A) Heavy advertising, where appropriate, to create buyer brand awareness and sometimes to generate a high volume of customer enquiries.
 - B) Favourable terms, such as high gross margins, substantial discounts, extended credit and, in some cases, help in training.
 - C) High availability of stock, to generate fulfilment of orders.
- This package is offered to the trade in a number of ways, depending on the product and the planned speed of launch.

Above all, it is indicated that, in many markets the Japanese have not adopted the ordinary distribution system used in these markets but rather have devoted considerable resources to developing a distribution system more suited to their marketing mix. This new approach to distribution reveals, in Kotler and Fahey's opinion, their dedication to achieving market penetration, their prior study of market conditions and possibilities, and, more important, their willingness to be innovative in their marketing policies.⁽¹⁸⁸⁾

The evidence available concerning the importance of distribution as a factor affecting competitiveness is spread among a number of studies. Among these is the study by Slijper⁽¹⁸⁹⁾ who came to conclusion that better distribution may often be the means of facing intensive competition in world markets and achieving an advantage in these markets.

Blackwell⁽¹⁹⁰⁾ confirmed the importance of distribution when he indicated that "in an environment of technological parity, effective market coverage becomes even more important in determining competitiveness, and choosing the best channels to serve specific market segments becomes a critical and complex decision".

McDougal and Stening⁽¹⁹¹⁾ provided further evidence of the correlation between distribution and market success. In their search for identifying the high performance exporter, they found that adequate distribution facilities was among the factors contributing to better level of performance in foreign markets.

Another study indicated that distribution was the most effective way for British producers to enter the German market.⁽¹⁹²⁾

Also, the study by Industrial Market Research⁽¹⁹³⁾ concerning the way that British industry exports, reveals the importance of the role of distribution network in achieving high performance in the world market.

On the other hand, the study by CPRs⁽¹⁹⁴⁾ about the future of the British car industry found that a poor distribution network is regarded as one of the major factors causing the industry's lack of competitiveness.

Also to the point is the role played by the agent as a member of the distribution network. Numerous studies have stressed the importance of choosing and motivating agents and indicated that successful presentation and penetration of the market depends to a large extent on this process.

Among these studies are those carried out by NEDo⁽¹⁹⁵⁾, Tookey⁽¹⁹⁶⁾, and ITI research⁽¹⁹⁷⁾. All have proved that gaining competitive advantage in the market place partly correlates with the ability to choose and motivate overseas agents.

In brief, the distributor is itself a part of the marketing package that is presented to the customer, and the ability of the producer to present the right package to differentiate his product for a particular customer/market will largely determine his success or failure.

Promotion Activities and Performance in World Markets

In a competitive environment, business people attempt to stimulate demand for their goods and services. Producers are not satisfied merely to produce their products and trust to chance that consumers will become aware of them. Instead they have to take the initiative to inform potential customers of the product's existence, its want-satisfying qualities and where it can be purchased.

It is also known that new products usually gain acceptance slowly, especially where their use requires a change or adjustment in the consumer's manner of living. Here the producer of the product has to spend more in persuading consumers to accept it.

So, business executives in trying to inform the consumer about their products and to overcome resistance to these products, have to communicate with their markets by using the promotional tools of advertising, personal selling, publicity and sales promotion.

However, it has been demonstrated that comparatively few studies have emphasised promotion as a factor for success in international markets, and even those associated promotion and competitiveness, have only mentioned advertising and personal contacts as the promotion activities contributing to better performance in world markets. (198)

Advertising is seen as central to Japanese marketing strategy. They consider it a vital investment because Japanese firms are typically competing with well-known western brand names. In this regard, Stone⁽¹⁹⁹⁾ pointed out that the Japanese do everything possible to cut costs in their marketing activities, in order to offer good margins to trade, but not in advertising which is regarded as all important. They encourage joint promotional efforts with distributors and typically support their products with heavy regional advertising. Moreover, it has been shown that through their innovative use of a "pull strategy", Japanese manufacturers could successfully penetrate highly protected markets such as the Indian market.⁽²⁰⁰⁾ Also, taking a long-term market-building approach, the Japanese begin advertising in China long before their products are available to Chinese consumers.

NEDo⁽²⁰¹⁾ is one of those who have considered the role of advertising. The study of Mechanical Engineering found a strong association between high export sales and advertising budget allocation to export markets. Many firms, however, seem to be deficient in their advertising activities and a quarter of those firms left advertising largely in the hands of their overseas agents or distributors.

In the same vein, Suzuki⁽²⁰²⁾, in his study of the changing pattern of advertising strategy by Japanese business firms in the U.S. market, found that there is a correlation between the advertising activities pursued by Japanese firms and their export performance in the U.S. market.

On the other hand, Johanson⁽²⁰³⁾ asserts that failure to create the right image and effectively to communicate the benefits of the product, which involves a certain amount of advertising, is one of the major reasons behind the British car industry's lack of competitiveness. He also shows that the higher imports penetration of foreign cars into the British market is accompanied by a higher advertising expenditure and that the advertising sales ratio was much higher for the foreign car producers than the British producers.

Generally, it could be argued that advertising is regarded by British firms as a less important factor in achieving success in the market place. Rollason⁽²⁰⁴⁾, for instance, stated that only 5 per cent of the firms under investigation viewed advertising as an important factor leading to success.

Similar evidence comes from Michell's⁽²⁰⁵⁾ study where only 3 per cent of the surveyed firms reported that advertising is a vital factor for success in foreign markets.

This situation leads some writers to ask why one of the most important and powerful modern marketing tools, advertising, hardly plays a role in Britain's foreign trade. It is claimed that the complacency of British producers is the enemy of advertising, and at the same time is one reason behind British loss of competitiveness in world markets⁽²⁰⁶⁾.

Another view sees that advertising is closely related to specific desires in respect of personal consumption based on differences in value judgements and behaviour, which are determined by various

factors pertaining to a particular country, such as politics, social conditions and other environmental factors. Such differences hinder the effective use elsewhere of a similar advertising campaign being employed successfully at home.

Although the above view might be seen reasonable, it would be difficult to imagine a competitive environment without the presence of persuasive advertising. Advertising still belongs firmly to the marketing and communication mix and has its crucial role in creating awareness, conviction and action.

The other aspect of promotional activities that could play a role in achieving success in foreign markets relates to personal visits. In most studies, contacting foreign markets through personal visits is seen as a vital factor determining success. NEDo⁽²⁰⁷⁾, for example, showed a positive correlation between company turnover and total overseas visits per year, and between the number of visits and the amount and proportion of sales exported. Similarly, Rollason⁽²⁰⁸⁾ found that about 90 per cent of British companies that have high export ratios indicated that personal contact with overseas customers has been the most important contributing factor to their success.

Further support for the importance of personal contact with agents/distributors and customers in the overall markets comes from the study by the Betros Trust Committee.⁽²⁰⁹⁾ A survey among 80 leading import agents in Holland asking them about factors that would most help to increase sales of British goods in this market yielded the following answers in order of importance: prompter replies to correspondence, more frequent personal visits by principals, faster deliveries and lower prices.

Various other studies by McDougal and Stenning⁽²¹⁰⁾, Cunningham and Spigel⁽²¹¹⁾, and Turnbull and others⁽²¹²⁾, proved the importance of personal contacts with customers and agents in the foreign markets as constituting a key factor affecting success in those markets.

However, Ray⁽²¹³⁾ records that British producers lag behind their competitors in making overseas visits, especially of a goodwill nature.

There is no doubt that the extent to which individuals in supplier companies have a good relationship with their agents/distributors and customers in the overseas markets is an important factor in business relationships. The existence of a close relationship allows a better understanding of each other's problems, facilitates closer co-operation and leads to greater involvement and commitment by both producer and agents/distributor and more satisfaction for and loyalty from the customers.

Other elements of the promotion mix such as personal selling and sales promotion are said to have a role.

The role of after-sales services and delivery dates

Product and distribution channels and promotion factors are not the only elements in the marketing package which can play a role in achieving success in foreign markets. Efficient after-sales service and reliability of delivery dates are also regarded as contributors to competitiveness.

A search of the relevant literature reveals the importance of these factors. In a survey undertaken by Industrial Market Research⁽²¹⁴⁾ among U.K. exporting manufacturing establishments, it was found that reliable delivery and providing an efficient after-sales service were key determinants, among others, to success in world markets.

A NEDo⁽²¹⁵⁾ study added strength to this finding. For the machine tool industry it was found that, for technologically advanced products, competitiveness depends mainly on delivery and reliability, and in the study of the pumps and valves industry, it was concluded that while the technical quality of U.K. products

matches that of major competitors, much of the U.K. industry lacks the organisation and resources to equal the marketing, delivery and after-sales service of foreign suppliers.

Further evidence for the contribution of after-sales service and delivery dates is found in a recent study by Rothwell and Gardiner⁽²¹⁶⁾. In their study of the important factors affecting purchasing decisions relating to agricultural machinery, prompt delivery of spare parts and the supply and quality of after-sales service were among the important factors.

In fact, after-sales service and delivery dates is another field where British producers lag behind their competitors. Ray⁽²¹⁷⁾, in his study of British competitiveness in Eastern Europe, found that British companies are seen to fulfil their contracts, but do not go beyond that, whereas other competitor nations are seen to undertake goodwill service visits.

In another study, the provision of local spares and services by British companies in Europe was regarded as being the worst of the supplier countries included in the study.⁽²¹⁸⁾

This is an identical conclusion to that reached by the Department of Health study⁽²¹⁹⁾ on the reasons behind the declining share of British producing companies in this sector. The study specified that bad delivery, time-keeping and inadequate after-sales servicing were the major factors accounting for this decline.

Taking the above facts into account, British producers must pay more attention to after-sales service and delivery dates as factors affecting their competitiveness in world trade.

We shall conclude our discussion about the role of marketing by quoting Kotler's words on this. He pointed out that "Marketing skills played a role in helping today's leading economies arrive at their current levels of development. Among the most important

factors in the growth of the U.S. economy have been the large number of frontier entrepreneurs, the large pool of ambitious sales people, the extensive use of advertising media to promote products and services, the mass use of credit permitting people to buy more than their incomes would allow, and so on". (220)

In the same vein, it has been amply demonstrated that if the aspirations of the developing countries of the world are to be fulfilled, relatively high priority must be given to marketing activities.

The general discussion of the above issues was vital, in order to clarify the breadth and richness of the marketing approach to competition.

(4) The Role of Management and Labour-Management Relations

A. The role of management in achieving competitiveness:

Quite apart from the previous factors, competitiveness is affected, for better or worse, by organisational and entrepreneurial factors, notably by the ability of management to see and grasp market opportunities.

It is argued that the key to survival and growth in a world of rapid change, technical development and competitive challenge is management effectiveness, and for those who are in danger of losing the race, such as Great Britain and the US, regaining the competitive edge in these difficult conditions means developing superb managerial skills and translating these skills into effective management actions. (221)

In fact, several studies have attributed the leading role in bringing about economic growth to business organisation. They see that the organisational response is not only the basis for daily operations, but also the strategic element in coping with

fundamental changes in the process of production and marketing in modern business, rather than entrepreneurial talents, capital markets or public policies.⁽²²²⁾

The experience of Japan provides clear evidence that important gains not only in productivity and production costs, but also in market identification, commercial dynamism, financial results and technological innovation can be achieved through organisational and management techniques. In fact, Japan's phenomenal post-war recovery has been attributed to three sets of factors:⁽²²³⁾

- a) The historical traditions, personality, culture and social norms of the Japanese people.
- b) Strong business - government ties, and
- c) Japanese management traditions and practices.

Pinder⁽²²⁴⁾ confirms this view when he argues that the Japanese challenge to other developed societies is based on distinctive management practices. In his words, "Japanese labour is no longer cheap and the newest Japanese factories have precious little room for the sort of unskilled or semi-skilled labour in which newly industrialising countries have a decisive cost advantage. It is the quality of Japanese management and its ability, in cooperation with the whole workforce, to apply the new technologies in making products people want to buy that make Japanese industry such a formidable competitor". He extends his argument by indicating that Japan has progressed in the last few decades from the position of a new industrialising country whose cheap labour provided its competitive advantage, to that of the best - performing advanced industrial country whose advantage lies in management and workforce skills.

In this context, Kono⁽²²⁵⁾ identifies three major characteristics of the Japanese style of management and organisation:

First; it is an innovative organisation; the goals of the organisation are clearly stated, and growth and employee welfare are considered as important. Top management act as a team, they are imitative but are sensitive to new opportunities.

Second; it is a "soft organisation", job specifications are not rigid and employees are willing to undertake any related jobs. Most of the decisions are made by participation, so group decision is the usual type employed.

Third; it is a community organisation; employees are considered as partners in the organisation. They stay in the organisation throughout their working life. The organisation provides more opportunities for promotion and wage increases with small differentials, both of which operate as incentives.

The writer indicates that some of those features are rooted in the uniqueness of Japanese culture, but many of them were transferred from other countries and modified and many of them were based on logical judgement, so that they both are universally effective and transferable.

Various other studies by Drucker⁽²²⁶⁾, Magaziner and Hout⁽²²⁷⁾, and White and Trevor⁽²²⁸⁾, reveal the important role played by Japanese management practices in achieving effectiveness and leadership in world markets.

On the other hand, the relative decline in the competitive position of the US and some Western European Countries, coincident with the superior growth of the Japanese economy has generated much criticism of the western managerial philosophies and practices.

Hayes and Abernathy⁽²²⁹⁾ are among those who considered management as a major factor contributing to America's lack of competitiveness. They see the following behaviour of American management paving the way to economic decline.

- An unwillingness to make longer term, risky investments. They see too many managers placing undue emphasis on short-term financial returns and paying too little attention to a firm's long-term welfare.

- An overanalytical management style that favours "numbers crunching" and portfolio management over hands-on operating experience.
- A market-driven orientation that is cautious and imitative. Firms prefer safe product extensions instead of gambling on potential block buster innovations.

O'Toole⁽²³⁰⁾ confirms the above view by arguing that America's economic problems are not really the result of inadequate investment, government over regulation or excessive taxation. Economic problems, he contends, are based on human values and culture. In his view, the main point to be emphasised if the American economy is to improve is that managerial philosophies, not economic policies, must change before productivity will improve.

Further support for such criticism comes from Abernathy and others⁽²³¹⁾, Franko⁽²³²⁾ and Buffa⁽²³³⁾.

With regard to the British situation, it has also been shown that poor management practices constitute one of those factors contributing to the "British disease". The evidence that the UK suffers from inferior management has been provided by reference to the relatively low level of human capital committed to business management, the low-priority claim it has traditionally held among the nation's most able citizens, the low intercorporate mobility of managerial personnel, and the like⁽²³⁴⁾.

It is also asserted that it was managerial incompetence and insufficient labour practices which resulted in poor production methods and laggardly innovation that led to the loss of British competitiveness in the Shipbuilding industry.⁽²³⁵⁾

More recently, Rothwell⁽²³⁶⁾ reported that the lack of managerial skills is a major problem hindering British economic progress in general and new innovations in particular. He claims that a successful innovation cannot be divorced from general management

skills, from the existence of technically qualified managers at all levels of the firm, or from a deliberate policy of management recruitment and training.

In fact, it might be the British managerial attitude and style together with the worker attitude that led to these criticisms. In this regard a recent study by Millar⁽²³⁷⁾ on the differences between British and German management philosophies and practices found that:

- A - German management appeared to be more concerned about "human relations" or people issues than their UK counterparts.
- B - German management showed more awareness of the role and significance of genuine participation.
- C - Relating to worker attitudes, there was much greater stress on "we are only here for the money attitudes" in the UK Sample, while in German Sample, much more interest in the job, loyalty to the company, etc., emerged.
- D - German workers were in general better informed on external issues and problems affecting their companies.
- E - In Germany more concern was expressed about the quality of working life, and greater emphasis was placed on human relations than appeared in the UK.

It is pointed out that in Germany a workable business philosophy has been developed, concentrating on:⁽²³⁸⁾

- A - Fostering a management system that seeks to maintain technical strength throughout the managerial hierarchy.
- B - Orienting their management towards the long-term growth and stability of the company instead of short-term profit maximisation.
- C - Basing their competitive position on well-engineered products, on-time delivery, solid workmanship, and superb after-sales servicing.
- D - Feeling themselves to be under such intense competitive pressure, they are willing to accept lower profit margins and returns on capital.

E - Using a traditional apprenticeship system to provide a broad base of competence. This provides a pool of skilled, technically proficient workers who are so well versed in the theoretical fundamentals of their trades that they adapt easily to new process technologies.

Productivity is regarded as the first test of management. While Japan and Germany have proved to be successful in the productivity battle, British management has failed in this test. This failure points to the management's key role in leading the economic growth in general and the productivity quest in particular.

As Pinder⁽²³⁹⁾ pointed out, the European problem in relation to Japan is not so much a technological gap as a management gap and to fill this gap, much of the Japanese experience requires to be learned.

B) Labour-management relations and international competitiveness

One aspect of management practices which can have an impact on competitiveness is labour-management relations. The term refers to the rules governing the functions, responsibilities and behaviour of workers and managers.

Labour-management relations within a firm, or within certain firms constituting an industry, can have an impact on the cost structure, output levels and productivity, and accordingly can affect the ability of these firms to compete in the market place. This effect can occur in a number of ways:⁽²⁴⁰⁾

First; labour-management relations determine, to a large extent, the allocation of resources within the firm, or within each firm in an industry.

Second; labour-management relations may affect productive efficiency through the role these relations play in the ability of firms and workers to adapt to changes in the technology of production.

Third; Labour-management relations can affect productivity through their role in developing worker morale and discipline, resolving

conflicts and complaints between workers and managers, protecting workers from arbitrary management behaviour and implementing a policy of fairness in the work place.

Although most of these aspects are intangible and thus their effort on competitiveness is difficult to quantify, yet it is commonly accepted that bad labour-management relations are harmful to any firm or industry because it can give rise to poor labour productivity.

Some aspects, however, of labour management relations could be revealed by the data published on industrial disputes and hours worked per week. Although these data do not characterise labour-management relations, they provide a measure of particular aspects of this factor, which result in temporary fluctuations in output and possible changes in competitiveness.

Table 3.8 presents a comparison of working days lost per 1,000 employees in industrial disputes in some of the leading industrial countries for the period 1970 - 1977.

Table 3.8: Days lost in industrial disputes per 1,000 employees
(1970 - 1977)

Year	Japan	U.S.A.	U.K.	Germany	France	Italy
1970	118	895	479	4	107	1,606
1971	177	671	616	198	271	1,125
1972	149	372	914	3	229	1,501
1973	127	357	324	25	233	1,769
1974	266	619	662	48	205	1,429
1975	220	406	265	3	236	1,996
1976	88	477	146	25	303	1,844
1977	40	438	443	1	-	-

Source: Japan Federation of Employees Association, Conditions of Labour Economy in Japan. Japan Federation of Employees'

Comparing the number of working days lost per 1,000 employees, a relative measure of the effect of industrial disputes on output, Italy appears to suffer most, having lost 1,996 days per 1,000 worker in 1975, 2 days per year per worker.

On the other hand, Germany lost only one day per 1,000 workers in 1977, and appears to have lost only about 300 days per 1,000 workers from 1970-1977. Little difference is revealed by this measure in relation to the U.S., U.K. and France. Japan stands in the second place after Germany in having the least days lost in industrial disputes per 1,000 employees, during the same period.

In the same vein, Table 3.9 shows the average hours worked per week in the manufacturing sector of the same countries, during the period 1968-1978.

Table 3.9: Average Weekly Hours in Manufacturing
1968 - 1978

Year	U.S.A.	Italy	U.K.	France	Japan	Germany
1968	40.7	36.2	41.8	44.9	N.A.	N.A.
1969	40.6	34.6	41.8	44.9	N.A.	N.A.
1970	39.8	34.5	41.4	44.4	N.A.	36.4
1971	39.8	33.2	40.7	44.1	N.A.	35.5
1972	40.5	33.2	40.4	43.6	N.A.	35.1
1973	40.7	31.2	41.2	43.2	42.0	35.0
1974	40.0	30.4	40.0	42.6	40.0	34.1
1975	39.5	28.7	39.6	41.6	38.7	33.0
1976	40.1	30.2	39.7	41.5	40.1	34.1
1977	40.3	30.5	40.1	41.1	40.1	33.5
1978	40.4	30.4	40.0	40.8	40.2	32.8

Source: Report of the President, op.cit,
Part V - p.67.

There are only small differences in this variable between Britain, Japan, the U.S. and France where approximately 40 hours are worked by each employee each week, while significantly lower average weekly hours are reported for Italy and Germany.

In fact, to the extent that costs, productivity or other aspects of productive efficiency vary with the average number of hours worked per week, international differences in this variable may affect a firm's or industry's competitiveness in world markets.

Generally speaking, part of Japan's success story is attributed to usually favourable and peaceful labour-management relations. The most important characteristic of Japan's industrial relations appears to be the "life-time employment" system whereby the worker is guaranteed job training and promotion with the company. The employment guarantee remains in effect even in situations where employment reductions are expected to be permanent. In such a system, the firm receives a great deal of co-operation from its employees which extends to all aspects of labour-management relations.

Moreover, the Japanese labour-management relations system has created a positive worker attitude toward technological innovations and the ability to adapt to changes in production technology.⁽²⁴¹⁾

More important, is the team spirit of the Japanese economy. Japanese workers are organised on an enterprise-wide basis, that, in turn, makes it possible for labour and business to relate easily to each other, to subordinate their interests to that of the firm and to work out their differences by consensus rather than by force.

All these aspects have largely been responsible for this excellent record of industrial peace.

In Germany, labour-management relations is mentioned also as a factor underlying her formidable trade performance in recent years.

By contrast, British history is said to have a legacy of industrial conflict and restrictive practices. Self-interest comes before corporate and national interest, short-term economic gains take precedence over long-term national goals and independence rather than interdependence of action is a highly prized social value.⁽²⁴²⁾

Furthermore, it is indicated that both parties, management and workers, view each other as adversaries who are deeply involved in a win-lose economic game.

Supporters of the above view cite the slow productivity level and high strike activity of the British industry in general as evidence. Smith⁽²⁴³⁾, for example, sheds light on this point by stating that "The development of British Trade Unionism and management's relations with the Unions have produced a strike-prone country". He adds, "Moreover, in the popular view the worsening of the strike record after the mid-1960s helps to explain the deterioration in the macro-economic performance of the economy and is strong evidence of the need for basic reforms in the industrial relations system".

Allen⁽²⁴⁴⁾, in analysing the "British disease", accused the British management system of being slow in coming to terms with the new social temper. He further claims that many firms were not persuaded of the need for change, and for them industrial relations were not a major pre-occupation of management until trouble came. In his view, if one attempts to explain Britain's bad record in comparison with her competitors, one cannot avoid bringing her class structure into account. He sees that the remains of the old system still affect, to a large extent, the relations between the two sides of industry.

Finally, the U.S. industrial relations system seems to carry the same aspects of the British one, but to a lesser degree. It is pointed out that, in today's world of slow growth, shrinking

productivity, and fierce international competition, the relationship between labour and management in U.S. factories has become destructive. In the workplace, unions often limit management's flexibility and companies continue to impose an authorisation style of management on what is increasingly a better educated and more independent labour force.⁽²⁴⁵⁾ These and other aspects of labour-management relations are said to constitute one of the reasons accounting for the competitive decline.

To sum up, industrial efficiency and competitiveness also rely to a great extent on the way in which people and resources are organised within the firm or the firms constituting an industry. The key to long-term success, even survival, in business is what it has always been: to invest, to innovate, to lead and to create value where none existed before. This exactly represents the responsibility of management in today's business environment.

Similarly, differences among nations in the degree to which labour and management cooperate with each other can have an effect on the international competitiveness of their firms and industries. This seems to be the case in Japan and Germany, which have had the best trade performance in recent years and where labour and management work closely with one another.

(5) The Role of Productivity in Determining International Competitiveness.

Introduction

Productivity is a measure of the quality of output of goods and services that can be produced for a given input of factors of production. A major long-term policy objective is to increase the standard of living of the community and rising productivity is considered to be the main way of achieving this objective.

Not only should improvements in productivity ultimately contribute to lower prices for the average consumer and higher real wages, but, more important, they should provide greater job security for

workers. Also, growth of productivity helps to mediate social conflicts. When productivity rises, there is a social dividend to be distributed which helps to remove the causes of conflict between economic groups. (246)

Finally, and more importantly, productivity is considered to be an important determinant of international competitiveness of an industry. Within the limits of certain wage structures, increases in productivity will tend to reduce an industry's output price. Accordingly, those industries with more rapid growth in productivity will tend to experience price declines relative to other domestic industries. Further, a high rate of productivity growth in domestic industries compared to foreign industries will tend to increase the price competitiveness of domestic industries relative to their counterparts abroad, thus productivity becomes the only means of supplying domestic and overseas markets with quality products cheaper. (247)

So, it could be argued that the problem of competitiveness is essentially a problem of productivity, and the improvement of productivity is fundamental to the enhancement of competitiveness and market strength.

Factors Affecting Productivity Growth

The productivity of a business enterprise is determined by a number of factors, both internal and external to the organisation. Among these are the following:

- A) Management: Management plays a major role in determining the structure of the organisation, influences the quality of supervision, provides training for workers, and works to motivate employees. Within the limits set by the national economic climate and existing organisational resources, it is the efficiency and innovativeness with which managers combine their resources that largely determine the rate of productivity improvement. (248)

- B) **Technology:** While productivity gains can be made by management leadership, technology is said to be the basis of most major gains in productivity. The use of better tools and better equipment and processes will usually improve productivity. It is demonstrated that industrial productivity has been higher in countries like Japan and Germany because new plants employing the most modern equipment were built to replace those destroyed during the war.
- C) **Capital investment:** Capital formation is an "investment in the future" and is basic to the improvement of productivity. Rapid capital formation allows a country to restructure its industry and to adjust to changing energy requirements.
- D) **Labour quality:** Another factor likely to be important in determining the long-term industrial performance of a country is the scale of investment undertaken in education and training of the labour force. In Japan, for instance, there is a continuous attempt to upgrade the capacity of the work-force to make-up for the shortage of skilled workers.
- E) **Government:** On the one hand, Government policies influence the climate for productivity growth. These policies might have a positive impact on productivity by way of assisting innovation, encouraging investment, encouraging better business-government relations and so on. On the other hand, some Government policies are considered to have a negative impact on productivity. Government regulations, as shown earlier, may cause serious problems in every aspect of industrial expansion. Regulatory procedures in America, for example, are said to have reduced the productivity rate and new product development in many industries.
- F) **Other factors** including availability of natural resources, changes in resource allocation and economies of scale, are regarded as important factors affecting productivity.

Some international comparisons of productivity growth and its effect on changes in competitiveness

Table 3.10 provides a comparative record of productivity changes for five major industrial countries from 1960-80. It is obvious that during that period, U.K. productivity averaged only 3.6 per cent, just over the U.S. average of 2.7 per cent. During the same period, Japan had an average productivity increase of 9.4 per cent and France and West Germany had productivity increases of 5.6 and 5.4 respectively.

In practice, measures of productivity are limited to labour costs rather than other factors of production. This is largely because of problems of measurement when using non-labour factors.

In using labour productivity as an indicator, two methods are generally used:

- 1) Output per head, which reflects the volume of output produced on average by each person employed.
- 2) Output per hour, which represents the volume of output per hour produced on average by each person employed.

Table 3.10: Changes in manufacturing productivity, 1960 - 1980
(Annual changes in per cent)

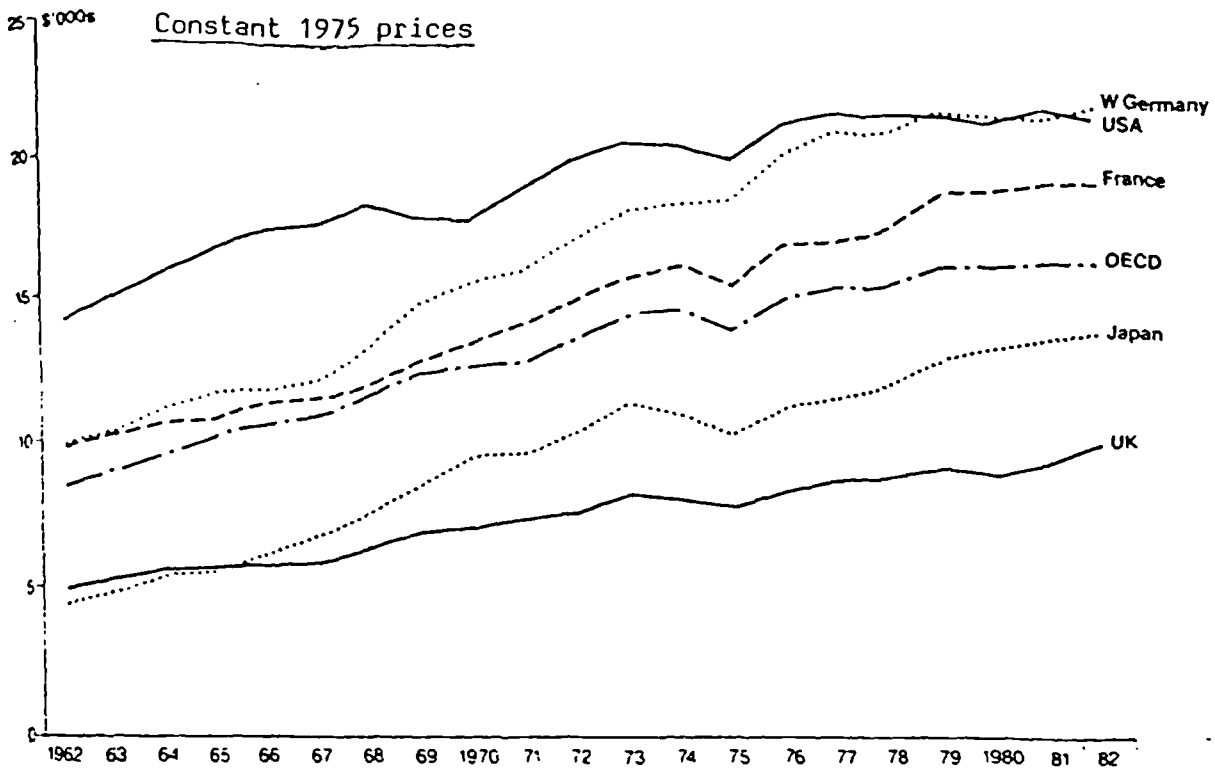
Year	U.S.	Japan	France	W. Germany	U.K.
1960 - 1980	2.7	9.4	5.6	5.4	3.6
1960 - 1973	3.0	10.7	6.0	5.5	4.3
1973 - 1980	1.7	6.8	4.9	4.8	1.9
1974	- 2.4	2.4	3.5	6.0	0.8
1975	2.9	3.9	3.1	4.8	- 2.0
1976	4.4	9.4	8.2	6.3	4.0
1977	2.4	7.2	5.1	5.3	1.6
1978	0.9	7.9	5.3	3.8	3.2
1979	1.1	8.0	5.4	6.3	3.3
1980	- 0.3	6.2	0.6	- 0.7	0.3

Source: Elwod S, Buffa, Meeting Competitive Challenge: manufacturing strategy for U.S. Companies, Dow Jones - Irwin, 1984.

Figure 3/2 shows one measure of labour productivity, namely industrial production per head for some major industrialised countries. The figure indicates that British industrial productivity is poor compared with her major competitors. Although the pattern varies slightly from year to year, over the whole period, the U.K. figure has remained relatively constant in its relation to the OECD average, with a progressively larger gap in absolute terms between the U.K. and all its major competitors.

FIGURE 3/2

Productivity: industrial production per head in common currency



Source: NEDC, British Industrial Performance, op.cit, p.33.

Similarly Table 3/11 shows the second measure of productivity which is based on output per head. It shows almost the same results as those obtained by using the "per head" measure with the exception of America, which in this case productivity is nearly the same as Britain's.

Table 3.11: Hourly Productivity in Volume
(1960 - 1980)

Country	1960-70	1970-80	1973-80	1975-80
France	6.1	4.9	4.9	5.1
W. Germany	5.7	5.2	4.8	4.2
Italy	7.1	4.5	3.5	4.9
U.K.	4.2	2.2	1.4	1.9
EC 7	5.8	4.5	3.8	4.2
U.S.A.	2.9	2.4	1.7	1.6
Japan	10.5	7.4	7.2	7.9

Source: Commission of The European Communities, The Competitiveness of the Community Industry, Luxembourg, office for official publications of the European Communities, 1982, p.38.

Japan, Germany, France and Italy, on the other hand, appear to be highly ranked in the productivity race according to this measure.

The significance of this analysis might be supported if we take into consideration the link between productivity and export shares.

Although changes in productivity might not provide a complete explanation of changes in market shares, yet it seems that those countries which have a high level of productivity are those who have a high export market share.

In fact, there are some relevant studies which reveal the relationship between productivity and competitiveness in international markets. The study by European Management Forum⁽²⁴⁹⁾ on industrial competitiveness is one of those studies. In analysing industrial efficiency and cost of production in some

major industrial countries, the study looks at labour costs and labour productivity and their effects on unit labour costs. The results show that, because it performs extremely well on most of the criteria specified, Japan easily takes first place in the overall ranking. Despite sharp increases over the last decade in labour costs, rises in productivity have compensated for this, placing Japan in first place.

Switzerland and Germany take second and third place respectively, both countries having compensated for high labour costs by high levels of productivity. France takes the fifth place while the U.S. occupied the seventh place.

Britain was placed thirteenth. Both its productivity and its improvement rate are mediocre, and future prospects, according to the study, are not enhanced by exceptionally low levels of investment. However, more encouraging trends seem to be emerging since the early months of 1981.

Jones⁽²⁵⁰⁾, in an earlier study, compared the U.K's performance in terms of output employment and productivity with those of selected European Countries. These comparisons, although excluding the U.S. and Japan, serve to illustrate the U.K's relatively poor performance.

Another study on international productivity by Smith and others⁽²⁵¹⁾ added strength to the above finding. Compared with productivity in the U.S. and Germany, Britain's industrial performance proved to be poor.

Perhaps the most detailed and comprehensive account of Britain's lagging productivity can be found in Cave's⁽²⁵²⁾ study. He regards low and slow growing productivity as central to the diagnosis of the British disease. In his view, there are three major factors which contributed to lower productivity in Britain:

- 1) Labour troubles: Strikes, restrictive rules, and policy changes over time are some negative aspects of the British labour relations system.
- 2) The small size of companies and plants which hinders the achievement of economies of scale.
- 3) Ineffective management practices.

On the other hand, declining productivity is seen as a principal determinant of the U.S.'s competitive decline in recent years. The factors contributing to such a decline include:

- The decline in technological progress.
- The decline in labour quality.
- Productivity drag caused by environmental and other regulations.
- The behaviour of American management.
- The decline in labour-capital ratio, and
- Changes in the availability of natural resources.

As a final note, the relationship between productivity and competitiveness is reflected not only in the ability of certain countries' producers to achieve high export market shares, but also in their ability to compete in their home market.

In fact, the increase in the import penetration ratio in many of the important manufacturing sectors in countries like the U.S. and Great Britain shows another aspect of the productivity dilemma. In 1979, for example, the U.S. imported 21 per cent of its cars, 14 per cent of its steel, about 50 per cent of its televisions, radio and tape records, and 90 per cent of its knives and forks.⁽²⁵⁴⁾

In Britain, the import penetration ratio is equally clear. According to one study, the share of the domestic manufacturers in the home market has fallen from 87 per cent in 1960 to 59 per cent in 1975⁽²⁵⁵⁾. There are other indications that this ratio has become even smaller in recent years.

The phenomenon is associated with the so called "De-industrialisation" in Britain. De-industrialisation is defined as "a state of affairs in which there is a continued decline in a country's

share of world trade in manufactures and/or a continued increase in the share of imported manufactures in domestic expenditures, , in consequence of which it becomes progressively more difficult to achieve sufficient surplus of exports over imports of manufacturers to keep the economy in external balance".⁽²⁵⁶⁾

De-industrialisation in this sense involves the absence of an efficient manufacturing sector, and this emphasises the failure of British industry to maintain its share of world trade in manufactures, on the one hand, and an increasing penetration of the domestic market, on the other.

It would seem therefore that if a country like Britain is to maintain living standards and compete with least cost suppliers, both in home and foreign markets, she must increase productivity.

Indeed, there are other factors which can have an impact on the international competitive position of an industry or economy, such as investment policies, location of industry and its concentration and so on. However, the factors previously discussed may be sufficient to provide a general representation of the main factors affecting competitiveness.

Summary and Conclusions

The main purpose of this chapter was to present a survey of evidence about the major factors that affect competitiveness in international trade. The full range of these factors is examined in the framework of two groups. The first group included those factors that have an impact on competitiveness at the macro-level represented in the role of government, exchange rates and infrastructure. The second group included those factors which have their effect at the micro or industry level; such factors as technological innovation, economies of scale, marketing, management philosophies and practices and the role of relative productivity.

Examining these factors helped the researcher to develop the following conclusions.

First, Governments of industrialised countries can affect the process of competitiveness in many ways. In addition to import-restricting activities, governments can promote industrial competitiveness through enhancing and encouraging a suitable environment for innovation, providing export credits and assurances, accelerated depreciation and other tax incentives, providing comprehensive information on world market opportunities and other ways easing the path for businessmen intending to enter international markets.

Second, Falling exchange rates improve competitiveness at least in the short run, while this effect in the long run depends to a large extent on the competitive position relating to non-price aspects of the country's products in the market place. Also, infrastructure is regarded as an important factor affecting the long-term competitive position and the role played by governments in this field can change the structure of the country's comparative advantage.

Third, Technical innovation proved to be an essential feature of competitiveness as measured by world export shares, and in many sectors, especially capital goods, it has been demonstrated that there is a significant positive correlation between a country's level of innovative activities and its share of world exports.

Fourth, marketing has proved to be a distinctive element in successful business strategies in recent years, and is regarded as the next major factor which will contribute to market power and competitive strength. High export performance is associated with all aspects of the marketing factors discussed. Product factors, channels of distribution and after sales service are the most important factors contributing to competitiveness.

Fifth, industrial efficiency and competitiveness rely also to a great extent on management's philosophy and practices. Evidence has been provided which suggest that the way in which people and resources are organised and directed is vital in gaining competitive advantage. Also, differences among nations regarding the system of labour-management relations can have an influence on competitiveness.

Sixth, productivity has also a major role in determining competitiveness and for those countries which aim to preserve jobs and raise the real incomes of their people, productivity must become a national priority.

Finally, the importance and dynamics of the above mentioned factors lead to the conclusion that traditional trade theory is a misleading guide to policy questions that do not fit its static orientation or its assumption of perfect competition. Competitiveness, accordingly, is a dynamic concept as the relative position of companies and countries is affected by changes in these factors themselves.

Having discussed the nature of competitiveness and the major factors affecting it in international trade, the main purpose of the next chapter is to give an overview of the theoretical dimensions of competitive strategies and how competitive forces could shape the strategy of certain industries.

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CHAPTER 4

INDUSTRY COMPETITION AND STRATEGIES

CHAPTER FOURINDUSTRY COMPETITION AND STRATEGIESIntroduction

The previous chapter established that competitiveness is affected by a wide range of factors of a dynamic nature. The effects they produce reveal the need to establish and adopt certain strategies through which the firm, or the industry, can find a suitable position in the market place.

This need becomes even greater in the light of the fact that many industrial countries are coming under increasing pressure to become more competitive. Increased competition from abroad, coupled with economic problems at home, present a formidable challenge to the business community in these countries. One element of this challenge is the formulation and implementation of competitive strategy.

The competitive strategy of a business essentially concerns the manner in which the firm, or firms constituting an industry, allocate resources to the various functional areas including production, marketing and the like. This task is complicated because a business does not exist in isolation but rather must compete in a competitive environment. Therefore, an understanding of the competitive environment is the base on which a strategy is developed.

Because strategy requirements in any business are ruled by the competitive environment and the potential for change in that environment, the business decision makers can adopt different competitive strategies according to their understanding and perception of their own business and the different competitive forces prevailing in the business environment.

On the other hand, the adoption of different competitive strategies leads, in practice, to different standards of performance, so the argument here is that the elements of strategy formation should be expanded to include an assessment of what can be learned from the most successful competitors in the market. This, in turn, may help in evaluating the implications of the alternative strategies available and improving the methods used by the less successful firms to compete with their rivals. Discussion of the above issues will be organised into two sections:

Section (1) The Nature of Competitive Strategy

- A. The concept of competitive strategy, how it is perceived and developed and the major forces that play a part in shaping the competitive environment.
- B. The alternative competitive strategies, shedding more light on Porter's approach through industry structure analysis.
- C. The potential role of the marketing function in competitive strategy formulation.

Section (2) Business Competitive Strategy: Some International Comparisons

- A. How business enterprises in some relevant countries including the U.K., the U.S., Japan and Germany formulate their competitive strategies, and the effect of the adopted strategies on their competitive position in international markets.
- B. The major lessons derived from the experience of the most successful competitors and how producers in less competitive economies could respond to competitive challenge.

Section (1)The nature of Competitive Strategy

Since the beginning of business activities , many firms have produced plans and followed some kind of strategy. The main characteristic of both plans and strategy, however, has been intuitive or traditional. In recent years, the increasing pace of change has forced management to make their strategies explicit and to change them frequently. During the post-war period there has been a progressive diminution in the degree of control exercised by the firm over its environment. This is attributed to the firm's widening exposure to an increasing turbulent social, political, economic and technological climate.⁽¹⁾

Under such circumstances, the firm is obliged to develop means of adapting to these changes in its environment. In this sense, strategy is used as a "mediating force" linking the firm and its environment.

Generally speaking, there have been a number of attempts in the business field to represent the concept of strategy, the most notable being the work of Ansoff⁽²⁾, Andrews⁽³⁾, Hofer and Schendel⁽⁴⁾, and Steiner⁽⁵⁾. These writers and others provide a variety of conceptual frameworks for representing the strategy concept. Some of them provide analytical or rationalistic models which, while precise, are not sufficiently comprehensive nor useful enough in actual practice. Other writers are more eclectic and provide a range of frameworks and ideas that collectively define the notion of strategy in business management. On the other hand, some writers have been primarily verbal in presenting their understanding of strategy.⁽⁶⁾

Perhaps the simplest understanding of strategy is that it refers to the means by which companies plan to employ their resources in the achievement of their objectives. Strategy is usually defined in terms of the relationship of the firm with its environment. In

this regard, Glueck⁽⁷⁾ defines strategy as "A unified, comprehensive and integrated plan relating the strategic advantages of the firm to the challenges of the environment. It is designed to ensure that the basic objectives of the enterprise are achieved".

Taking into account that the formulation of a good strategy depends on a thorough understanding of the company, the customer, and the competitor, Ohmae⁽⁸⁾ defines strategy as "an endeavour by a corporation to differentiate itself positively from its competitors, using its relative corporate strengths to better satisfy consumer needs". Nearly in the same vein, Learned and Associates⁽⁹⁾ defined strategy as "how a firm attempts to compete in its environment, encompassing key choices about goals, products, marketing, manufacturing and so on".

Finally, taking a broad view, Andrews⁽¹⁰⁾ defines strategy as "The pattern of decisions in a company that determines and reveals its objectives, purposes or goals, produces the principal policies and plans for achieving those goals, and defines the range of business the company is to pursue, the kind of economic and human organisation it is or intends to be, and the nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers and communities".

Following Schendel and Hofer⁽¹¹⁾, four distinct levels of strategy formulation may be identified:

- 1) Enterprise strategy. This level of strategy formulation is concerned with the overall social, political and legal environment of the firm. It deals with such issues as business-government relations, the social responsibility of business, policy toward stockholders, ethical conduct and the like.
- 2) Corporate strategy. Strategy formulation at this level is concerned with selecting the portfolio of business for the

firm. It provides a way for management to answer more effectively the questions: What business is the firm in? and What business should it be in? In general, corporate strategy serves to integrate the activities of such critical management areas as marketing, finance, and production.

- 3) Business Strategy. This level of strategy formulation is concerned with the selection of overall competitive goals and tactics by the business unit within a specific industry. At the business level, the major purposes of strategy analysis are to identify the major opportunities and threats a business will face and to identify the key resources and skills around which it can develop a strategy that will exploit these opportunities and meet these threats in a way which will satisfy its goals within its existing structure.
- 4) Functional Strategy. Corporate Strategy, by definition, constrains all administrative and operational decisions throughout the organisation. Because of the size and complexity of these functional areas, such as marketing, finance and production, it is not surprising that each, in turn, seeks to develop its own strategy which constrains the actions within its group. Each of these functional area strategies is an element of corporate strategy and when aggregated they provide substance and meaning to the firm's overall strategy.

The four levels of strategy formulation are arranged in a hierarchical relationship reaching from the activities of the various functional areas through market place competition and selection of the portfolio of business to the social role of the overall enterprise.

It has also been proposed that there are four components to any strategy : scope, resource deployments, competitive advantage, and synergy.⁽¹²⁾ Scope refers to the range or breadth of interactions with the environment. Resource deployments, often referred to as distinctive competencies, is concerned with the level and pattern

of resource and skill deployments. Competitive advantage refers to the unique position of the organisation vis-a-vis its competitors. Finally, Synergy constitutes the joint effects of scope, resource deployments, and competitive advantage. The relative importance of each of these components will depend upon whether one is concerned with corporate, business, or functional strategy.

In Henderson's⁽¹³⁾ view, the more useful concepts of strategy relate the firm to its competitors in terms of a competitive system in equilibrium. A useful strategy, he contends, must include a means of upsetting the competitive equilibrium and re-establishing it again on a more favourable basis. So, strategy is more than a posture or a pattern, it is a dynamic concept involving sequence, timing and competitive reaction.

In this sense, competitive strategy is a business strategy that discerns the basic forces affecting competitive conditions and their underlying structural causes, identifying the particular strengths and weaknesses of the firm vis-a-vis each underlying structural cause and determining offensive and defensive tactics for creating and maintaining a competitive position over time.

Accepting the view that the essence of strategy is relating the firm to its environment, discussion of the competitive environment becomes necessary, as it provides the base for formulating competitive strategy.

Understanding the Competitive Environment : The Base for Developing Competitive Strategy

Any organisation is a creature of its environment. Its very survival and all of its perspectives, resources, problems, and opportunities are generated and conditioned by the environment.

It is important, accordingly, for the firm to monitor the relevant changes taking place in the surrounding environment and plan to

adapt to these changes. In this regard, Glueck⁽¹⁴⁾ defined the environmental analysis as "The process by which strategists monitor the economic, governmental and legal, market and competitive, supplier and technological, geographic, and social settings to determine opportunities and threats in their firms". In fact, strategy formulation literature has heavily emphasised the basic notion of articulating an organisation with its environment. Saunder and Tuggle⁽¹⁵⁾, for instance, argue that a complex, unpredictable and changing environment will tend to call forth strategic planning efforts as an organisational response. The basic scheme for such strategic analysis is a comparison of the firm's internal strengths and weaknesses with its external threats and opportunities. Thus, environmental analysis is regarded as a key component in any planning system, without which a company cannot expect to develop a strategy.

In this context, the issue of a strategic intelligence system is seen to be crucial.⁽¹⁶⁾ The concept refers to the means by which an enterprise actively monitors and assesses the external environment in which it operates. Intelligence will not only aim at detecting changes which may indicate opportunities or threats, but equally it should be directed towards protecting the advantages intrinsic to a company's present and future success.

Competition is clearly a major component of this environment, which should be given special attention. Although environmental analysis encompasses many factors; social, political and economic, yet competition is regarded as the most important part in this environmental analysis. Performance relative to competition is the key test of business success, and so it is important to analyse and examine competitive strengths and behaviour in order to determine what will be required for a successful strategy. Porter⁽¹⁷⁾ highlights this point by indicating that "The essence of formulating strategy is relating a company to its environment. Although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of a firm's environment is the industry or industries in which it competes".

In his view, the competitive environment has a strong influence in determining the competitive rules of the game as well as the strategy to be pursued. In the same vein Lorange⁽¹⁸⁾ remarked that the strategy requirements of any business are ruled by the competitive environment and the potential for change in that environment.

The term competitive environment is characteristically used to identify a product-market domain, usually referred to as "business". It is the unique combination of market structure characteristics in that industry, or segment of industry, in which the business competes.⁽¹⁹⁾

Because industries can be segmented, there may be different types of competitive environments within the industry. Thus, the distinguishing feature of a particular competitive environment is that its combination of market structure characteristics differs from other combinations within the industry.⁽²⁰⁾ In brief, the competitive environment is the most immediate environment to which the business must attend.

A full account of the assessment of the competitive environment is found in Porter's "Competitive Strategy".⁽²¹⁾ In his view, competition within an industry is a result of forces that produce the competitive environment within which a company must function. The resulting effects vary from industry to industry, but Porter analyses an industry in terms of five basic competitive forces:

- The threat of new competitors entering the industry.
- Current competitors and rivalry among them.
- The threat of substitute products.
- The bargaining power of suppliers.
- The bargaining power of buyers or customer.

Obviously, these five forces suggest that competition extends beyond the companies within the industry to include new entries, substitutes, suppliers and buyers.

Porter argues that the collective strength of these forces determines the ultimate profit potential in the industry, where profit potential is measured in terms of return on invested capital. Knowledge of the underlying sources of competitive pressure, Porter contends, can reveal the basic attractiveness of an industry, highlight the critical strengths and weaknesses of the company, clarify the areas where strategic change may yield the greatest payoff, and pinpoint the industry trends that may represent the greatest significance as either opportunities or threats.

Through competitive strategy, a given firm in the industry attempts to position itself for the best defence against competitive forces, or attempts to influence such forces to its advantage. Certain combinations of these forces are dominant in one industry, while a different mix dominates in another.

A brief discussion of the competitive forces is presented below:

- A) Threat of entry. A new entry into the industry threatens to dilute the existing market by vying for market share, increasing industry capacity, and possibly destabilising the price structure and affecting profitability.

For instance, increased competition can be touched off by new entrants who use price-cutting tactics to gain market penetrations. This occurred when the Japanese entered the U.S. automobile market⁽²²⁾. The extent of entry threat depends on the barriers to entry and the expected reaction of companies in the industry, which may include using pricing to deter entry. If entry barriers are high and a new entrant can expect sharp retaliation from the entrenched competitors, obviously he will not pose a serious threat of entering.

In Porter's view there are several sources of barriers to entry:

- 1) Economies of scale and experience curve. Economies of scale deter entry by forcing the new entrant either to come in on a large scale or to accept disadvantages, both undesirable options. Scale economies in production, research, marketing and service are probably the key barriers to entry in industries like mainframe computers, automobiles and steel.

Scale economies may relate to an entire functional area, as in the case of sales force, or they may stem from particular operations or activities. Similarly, the experience curve effect, which refers to the decline of unit costs as the firm gains more cumulative experience in production, may act as an entry barrier. The cost decline creates a barrier to entry because a new entrant with no experience faces higher costs than the established ones. In some ways, cost decline with experience operates in the same manner as scale economies. However, experience is seen as a more ethereal entry barrier than scale.⁽²³⁾ The mere presence of an experience curve does not necessarily constitute an entry barrier. The experience must be proprietary, i.e. not available to competitors and potential entrants through copying, hiring competitors' employees, or purchasing the latest machinery from equipment suppliers or the relevant know-how from the consultants or others. If the experience curve can be kept proprietary by established firms, then it can act as an entry barrier.

- 2) Product differentiation. Newcomers will find it particularly difficult to compete with established firms for distribution channels and buyers if the industry is characterised by product differentiation. Brand identification creates a barrier by forcing entrants to spend heavily to overcome existing distributor and consumer loyalties. Investments in building a brand name

are particularly risky, since they are unrecoverable. Product differentiation is perhaps the most important entry barrier in soft drinks, baby care products, investment banking and public accounting.

- 3) Capital requirements. The need to invest large financial resources in order to compete creates a barrier to entry, particularly if the capital is required for unrecoverable expenditures in up-front advertising and R & D. The huge capital requirements in certain fields, such as computer manufacturing and mineral extraction, limit the number of potential entrants.
- 4) Cost disadvantages independent of size. While the barriers mentioned above can perhaps be surmounted by entrants willing to invest the capital, established firms may have other cost advantages not replicable by potential entrants no matter what their size and attained economies of scale. These advantages can stem from proprietary technology, access to the best raw material sources, assets purchased at preinflation prices, government subsidies or favourable locations.
- 5) Access to distribution channels. Entry can be deterred by an entrant's need to secure distribution channels for its products. Generally speaking, the more limited the wholesale or retail channels and the more existing competitors have these tied up, the more difficult entry into the industry will be.
- 6) Government Policy. The government can limit or even foreclose entry to industries with such controls as license requirements and limits on access to raw materials. The government can also play a major role by affecting entry barriers through controls such as air and water pollution standards and safety regulations.

Although entry barriers take many forms, sizes and shapes, they all create a more favourable situation for an existing industry participant than for a potential entrant. This advantageous situation may be based on costs, reputation, service, technology, or some other characteristics important to success in the industry. Entry barriers and deterrents are key aspects of an industry's continued success. Without continual maintenance of the barriers, new entrants will sneak into the industry, usually in the most profitable segments of the market.⁽²⁴⁾ A firm that contemplates entering a new industry must consider the entry barriers to be overcome and potential retaliatory action by the threatened competitors.

B) Industry competitors and rivalry among them. The rivalry among firms in an industry is what one usually thinks of as competition. It involves price and quality competition, advertising wars, new product introductions, a flexible stance with respect of customers concerning product design modifications, and other forms of customer service. Industry rivalry can vary from very intense "guerilla warfare" to a very relaxed "Country Club" approach. Very intense rivalry depletes the industry of some potential profits, because actions harmful to the entire industry may occur as competitors struggle to the death for an advantage. The airline industry provided a good example for this. Because of intense rivalry, airline companies are price-cutting far below their real costs.⁽²⁵⁾ In Porter's view, intense rivalry is related to the presence of a number of factors.

- Competitors are numerous or are roughly equal in size and power.
- Slow industry growth precipitates fights for market share that involve expansion-minded members.
- The product or service lacks differentiation or switching costs. Buyer choice will largely be dictated by price and service.

- High fixed costs create strong pressures for all firms to fill capacity, which often leads to rapidly escalating price cutting.
- Capacity is normally augmented by large increments such additions disrupt the industry's supply-demand balance and often lead to periods of over capacity and price cutting.
- High exit barriers. Exit barriers such as very specialised assets or management's loyalty to a particular business. Keep companies competing even though they may be earning low or even negative returns on investment.
- Competitors who are diverse in strategies, origins, and personalities. Such competitors have different ideas about how to compete and continually run head-on into each other in the process. Foreign competitors often add a great deal of diversity to industries because of their differing circumstances and often differing goals.

While a company must live with many of these factors, it may have some latitude for improving matters through strategic shifts. For instance, it may try to raise buyers' switching costs or increase product differentiation. Focusing on selling efforts in the fastest growing segments of the industry or on market areas with the lowest fixed costs can reduce the impact of industry rivalry.

- C) Threat of substitute products. How profitably and successfully a firm operates depends in part on the availability of quality and less costly substitutes for a firm's product or service, and how competitive the substitute industry is will determine how viable the substitute is. In some instances, a substitute product can virtually eliminate an industry. This happened when silicon-chip-based calculator replaced electro mechanical adding machines. Thus, an industry must recognise that both existing and potential

substitutes will affect the overall demand for products and the profitability that will result from servicing the remaining demand. This reduced profitability results from price competition with substitutes, the cost of advertising against substitutes, and product innovation directed at substitutes.

In Porter's view, substitute products that deserve the most attention strategically are those that (1) are subject to trends improving their price-performance trade-off with the industry's product, or (2) are produced by industries earning high profits.

Effective defence against substitute products may require collective industry action. For example, heavy and sustained advertising by all industry participants may well improve the industry's collective position against the substitute. Similar actions in areas like product quality improvement, marketing efforts, and product distribution may help in achieving a better position against substitutes.

- D) Bargaining power of suppliers. Another factor influencing competition in an industry is the bargaining power of suppliers. Strong supplier groups may reduce much of an industry's potential profits by raising prices or reducing the quality of purchased goods and services. The suppliers of an industry include the sources of raw materials, machinery, capital and labour. Suppliers will be powerful given the following conditions:
- . There are no logical substitutes for the material supplied.
 - . The industry is not an important customer of the supplier group.
 - . The purchased product is an important component in the buyer's product.

- . The supplier group's products are unique.
- . There are switching costs if the industry tries to change sources.
- . There is a genuine threat of the supplier integrating forward into the company's business.

The conditions determining supplier power are frequently beyond a company's control. However, the firm can sometimes improve its situation through an appropriate strategy. It can promote a threat of backward integration, seek to eliminate switching costs, and the like.

E) Bargaining power of buyers or customers. The buyer groups of an industry represent a force which, if strong, can reduce profitability of an industry. A buyer is powerful given the following circumstances:

- . His purchases comprise a large portion of the seller's total sales.
- . The buyer is price sensitive because his purchases represent a large portion of his costs.
- . Because of low profitability, the buyer is extremely price sensitive.
- . The products purchased from the industry are highly standardised or are commodities.
- . The buyer faces small switching costs.
- . There is a genuine threat of the buyer integrating backward into the seller's business.
- . The industry's product does not affect the quality of the buyer's product.
- . There is a well-defined market for the industry product so that the buyer has full information regarding price and quality.

The power of buyers can rise and fall as the underlying factors creating power change with time or as a result of a company's strategic action.

The five competitive forces derived from new entrants, competitors, supplier power, substitution, and buyer power shape the competitive environment for each firm in an industry. These forces vary in manner and the degree to which they will have an impact on each firm in the industry. As part of its strategic analysis, each firm must identify the specific competitive forces and underlying economics that determine the strength and stability of those forces.

The link between competitive environment and competitive strategy formulation is also illustrated by Prescott.⁽²⁶⁾ In his view, competitive strategy does not have the implied permanence that a competitive environment has. This is, while competitive environmental changes gradually, competitive strategy is more easily changed. There can be many different competitive strategies followed in a single competitive environment. In a business, the critical role for the decision maker is to identify the competitive strategies that exploit the competitive strengths of the business and are consistent with the competitive environment demands. The degree of fit between competitive environment demands and competitive strategy is a strong determinant of performance.

It is pointed out that the competitive environment analysis generally provides the firm and the industry with six major benefits:⁽²⁷⁾

- . Providing a new or different view of the business.
- . Identifying the changing or consistent success factors.
- . Assessing relative position in the market.
- . Providing the ability to anticipate changes in competitive moves and their implications for potential rewards, costs and risks.
- . Generating alternative strategies. Because competitors may have different perceptions of their competitive environment and the market needs, thus stimulating

different opportunities and threats, they may also develop different strategies to meet such challenges.

- Providing help in determining the potential effectiveness of the current or new strategies.

Finally, it is worth stressing the point that the competitive environment in which the firm operates is continually changing so that new threats and opportunities arise frequently. In the long term, a prerequisite of strategic success is being able to adapt quickly to new environmental conditions by anticipating market evolution and devising unique competitive advantages. Analysis of social, political and technological issues that may influence competitive strategies is also of considerable importance. As Rothschild⁽²⁸⁾ put it, "winners are those who never forget that they are in a continuing competitive game and that it is important to understand and monitor the competitive environment. Competitive understanding and monitoring are key elements to strategic thinking, since they help the firm to see the relationship between customers and resources". Therefore the competitive environment analysis is a key element in strategy development, it is literally the predominant consideration at business level of strategy formulation.

Alternative Competitive Strategies

Much research into strategy has tended to overlook the effects of competition among firms. Most case studies examine a particular firm historically, focusing on internal decision making and structural changes without considering the effects of the external environment.⁽²⁹⁾ Even larger industry studies play down the role of competition in limiting the firm's ability to implement its strategy successfully. However, in the late 1960's and the early 1970's, strategic thinking began to inspire business policy makers. This new thinking has come recently to include not only product-market domain definition, but also the development of generic strategy for competition and the elements of competitive strategy.⁽³⁰⁾

An earlier version of this type of thought was presented by Ansoff⁽³¹⁾, who claimed that most conventional management theories restricted their concern within the company. His study covered the interaction between a firm and its product market environment and produced an indication of several important concepts, such a growth sector, synergy and competitive advantage, which exert influences on an action planning of diversification strategy. Other studies by Rumelt⁽³²⁾, Hoffer and Schendel⁽³³⁾, indicate that the policy making of a firm should be conducted on the basis of both environmental variables and a firm's internal variables.

Although such researches and others provided discussion concerning a generic strategy for the business, they did not refer to the practical elements of competitive strategy. The reason given for this is that these researchers try to limit the variables in an attempt to demonstrate the content of generic strategy clearly. Porter⁽³⁴⁾ pointed this out by stating that "most of the emphasis in formal strategic planning processes has been on asking questions like: What is driving competition in the industry? What actions are competitors likely to take, and what is the best way to respond? How will the industry evolve? How can the firm be best positioned to compete in the long term? These questions have been asked in an organised and disciplined way rather than on answering them". He adds "Those techniques that have been advanced for answering the questions, often by consulting firms, either address the diversified company rather than the industry perspective or consider only one aspect of industry structure, like the behaviour of costs, that cannot hope to capture the richness and complexity of industry competition".

Porter presented a theoretical framework which consists of variables relating to the circumstances of the industry and competition in it. A comprehensive list of several variables concerning practical elements of competitive strategy has been provided. However, before addressing ourselves to Porter's classification of competitive strategy, it might be useful to shed

light on the classic approaches to formulation of competitive strategy as well as pointing out some techniques that are usually employed in developing business strategy in general and competitive strategy in particular.

The classic approach for developing a competitive strategy

In principal, developing a competitive strategy is developing a broad formula relating to how business is going to compete, what its goals should be, and what policies will be needed to carry out those goals. Henderson⁽³⁵⁾ suggests that the starting point for competitive strategy development should be:

- . The identification of the business area involved.
- . The identification of significant competitors in the business area.
- . The identification of the differences between the firm and significant competitors.
- . Forecasting of the changes in the environment which can affect the competition.
- . The identification of firm's objectives and any known differences between them and those of competitors.

He emphasises that the difficult part of constructing a strategy is the development of the strategy concept. Any strategy of value, he contends, requires following a different course from competitors, or initiating actions which have quite different, and more favourable consequences than those of other competitors.

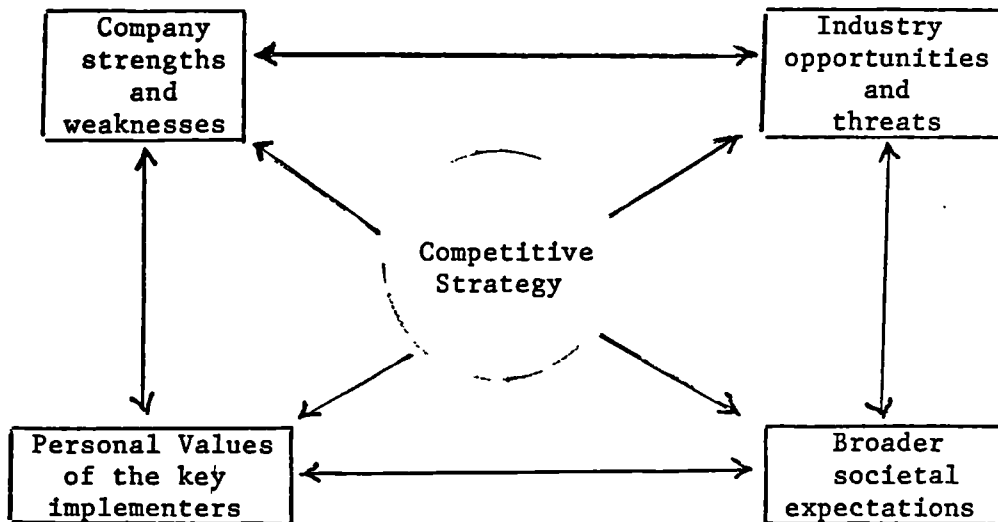
Developing competitive strategy is the result of a comparison of environmental threats and opportunities with the firm's current resources and capabilities. As Hofer and Schendel indicated⁽³⁶⁾, "It is the unique characteristics of strategic opportunities and threats that determine the specific actions it should take to create effective competitive advantages". In their view, analysing an industry to identify these unique threats can be seen to play an

important role not only on determining what strategies are required, but also in implementing them.

Generally speaking, formulating a competitive strategy at the broadest level involves the consideration of four key factors that determine the limits of what a firm can successfully accomplish. Two of these factors, including company strengths and weaknesses and the personal values of an organisation, are internal to the firm. While the other two, industry opportunities and threats and the broader environment, represent factors external to the firm. The four forces should be considered before developing the set of goals and policies. The appropriateness of a competitive strategy can be determined by testing the proposed goals and policies for consistency. Figure 4/1 illustrates this approach.

FIGURE 4/1

Context in which competitive strategy is formulated



Source: M.E. Porter, *Competitive Strategy*,
op. cit, p.xviii

The normal procedures for developing competitive strategy are said to include the following sequence:⁽³⁷⁾

- . Defining the present business situation.
- . Forecasting what will happen to the competitive environment in general over a reasonable period of time. This includes markets, technology, industry volume, and competitive behaviour.
- . Predicting what the performance will be over this period if the firm continues with no significant change in its policies or methods of operation.
- . If this is fully satisfactory, there is no need to develop any further to achieve satisfaction; if not then continue.
- . Appraising the significant strengths and weaknesses in comparison to those of important competitors.
- . Evaluating the differences between the firm's policies and strategies and those of major competitors.
- . Attempting to conceive of some variation in policy or strategy which would improve the firm's posture in the future.
- . Appraising the proposed alternative strategy in terms of possible risks, competitive response, and potential pay out.
- . If this is satisfactory, strategy development is completed and concentration should be given to planning the implementation; if not, then broaden the definition of the present business and repeat the cycle above until satisfactory indications appear.

Porter⁽³⁸⁾ summarises this process of formulating competitive strategy as an attempt to answer three main questions.

1. What is the business doing now? This includes the identification of the current strategy and the implied assumptions about the company's relative position, strengths and weaknesses, competitors and industry trends.

2. What is happening in the environment? This includes analysis of the industry, competitors, social forces, and the company's strengths and weaknesses relative to present and future competitors.
3. What should the business be doing? This implies tests of assumptions and strategy, examining strategic alternatives and strategic choice.

In brief, competitive strategy development consists of ways and means to emphasise the value of the differences between the firm and its competitors.

On the other hand, a series of techniques has been developed and used for achieving strategic advantages over competitors. Most of these techniques are based on the use of a matrices and screens approach which has provided a useful, if rough and ready, guide for looking at strategic options. The most commonly quoted techniques are: (39)

1. The Boston Consulting Group approach, which focuses on market share and market growth.
2. General Electric's business screen, which classifies a product or business into one of nine cells, depending on the attractiveness of the industry and the position of the business within the industry.
3. The Shell directional policy matrix, which classifies products on the basis of "sector" profitability and the firm's competitive capabilities.
4. Hofer's analysis which has extended the Boston Consulting Group and General Electric analysis by analysing business in terms of their competitive position and the stage of product/-market evolution.

5. Hussey's concept of risk matrix where environmental risks are plotted against environment attractiveness. The components of the axes are: Competitive position, environmental attractiveness and environmental risks.

6. An earlier technique used for developing business strategy in general and competitive strategy in particular is the concept of critical success factors. The concept refers to those variables which management can influence through its decisions that can affect significantly the overall competitive positions of the various firms in an industry. In other words, they are the limited number of areas in which results will ensure successful competitive performance for the firm. Critical success analysis can aid strategy development in analysing and assessing the external environment. This includes the competitive environment and identification of the significant threats and opportunities facing the firm.

Industry Structure Analysis

Although much of the strategic planning literature offers techniques for analysing the structure of the industry, the framework of analysis set forth by Porter⁽⁴⁰⁾ might be considered as the first truly comprehensive approach to competitive strategy. According to Porter, after the forces affecting competition in an industry i.e. buyer power, supplier power, substitution, new entrants and rivalry, and their underlying causes have been analysed, the firm is in a position to identify its strengths and weaknesses relative to each force. Then the firm can devise a plan of action that may include:

- . Positioning the company so that its capabilities provide the best defence against the competitive forces.
- . Alternatively, a company can take an offensive approach by trying to influence the balance of competitive forces, thereby improving the company's position, and/or

- . Anticipating shifts in the factors underlying the forces and responding to them with the hope of exploiting change by choosing a strategy appropriate for the new competitive balance before opponents recognise it.

Porter proposed what he calls three generic competitive strategies. These strategies are:

- Overall cost leadership.
- Differentiation.
- Focus or market segmentation.

The first two strategies are industry wide. By definition, the third applies only to a portion of the market. Each of these provides a general framework within which a firm sets functional policies and procedures, and performs activities that implement that strategy. If a firm executes one of these strategies, Porter contends, it will enjoy an advantage relative to industry forces that will yield higher than average returns.

(1) Overall cost leadership. The main purpose of this strategy is to achieve overall cost leadership in an industry through a set of functional policies aimed at this basic objective. Basically, a firm seeking to base its competitive strategy on overall cost leadership must aggressively pursue a position of cost leadership by constructing the most efficient scale facilities and obtaining a large share of the market so that its cost per unit be among the lowest in the industry. The cost leadership strategy also usually involves production of stock since part of the strategy is to make the product available on demand or off-the-shelf. ⁽⁴¹⁾

Also, where possible, economics of scale are used in this strategy as are the benefits that come from cumulative organisational learning and the experience curve. Products are designed for productivity so that experience curves take off from a completely different point than they do for competitors who follow alternative strategies. A great deal of managerial attention to cost control is necessary to achieve the main objective of this strategy.

Cost-minimisation should be possible in other functional areas, such as R & D, Service, Sales, Advertising, Personnel, and so on.

In short, low cost relative to competitors becomes the theme running through the entire strategy. However, quality, service and flexibility cannot be completely ignored, but they are not emphasised. The cost leadership strategy deals effectively with all five competitive forces. The low-cost producer in an industry will earn higher than average returns, giving it a defence against competitors. The low-cost position provides an entry barrier in terms of economies of scale and cost advantages. Even substitutes have a more difficult task in competing because of low cost and availability. The cost leadership strategy also provides bargaining power in relation to both suppliers and buyers compared to other less efficient producers.

Many prominent producers have their competitive strategies built around low cost and high availability, most notably the Japanese firms. Japanese companies and suppliers in the 35 mm Camera, Consumer Electronics and Entertainment Equipment, Motor Cycle, and Automobile Industries have achieved leadership on a world basis through the successful adoption of overall cost leadership.

Overall cost leadership strategy, however, involves some risk, the most obvious one being that the production system may become inflexible. If consumer preferences take a sharp turn or if technological changes make product designs and plant and equipment obsolete, the firm may have to reinvest huge sums of money in order to recover. The Ford Model T. is just an example of such risks.

(2) Differentiation Strategy. Differentiation, the second generic strategy, involves the creation of a product or service that is perceived by the industry and its customers as being unique. Approaches to differentiation can take many forms including design, brand image, technology, product features, customer service, dealer networks, or some other category. Usually firms pursuing a differentiation strategy are most successful when they establish uniqueness in several categories.

Just as the low-cost strategy does not ignore quality, the differentiation strategy does not ignore costs. The focus of the production system, the marketing function and the entire organisation is on the uniqueness that the firm has to offer. Cost may be secondary and customers are willing to pay a little more and even to wait for the uniqueness. The differentiation strategy deals effectively with the five forces in the industry environment and is therefore capable of earning high returns. In relation to the industry competitors, following such a strategy limits competition from both direct competitors and potential substitutes because of the uniqueness of the company position. The customers have greater brand loyalty and therefore less price sensitivity. uniqueness provides barriers to entry, and the higher margins make competition from suppliers less important.

Examples of successful differentiation are Maytag in the area of large home appliances, Caterpillar in construction equipment, Mercedes in luxury automobiles, and almost any successful branded consumer product.⁽⁴²⁾

A differentiation strategy also has its risks. Customers will tolerate only up to a point a maximum premium for the uniqueness. If cost control becomes lax, or if the base cost of providing the uniqueness is beyond the customer's willingness to pay, then this advantage becomes a disadvantage.

In other words, there are limits to how much more buyers will pay for a product that is more fashionable than its rivals. At some point, the buyers may be attracted to a more generic product at a lower price.

(3) Focus or segmentation strategy. The third and final generic competitive strategy is focus, which is based on serving a particular market segment more effectively and efficiently than any other competitor. While the first two strategies are industry wide, market segmentation focuses on a particular customer group, a segment of the broad product line, a geographic portion of the

market, and so on. It selects a market segment on some basis and tries to do an outstanding job of servicing that market.

Part of the rationale is that the industry wide leaders cannot do as good a job of serving all segments of the market, so that profitable niches are available to specialists. Thus, segmentation strategy could adopt an approach that includes one of the other two strategies, i.e. meeting the special needs of a particular market or by providing lower costs for that market segment, or both.

In order to serve this segment of the market, manufacturing facilities must be flexible enough to handle all types of sizes in small volumes. Also, there is relatively little room for the application for automation and robotics in low-volume manufacturing firms. Therefore, while segmentation can emulate either the first two strategies in a limited way, it is unlikely that it could ever achieve the market share of those in the industry that are attempting industry wide strategies. The segmented firm is likely to be smaller and may lack the financial resources to attempt an industry wide strategy. Nevertheless, the segmentation strategy can be a viable one for defence against the five forces in the competitive environment. It need not compete directly with the giants of the industry. It may have more of a problem in dealing successfully with suppliers because it does not have the leverage of a larger producer. It may also be more of a target of forward integration from suppliers and backward integration from customers.

In general, however, a firm following the segmentation strategy will have the modes of defence associated with one of the other two strategies depending on whether it has opted for low cost or flexibility within the segmentation strategy.

As the three strategies differ in the functional dimensions mentioned above, implementing them requires different resources and skills, as well as organisational requirements.

Finally, not all industries seem to have opportunities for all three strategies. In most commodities, costs are the most important factor in competition. In industries where entry barriers are low and exit barriers are high, the competition may be so intense that the only feasible strategies are either differentiation or segmentation. Again, forging a successful competitive strategy begins with understanding what is happening in the industry environment and deciding which of the available competitive niches the firm should attempt to dominate.

Critics of Porter's generic strategies will suggest the fallacy of using stamped-out game plans for situations that aren't identical. They will also levy the charge, with considerable justification, that generic strategies, however elegant they sound, would be very difficult to execute. O'Shaughnessy⁽⁴³⁾ emphasises the latter criticism by stating that "a more vexing issue is the extent to which Porter's system is operational. Although he speaks of the need to assess the relative power of the five forces at work, he has no optional concept or measure of power".

However, using the generic strategy approach will be useful for learning a great deal more about customers and will force the firm to monitor its competitors in far greater depth than just following their market share figure. In addition, using Porter's approach in developing a competitive strategy will provide a better understanding of the business chessboard and a list of possible moves available to the firm.⁽⁴⁴⁾

Internationally oriented business and competitive strategy formulation

Growing internationalisation during the past three decades or so has become one of the most persuasive influences in business today. This is true not only with regard to positioning the firm's products in various foreign markets, but also with managing the competitive interaction of a firm's, or industry's, products in the domestic market.⁽⁴⁵⁾

As an outgrowth of today's internationalisation process, the international market place is proving to be an aggressively dynamic area for competitive interaction that, in many cases, knows only limited national boundaries. To compete successfully in this broad arena, it is important to have an appropriate international business strategy which can lead to telling advantages over competitors.

Porter⁽⁴⁶⁾ places greater emphasis on the point that structural analysis and the resulting competitive strategies also apply to diagnosing industry competition in any country or in any international market, though some of the institutional circumstances may differ. In his view, there are many differences in competing internationally as opposed to nationally, which should be taken into account in developing an international competitive strategy.

These differences include:

- Factor cost differences among countries.
- Differing circumstances in foreign markets.
- Differing roles of foreign governments.
- Differences in goals, resources, and ability to monitor foreign competitors.

In the light of these differences, and following the diagnosis of sources and impediments of competition on a world wide basis, there are four alternative strategies.

1. Broad line global competition, This strategy implies competing worldwide in the full product line, taking advantage of the sources of global competitive advantage to achieve differentiation or an overall low cost position. Implementing this strategy requires substantial resources and a long time horizon.
2. Global segmentation. This strategy targets a particular segment of the industry in which the firm competes on a

worldwide basis. The strategy produces either low cost or differentiation in its segment.

3. National focus. Here the strategy takes advantage of national market differences to create a segmentation approach to a particular national market that allows the firm to outcompete global firms.
4. Product niche. The strategy applies in countries where government restraints exclude global competitors by requiring a high portion of local content in the product, high tariffs, and so on. The strategy is adopted to deal effectively with the particular national markets subject to such restrictions, and places greater attention to the host governments in order to ensure that protection remains in force.

Apart from Porter's work which, however, is basically directed at analysing competition in the national market, it could be said that much less attention has been directed at the study of competitive strategies in international business. Most notable exceptions are the studies by Ohmae⁽⁴⁷⁾, Rapp⁽⁴⁸⁾, Abegglen and Rapp⁽⁴⁹⁾, and Ayal and Zif⁽⁵⁰⁾.

Most of these works recognise that developing an integrated approach to international business strategy must be based on developing a conceptual framework for analysing and predicting patterns of international competition. Such a framework for competitive analysis includes international product life cycles, worldwide market segmentation, cost-volume relationships, market choice strategies and international portfolio analysis.

A brief discussion of these concepts is presented below.

- 1) International product life cycle and competitive strategy formulation. The concept of the international product life cycle was described in Chapters Two and Three. It was pointed out that

different countries are often at different stages in the adoption and usage of products, depending on the country's level of economic development. The firm working in international markets can gain competitive advantage by expanding into markets where products are at an early stage in the product life cycle, where profits are high and the best opportunity of gaining a large market share exists. Market-entry strategies are also affected by the international product life cycle. For low-cost production, so important in the maturity stage, the firm must continually assess whether its entry strategy is appropriate for each national market. This is true for all stages of the life cycle. Competitive advantage for a particular product or industry may allow the firm to compete effectively in certain countries and not in others. A decline in an industry's ability to produce and to market competitively, will restrict the foreign markets in which it can sell successfully. This can eventually affect the ability to sell in the domestic market. Therefore, the firm, or the industry in general, must either take steps to modernise and to increase the advantage, or it must move to new products or markets where there will be an advantage.⁽⁵¹⁾ In short, the requirements for effective competitive strategy vary at different stages of the product life cycle.

2) Worldwide product-market segmentation. Another way of analysing the competitive implications of new demand - supply developments for strategic purposes is in terms of product-market segmentation. It is generally recognised that, since competitive survival demands domination of a selected group of segments in the world as a whole, successful participation in world markets requires an explicit concept of segmentation. Major successes in world markets, despite overall industry decline in some cases, are seen as attributable to an extension of a clear segmentation concept.⁽⁵²⁾

For example, Japanese automakers recognised in the American market a growing demand for smaller cars that was not being served by

local manufacturers, and successfully penetrated the American auto market with compacts and sub compacts. In some instances they were able to penetrate this rich, new market with only minor adaptations of existing products; in other instances they designed completely new products for the U.S. market. In general, a manufacturer is at greatest competitive advantage in foreign markets when an existing product can be introduced into new markets with minimal change.

3) Cost-Volume relationships. A convenient way of assessing the competitive importance of world share is in terms of cost-volume relationships. The Boston Consulting Group and other researchers have demonstrated that for a wide variety of manufactured products, total cost per unit will decline characteristically by 20-30 per cent each time accumulated production experience. Although the precise reasons for this relationship are not entirely known, it appears to be a combination of learning by doing, management experience, more efficient working performance, and scale economies in manufacturing as well as improved marketing and general management. When combined with segmentation analysis, this approach could demonstrate many of the reasons for competitive success and failure. A critical aspect of many industries' competitive development has been their ability to lower rapidly the costs of their products.

Given this relationship between cost and volume, a firm's cost position within an industry depends on its growth relative to the entire industry, that is, on its market share. Therefore, a successful international business strategy must take into account world market share in order to increase potential volume and to lower per-unit costs.

Japanese firms, for example, have usually begun as internationally high-cost producers in most products, but within a few years they have become very competitive. The Japanese television manufacturers provide an apt illustration of an industry that took advantage of greater accumulated experience to obtain a large cost-price advantage over other competitors.

The implication of the cost-experience effect for international competition is that growth directly determines a competitor's ability to accumulate experience and lower costs, and market share determines the ability to lower costs, relative to competitors, both domestic and foreign.

4) Competitive market choice approaches. Part of the process of formulating an international competitive strategy relates to the choice of territorial markets in the international arena. Recently, Ayal and Zif⁽⁵³⁾ have classified and analysed the competitive aspects of market choice on the basis of three operational dimensions:

- A. Market concentration versus market diversification. This is based on the number of markets served and the allocation of resources among markets. The choice between the two alternative strategies is affected by the characteristics of both the product and the market, and by the decision criteria established by the firm.
- B. The second dimension of competitive market choice strategy is competitive posture. This dimension describes the competitive objectives of the firms, which could be classified as defensive or offensive objectives.
- C. The third and last dimension is based on the territorial location of the major competitive area. According to the firm's strengths and weaknesses compared to competitors, the world markets could be divided into three regions including the firm's home market, neutral territories and competitors' home market.

Based on this analysis, a competitive market choice strategy is selected, detailed market-by-market analyses are conducted, and the strategy is translated into a specific market expansion programme.

The successful application of such strategies, they argue, requires that the firm involved should be strong enough to aim at a substantial share of at least some markets and should also be able to identify its major competitors and evaluate their relative strengths.

5) International portfolio analysis. It is claimed that, with the growing importance of international trade and the development of improved communication, computer links, and greater travel among countries, as well as the emergence of competition on an international scale, it is becoming increasingly important for companies to adopt an international portfolio perspective for business operations. In general, a portfolio analysis is a method of measuring business opportunities according to a company's relative competitive strengths and the relative attractions of the market. The conceptual simplicity of presenting the combinations of competitive strengths and market attractiveness provide a two-dimensional matrix useful for plotting products. More important to strategy formulation, each axis is a linear combination of factors which together can be used to define a country's attractiveness from a market viewpoint and determine the company's competitive strength in that country. The factors used to rank a country's attractiveness will vary considerably according to the product to be sold. Also, competitive strength must be defined within an international context.⁽⁵⁴⁾

The most commonly utilised product portfolio models are:

- The Boston Consulting Group's growth/share matrix.
- Other standardised portfolio models typically involve various measures of two dimensions, i.e. business strength/country attractiveness.
- International extension includes either the development of a worldwide matrix in which the units classified are products by countries or a separate classification matrix for each country.

- A similar conceptual approach based on growth rate and market share in each country but specifically designed for international decisions, was supported by Lareche⁽⁵⁵⁾. Following this approach, resources and efforts can be shifted from countries with low to those with high rates of market growth. However, implementing this approach requires appropriate data and forecasting models to assess the likely future market growth and share in each country.

Most of the above mentioned approaches to international competitive strategy formulation are useful in evaluating the competitor's current product-market portfolios, generating provisional projections of the firm's future competitive situation, guiding the development of a strategic intelligence system and determining strategy options. However, such approaches are in essence domestically oriented and do not incorporate considerations such as costs of entry to the various countries and markets, shared marketing costs, the risks involved in international operations and, more importantly, the likely competitive moves into domestic and foreign markets, which serve as an important component of any strategic analysis.⁽⁵⁶⁾

The potential role of the marketing function in competitive strategy formulation

The ultimate goal of strategic management is to secure a sustainable differential advantage for the firm. Achieving this differential advantage requires a careful appraisal of where the company is, should be, and must be within the business environment. In addition, the question of how a differential advantage can be achieved and sustained must be addressed.⁽⁵⁷⁾ The concept of differential advantage is important to grasp due to its centrality to strategic management in general and competitive strategy formulation in particular. The central pursuit of a sustainable differential advantage depends on the imagination and skill of top management in all functional areas of the firm.

Marketing is considered to be one of those key functional areas. In fact, striving to achieve differential advantages in product, place, promotion and price, is a long established mission of the marketing function. More recently, Cook⁽⁵⁸⁾ made an interesting attempt to examine the link between the firm's performance and the differential advantage generated through the marketing mix decisions. In his paper entitled "Marketing Strategy and Differential Advantage", he introduced the concept of "strategic marketing ambition" and developed an operational measure of differential marketing advantage and derived a theoretical function relating strategic marketing ambition to market share. He also related these concepts to the marketing mix and provided an illustrative analysis which interpreted the competitive dynamic of the automobile industry over its most recent purchase cycle. In this sense, marketing strategy is seen as the manner in which company resources are put at risk in search for differential advantage.

Simmonds⁽⁵⁹⁾ asserts that although strategy has been given more attention recently than in the past, marketing was never intended to be studied as a tactical field divorced from its strategic implications. In his words, "It is the strategy component that is concerned with those core actions for any business which determine the direction it moves in within its market place and are the essential cause of improvement or reversal in performance". Consistent with this view, Paley⁽⁶⁰⁾ argues that the marketing function and strategy are regarded as an extension of corporate policy to the extent that the total enterprise exists and is organised as a system of business activities to satisfy market requirements.

Perhaps the link between the marketing function and competitive strategy formulation can be made clearer if the major contributions of marketing to strategic thinking in general and competitive analysis in particular is illustrated. In this concern Briggadike⁽⁶¹⁾ identifies five major contributions of marketing:

A) The marketing concept • One contribution of marketing is providing a perspective that emphasises that customers should be the focal point of strategy. It is commonly accepted that the first place to start in formulating competitive strategy, as is true with all good strategic thinking, is outside, especially with the customer and his needs and wants. Knowing these needs and wants helps the firm to anticipate changes in competitive moves, especially in the form of new offerings or substitute products, while missing changes in these needs and wants can be devastating to the firm's competitive position. Again, the car industry is our example. Missing the change from concern for style and power and little concern for energy efficiency to the current concern for quality, reliability, and high mileage, put the American leaders in the position of having to move aggressively to catch up with their new foreign opponents. So, the rules of the competitive game may change because the customer has needs and wants not being satisfied by the current competition.

Indeed, marketers would argue that the new fashionable pre-occupation with the external environment and strategy started with the articulation of the marketing concept.

B) Market segmentation and positioning. The concept of market segmentation and its counterpart, positioning, are seen as marketing's most important contribution to strategic thinking in general and competitive strategy in particular. In using these concepts, marketers first ask the question: how do customers define the environment? i.e. what needs or problems are relevant to them? Second, how do customers perceive different competitors' attempts to solve their problems? Having segmented customers and positioned competitors, marketers next ask: how will environmental change alter the market? Finally, marketers ask: which part of the market should be served against which kind of competitors?

In answering these questions, marketers developed some strategic rules of thumb. (62)

- Look for the hole, i.e. look for an unserved segment.
- Don't squat between segments.
- Don't serve two segments with the same strategy.
- Don't position yourself in the middle of the map.

These rules stress the importance of achieving a focus in strategy: chose a segment of the market and serve it. In general, an analysis of the competitive situation will include a determination of how competitors segment the market and approach the customers. Sometimes this can present attractive opportunities.

C) Market/Business definition. Segmentation and positioning concepts are considered as the entry point for strategic issues of market and business definition. On this point, it has been proposed that business may be defined along three dimensions:⁽⁶³⁾

- The type of customer groups that are targeted.
- The functions that are performed for each customer group.
- The technologies that are employed to perform functions.

The strategic questions for a competitor in the market concern the scope of its business and how it should differentiate itself.

Answering these questions requires the analysis of the resource requirements of the different business functions, customer needs and the company's relative ability carefully to span the resource requirements associated with serving a variety of customer functions in a variety of market segments.

D) The product life cycle concept. The value of this concept derives from the fact that the stage of the Plc is a world indicator of what might be appropriate strategies. Hofer⁽⁶⁴⁾, argues that the most fundamental variable in determining an appropriate business strategy is th stage of the Plc.

In short, marketing has a perspective that is critical to competitive strategy formulation. This perspective is captured by the marketing concept, which provides such strategy with both a philosophy and an operational method of resolving some of strategic issues and for integrating the activities of the business.

On the other hand, taking Porter's view concerning competitive strategy formulation, one might argue that although he did not give sufficient emphasis to the role played by marketing in developing and implementing such strategies, it is not so difficult to appreciate this role.

First, Porter points out that competitive strategy is often thought of as a wheel, the goals and definition of how the business is going to compete being in the centre. The spokes of the wheel are the key operating policies with which the firm is seeking to achieve its goals. These key operating functions include target markets, marketing, sales, distribution, product line, finance and control, R & D, labour, purchasing, and manufacturing. At first glance, one might conclude that marketing in its broader sense encompasses at least the first four functional areas which, without the wheel of the competitive strategy, will not roll. In other words, the marketing function provides a key input to the competitive strategy formulation process.

Second, and perhaps more important, if we looked at the three generic strategies as classified by Porter, one would find that at least two strategies are, in principal, marketing-oriented strategies. Focus strategy, for example, is by nature a marketing strategy. Most of the marketing textbooks and literature in general deal with the concept of segmentation, the procedures and the major basis for segmentation as well as the requirements for effective segmentation. In the international context, marketers refer to the importance of market segmentation as a base for developing competitive strategy.⁽⁶⁵⁾ Accordingly, it could be said that marketing is the major factor affecting success for such a strategy.

With reference to the second strategy which is a differentiation strategy, it is considered that differentiation can take many forms including brand image, design, technology, customer service, dealer network and the like. It is obvious that the successful

implementation of such a strategy needs in the first instance strong marketing abilities to create brand image and consumer loyalty, to provide the customer with the sufficient service, to help in choosing and motivating a capable dealer network and to assist and push new or improved products to the market place. In other words, the marketing literature generally stresses the importance of differentiation as a means of achieving competitive advantage in the market place. This can be done by advertising and creating brand loyalties. Other factors such as reliability, prompt delivery and after-sale service can assist in the creation of consumer goodwill. Levitt's work is considered to be a landmark in this area⁽⁶⁶⁾. In brief, perceived uniqueness as the major dimension of differentiation strategy is, in essence, a marketing mission and responsibility.

Finally, the marketing function could also help in achieving success for the overall cost leadership strategy through rational spending on sales force, advertising, market research and the other marketing activities. Also, marketing contributes importantly to producing at optimum competitive costs through the way it selects the markets and customers.

Generally speaking, in the search for competitive advantage which represents the core of competitive strategy, the foremost concern should be the potential market reaction to the selected strategy. To be successful, the strategy has to be consistent with consumer needs, perceptions and preferences.

The marketing function and strategy focus explicitly on the quest for competitive and consumer advantage. Marketing is the only function able to assess consumer needs and competitive moves and, consequently, the firm's potential for gaining competitive advantage.

Though the role is played by marketing in formulating competitive strategy is vital, little explicit attention especially in the

marketing literature, has been given to this relationship. Moreover, most marketing texts have ignored systematic treatment of competitive analysis.⁽⁶⁷⁾ More recently, some attempts have been made to try to fill this gap, most notably the works by Hout and Associates⁽⁶⁸⁾, Kotler⁽⁶⁹⁾, and O'Shaughnessy⁽⁷⁰⁾.

Hout and Associates, for example, emphasised the need to pursue competitive advantage. They advanced a number of propositions that could serve in formulating competitive strategy, including the following:

- Competition consists of the constant struggle of firms to develop, maintain, or increase their differential advantages over other firms.
- Competition for differential advantage is the primary force for innovation in marketing.
- The bases for differential advantage are market segmentation, selection of appeals, product improvement, process improvement and product innovation.
- Through time, competitors will attempt to neutralise the differential advantage of an entrant.
- The existence of differential advantage gives the firm a position in the market place known as an "ecological niche".

According to the behaviour of the firm in an industry, Kotler classifies the competitive position of these firms into four distinct groups: A market leader, a market challenger, a market follower and a market nicher. According to the nature of the challenges that face every group and the nature of its objectives, every group will try to develop its own competitive strategy which could help to achieve the proposed objectives. For example, for a market nicher, a firm that serves small market segments, to be successful, the firm has to specialise along market, customer, product or marketing-mix lines. A reputation for high quality and fair prices is strategically essential.

Along the same line of thought, O'Shaughnessy reached a classification of competitive marketing strategy depending on the goal of the firm. In his view, the goal must be either protecting or advancing market share. In the light of the chosen goal, the firm must decide to move before competitors, with competitors or away from competition. According to the chosen goal and the chosen action, the suitable competitive strategy will be developed. This approach is summarised in Figure 4/2.

Figure 4/2
Competitive Strategy

	move before competition	move with competition	move away from competition
Market share Protection	- mix adjustments - deterrent action	- imitate - compensate	- merger - acquisition - collusion
<u>GOAL</u>			
Market share Advancement	- new areas - new segments - additional channels - Penetration pricing	- capitalize - leap	- new offerings - reciprocal agreements

Source: J. O'Shaughnessy, Competitive Marketing, op. cit, p.113.

To sum up, a marketing perspective for the development of a competitive strategy is consistent with the early literature relating to the marketing concept, which recognised that marketing is not only a set of functions but also a guiding philosophy.

In a great many firms, the marketing function represents the greatest degree of contact with the external environment. Marketing effort is not restricted only to studying the particular grouping of customers that are the target of strategy; it also

analyses the actions of competitors. It helps in evaluating the opponents' competitive positions and likely moves and even the probable effects of its moves on those positions.

In fact, most of the competitive strategy literature deals with such marketing variables as market share, market growth, product differentiation and market segmentation. This reflects the view that the marketing function is the core element in formulating competitive strategy and is the mediating force which helps to establish a match between the firm and its environment in general. Thus, the leverage effects of revenue generation make marketing a critical input to any competitive strategy formulation.

An alternative view for formulating competitive strategy

An obvious conclusion from the previous discussion is that there is no single way of formulating competitive strategy, and with the exception of Porter's attempt in this area, one might conclude that most of the literature about competitive strategy formulation suffers from a lack of international orientation.

Taking this consideration as a starting point and depending heavily on the literature review in the previous chapter regarding the major factors affecting competitiveness in international trade for manufactured goods, the researcher will attempt to introduce an alternative view for developing competitive strategy. In doing so, we shall first deal with the idea of competitive advantage as it represents the core and major consideration in formulating competitive strategy, after which we shall deal with two main questions regarding this goal. First, what are the major factors affecting the achievement of competitive advantage? Second, how could these factors be injected into strategic action, i.e. how could these factors help in shaping and developing competitive strategy? Finally, some attention will be given to strategic choice criteria.

Competitive advantage : The key to strategic competition

In recent years, many industries working in the international environment are coming under the pressure of two predominant forces: uncertainty in the business environment and global competition. While other developments will also be important, these two factors are likely to shape the prevailing philosophy of management. Under such conditions, it is becoming more and more evident that the idea of competitive advantage, which reflects the philosophy of choosing only those competitive arenas where victories are clearly achievable, offers the best general approach for achieving sustained business success.⁽⁷¹⁾

Prescribing a concentrated investment of resources in those enclaves of competitive activity, because they are relatively sheltered from the changing business environment and are also relatively protected from intense global competition, offers the best opportunity for continuing profitability and sound investment returns. Accordingly, a good competitive strategy is one by which the firm, or the industry, can gain maximum advantage over its competitors, either in the domestic or foreign markets, at minimum cost to itself. In other words, a useful operational criterion for competitive strategy is whether a sustainable competitive advantage exists as the backbone of such strategy. Without a real, sustainable competitive advantage, an attractive long-term success will be unlikely.

Aaker⁽⁷²⁾, in a landmark article, asserts that any successful business strategy should include a sustainable competitive advantage. In his view, this advantage is usually based upon strong points of differentiation such as product quality, a sustainable cost advantage, or focus upon one or more market segments.

Porter⁽⁷³⁾ supported this view when he pointed out that a successful attack against strong competitors, and industry leaders, requires that the challenger must have a sustainable competitive

advantage which should be either in cost or in differentiation. In South's⁽⁷⁴⁾ view, the idea of competitive advantage is a powerful one because it identifies what to look for in developing strategies and plans, namely, a fundamentally advantageous position from which to compete.

Competitive advantage as a strategic objective emerged in the late 1970s and is largely based on the success of the Japanese in penetrating world markets under changing business circumstances.⁽⁷⁵⁾ Their success, in many cases, is the result of skillfully selecting competitive arenas in which they could do battle from a position of strength. Therefore, the notion of competitive advantage is used here to provide a guiding philosophy relating to the process of developing competitive strategy for those firms or industries which compete on a worldwide basis.

Factors affecting competitive advantage

Taking into account that competitive advantage is the main focus of the process of developing competitive strategy, the following question arises: what are the main factors that could help in achieving competitive advantage?

The answer to this question depends mainly on the outcome of our literature review in the preceding chapter. In that part of the study, we reviewed a series of factors associated with competitive success in world markets. It was evident from this review that there are a host of factors that could play a vital role in achieving competitive advantage in the world market place. The role of some of these factors operates at the macro level, namely the role of government, infrastructure, and exchange rate movements, while the other group of factors operates at the micro or industry level, namely the role of technology and innovation, marketing, management style and practices, economies of scale and the role of relative productivity.

Thus, competitive advantage, both in home and foreign markets, can be achieved through one or a combination of the following avenues:

- Offering new or improved products which differ significantly from other competitors' products.
- Pursuing aggressive marketing initiatives by using alternative distribution channels, concentrating on particular market segments, creating product loyalty, employing selective pricing structures, aggressive promotion and the like.
- Achieving higher productivity standards by using alternative manufacturing processes, upgrading employees capabilities, achieving the benefits of large scale and experience curve effects and the like. This would help essentially in gaining and maintaining cost leadership vis-a-vis other competitors.
- Favourable management philosophies and practices.
- A positive government role that is intended to develop or retrench the various industries in a national economy in order to achieve and maintain global competitiveness.
- An adequate and efficient infrastructure.

However, for the purpose of analysis and strategy developments, these factors will be divided into two main groups:

- 1) Key strategic factors, including technology and innovation, marketing, and relative productivity.
- 2) Contributory factors, including management philosophy and practices, government policies and attitudes, the nature of infrastructure, and exchange movements.

Each group participates in one way or another in establishing a clear and favourable differentiation from competitors. However, the first group exercises the major role in the competitive battleground. They are regarded as the main means of achieving competitive success and around them the strategic actions should be tailored and developed, while the other group plays the role of assisting and strengthening the role played by the factors in the first group.

For example, one might argue that competitive strategies based on technology, marketing or productivity require a basically different management style for competitive success, than the traditional one. In the same vein, government's attitude towards the role of innovation, marketing activities and fiscal policies in a particular country will affect to a large extent the global competitive position of the different industries in this country in world markets.

Developing Alternative Competitive Strategies

Once the notion of competitive advantage is accepted as a major competitive drive and the major element or elements that will help in achieving it have been specified, the question which then arises is how does the firm, or industry, most effectively employ the advantages it has? In other words, how does the firm translate the advantage it has into specific strategic action.

Depending on the key strategic factors mentioned earlier, the firm, or the industry, could develop one of the following strategies:

- Technology-oriented strategy
- Marketing-oriented strategy
- Low-cost oriented strategy

However, before addressing ourselves to the main aspects of each strategy, it should be pointed out at the outset that such strategic options are neither exhaustive nor mutually exclusive, but are rather offered as a framework reflecting the role of such factors that have already proved to be vital in today's competitive environment.

1) Technology-oriented strategy

A strategy based on product technology involves serving high income markets with a flow of new, preferably unique, high-performance and high-technology products. Technological innovation presents an advantageous competitive position, it can prepare the way to ensuring profitable return on investment, and it provides an

opportunity to develop an advantageous position for the longer term. In the case of product leadership, the temporary absence of competition provides the opportunity to gain market share and brand loyalty, which tends to continue over a long period of time⁽⁷⁶⁾. Therefore, a company or industry that integrates technology into its strategy significantly improves its chance of reaping benefits from technological changes.

However, it was only a few years ago that Kantrow⁽⁷⁷⁾ wrote "The past decade reveals managers' growing awareness of the need to incorporate technological issues with strategic decision making. They have increasingly discovered that technology and strategy are inseparable". Most frameworks for strategy development have been based on financial considerations such as investment requirements and cash flow.

Frohman⁽⁷⁸⁾ argues that, while these frameworks are useful, they do not consider the technological factors which are important in building a fully integrated business strategy.

In summarising the many reasons for considering technology strategically, Kantrow⁽⁷⁹⁾ asserts, "Technological decisions are of fundamental importance to business, and therefore, must be made in the fullest context of each company's strategic thinking. This is plain commonsense".

In Porter's⁽⁸⁰⁾ view, the power of technology as a competitive weapon lies in its ability to alter competition through changing industry structure. Realising this fact, many companies in recent years put emphasis on the technology factor as the main basis of their strategy. For instance, the Swedish telephone manufacturer, L.M. Ericsson, has become a successful competitor in the home and international market by developing and exploiting a technological niche. The company designed exchange software to apply internationally. Although initially the development costs were high, after a few years the company's growth accelerated and the

company now enjoys an advantage in software cost and variety that continually reinforces itself. Through this technological device, the firm has raised a significant entry barrier against other competitors in the small-system market. In the same vein, it was a Polaroid technology-oriented strategy that was responsible for the creation of the instant-still-photocopy market. In consumer electronics, it was Sony technology-driven strategy that was responsible for the creation of the Betamax, which was the first videotape device, and the Phillips strategy that was responsible for the creation of the video disk.⁽⁸¹⁾

In the macro or industry level in a certain economy, no one doubts any more that to become competitive with foreign industries, there is a need to adopt and implement technology as a competitive weapon in facing such competition. Technology and innovation are designed not only to enhance the quality of life, but also to increase international trade surplus. In countries like the U.K. and the U.S., there is a tendency to attribute industrial decline to falling levels of innovation. On the contract, the notable success of countries like Japan and Germany in international market place is attributed to their greater innovative activities.

These examples suggest that technology should be regarded as a central part of any competitive strategy for competing in either the home market or in the foreign markets.

The success of such a strategy will depend on:

- A high commitment to R & D activities.
- Top management orientation.
- Market orientation. Successful innovative companies tie their expectations to the practical realities of the market place.
- Flexible manufacturing system to accommodate frequent changes in products as well as their rapid introduction to the market.

In this strategy the product itself is the major competitive weapon. However, some attention should be given to the manufacturing costs. In short, for many firms and industries, a competitive strategy based on the technology factor should be the long-term approach to domestic and international competitive success.

2) Marketing-oriented strategy

Marketing can decide the direction pursued by a business, as well as adopting a supporting role in relation to strategy. In a great many firms the marketing function represents the greatest degree of contact with the external environment. As alluded to earlier in this chapter, the marketing function focuses explicitly on the quest for long-term competitive and consumer advantage. It helps to establish a match between the firm and its environment in the search for solutions to the problem of deciding:⁽⁸²⁾

- What business the firm is in and what kinds of business it may enter in the future.
- How the chosen fields of endeavour may be successfully conducted in a competitive environment, by pursuing product, price, promotion, and distribution perspectives to serve target markets.

The evidence suggests that marketing will be tomorrow's cutting edge in many non-marketing oriented industries. Michaels⁽⁸³⁾ argues that the move to marketing across a range of industries is at least the result of three participating factors:

- The battle for market share is intensifying in many industries as a result of declining growth rates. Industries such as apparel, textiles, consumer durables and transportation will be seeking new weapons to help them win market share, and sophisticated marketing methods can provide important extra power in these competitive shootouts.
- In several industry sectors, deregulation is forcing a move to marketing. As a result of substantial regulatory changes now underway, the airline, trucking and telecommunications

industries are becoming dramatically more competitive. In the past, competition in these industries has been along prescribed lines. Jurisdictions have been protected, prices have been regulated. As a consequence, the marketing function has been rudimentary. Now, with the winds of competition blowing, the need for marketing muscle has become urgent and some companies are already moving to meet it.

- Numerous packaged-goods producers are acquiring companies to hitherto non-marketing oriented industries and moving to gain share through massive injections of marketing capacity. They recognise the opportunity to use their marketing strengths and gain share, or change the nature of the competing industry sector.

In the same vein, some light on the impact of different marketing variables in competitive success was shed by Buzzell and Wiersema⁽⁸⁴⁾, drawing on the PIMS data base. They found that companies showing market-share gains typically outperformed their competitors in three areas: new-product activity, relative product quality, and marketing expenditures. A striking example of a successful competitive strategy based on marketing genius is Honda's penetration of the U.S. market. Three crucial steps were decisive in Honda's achievements:⁽⁸⁵⁾

- First, Honda focused market performance around the characteristics of its own products and away from those of American and European competitors.
- Second, Honda sustained growth by enticing customers with the upper levels of its product line.
- Third, Honda tried to exploit economies of scale through both centralised manufacturing and logistics.

A marketing-oriented strategy recognises some alternative approaches to achieving differential advantage over competitors. These include:

A) Concentrating on particular market segments. Since competitive survival, in most cases, demands domination of a selected group of segments either in the home markets or in the world as a whole, successful participation in these markets requires an explicit concept of segmentation.

In Rapp's⁽⁸⁶⁾ view, many companies have difficulty competing with internationally oriented competitors, despite an understanding of world trade patterns, because they lack basic insights about changes in market segments. At the same time, it is pointed out that the successes of the other companies in world markets, despite overall industry declines, are attributable to an extension of a clear segmentation concept. For instance, a Japanese manufacturer of fork-lift trucks formulated his competitive strategy on the basis of the realisation that there are different segments of the fork-lift truck market which have different product-performance requirements, and that the needs of more than 80 per cent of the market can be met by a vehicle costing 20 per cent less to build than a machine designed to satisfy the entire market. Having segmented its market and identified each segment's requirements, the company decided to concentrate on its retailing and construction industry customers and drop the more demanding segments. This enabled the firm to introduce sound value-engineered product line into a clearly defined target market where it has swept to a dominant position.⁽⁸⁷⁾

Another example is the success of General Motors vis-a-vis Ford in the U.S. market which is directly attributable to the perception of several emerging passenger-car market segments.

B) Offering products which differ from other competitors' offerings in the market place. Product differentiation entails designing and marketing products so that they are perceived as unique by customers. Although many bases for differentiation exist, superior quality is the approach to stress here to characterise this aspect of marketing-oriented strategy.

Of the many reasons supporting quality as a specific competitive weapon in a marketing-oriented strategy are the following:

- The organisation's marketing is a potentially powerful ally of a quality strategy. More clearly than others in the firm, they see the difficulties of overcoming a competitor with a demonstrably better record of quality.
- A marketing-oriented strategy urges the company to look outwards to the market place. For new products and new opportunities, this may result in a product quality that meets the real needs of the market place. Also, determining how customers perceive and define quality is pure marketing task.
- Growing government intervention and pressures from consumer groups for better quality put more emphasis on the marketing role in revealing the desired standards of quality and paving the way for implementation.

All these forces and others support the view of incorporating quality in a marketing-oriented strategy. Ross and Shetty⁽⁸⁸⁾ share the same view by stating that "Quality considerations have historically focused on the production process and motivation of the worker. Now strategists are realising that success is a function not only of a defect-free product but the consumer's perception of high quality and service".

Apart from quality, other product differentiation aspects such as brand image, consumer loyalty, an efficient dealer network and better product support services, are in fact a reflection of marketing's role. In short, product differentiation aspects, particularly product quality, are central or core elements in any marketing oriented strategy, and the firm or industry that strives to provide a higher value for its products through the marketing function might have a sound and longer lasting base for prosperity.

C) Using better or alternative approaches to distribution and promotion activities.

At times, the marketing thrust is driven by its approach to the market rather than any other factor. If the firm has a strong or unique distribution or sales approach, that constitute a barrier to the entry of others and the difference between success and failure. For example, the U.S. Timex Company was able to achieve great success by selling its low-price timex watches through mass-merchandise channels instead of through jewelry outlets. In this case opening new and additional channels were seen as a way of achieving competitiveness. Another American company achieved its spectacular growth as a leader in cosmetics by restructuring the old and neglected channel of door-to-door selling rather than by fighting for space in conventional retail outlets.⁽⁸⁹⁾ Similarly, it has been pointed out that one major reason behind the success of Japanese companies in the world markets is their distribution strategies. In the U.S. market, for instance, they have succeeded in developing a distribution system more suited to their marketing mix, refusing to adopt the U.S. distribution system.

The marketing-driven strategy also includes promotion. Promotion can be a main driver and key element of a marketing-oriented strategy. When product performance and mode of distribution are difficult to differentiate, image may be the only source of positive differentiation. A company like A T & T, through promoting media events, and providing attractive phones, more ads, and industry sales plans, has become a marketing-oriented company which puts emphasis on promotion activities as a main driver and key element in its strategy.

D) Putting more emphasis on non-price aspects. In fact, all that is known about strategy and strategic planning in recent years indicates that non-price factors are becoming key factors in gaining competitive advantage. In industries like telecommunications and micro-computers, manufacturers may find a service strategy to be appropriate. The presence of substitute products in the market will make the buyer aware of how few differences exist between the offerings of competing suppliers. So, consumer interest will be

likely to focus not on product but on service. Clearly, the provision of technical service might be expensive, and this is particularly true of firms working on an international basis. However, as a form of competitive differentiation, where scope exists, the technical service element can offer a powerful competitive weapon.⁽⁹⁰⁾ IBM achieved part of its success by recognising this fact, using a service-oriented strategy to great advantage in the computer industry. In the same vein, recognising that service is a critical factor in the fork-lift truck business, Toyota chose it as their major battle ground and built an awesome service network that enables it to compete on the basis of this advantage. Despite Toyota's rather conventional product and price schemes, its share of this service-hungry industry continues to climb.⁽⁹¹⁾ So, a marketing-oriented strategy will encompass one or more of these elements in seeking competitive advantage in the market place.

The successful implementation of a marketing-oriented strategy requires in the first place a sound organisation structure that places more emphasis on the marketing concept as a major philosophy of business. Kotler and Singh⁽⁹²⁾ predict that marketing competition will increase considerably in the years ahead. The battlefield concepts of front attack, flanking, encirclement, guerilla warfare and confront offensive, they suggest, will become current boardroom language in the 1980s. Accordingly one might conclude that defining marketing strategy and developing it in the context of competitive environment will be vital in ensuring success in the years ahead.

3) Low-cost oriented strategy. A critical aspect of many industries' competitive development has been their demonstrated ability to lower product costs rapidly.

Although price is the competitive weapon used in the market place, profitability is related to the difference between price and cost. Cost is the variable that can allow lower prices that may prove to be profitable. So, price advantage is regarded as the vehicle for reaping the rewards of an advantageous cost position.

Reaching a low-cost position requires a stabilised manufacturing environment and linking manufacturing more effectively to the marketing function. The cost advantage may be based also on scale or experience and volume. In addition, cost advantages are obtainable through efficient purchasing, parts commonality, concentration of product lines into fewer models and, of course, through vertical integration. It is also indicated that improved product reliability decreases total cost by reducing service and warranty costs. Often creativity is used to reduce costs. The development of robots, computer-assisted design or flexible manufacturing are some examples of the operation of this factor.

The low-cost oriented strategy is in essence a productivity-driven thrust, which is important when the industry has matured and the competition is trying to gain or hold its position through aggressive pricing. An analysis of Japanese experience demonstrates how such strategy can be achieved. Japanese firms which began as high-cost producers, have in a few years become cost competitive utilising cost-volume interaction on a world-wide basis.

In brief, strong and sustained differentiation vis-a-vis competitors, the core of competitive-based strategy, can be achieved as a result of sustainable advantage either in technology, marketing, or in cost. Once the firm, or the industry in general, has defined the positive advantage it has over competitors, it is natural to inject and exploit this advantage persistently in formulating and developing its strategy against other competitors.

Which strategic road to take?

Up to now, there has been little discussion concerning the methods a firm can use in making a choice from the available strategic options. In fact, the choice of strategy is not a routine or easy task. Strategic choice, like all decisions, should be made in the context of the decision maker and the decision situation.

Therefore, it might be useful here to introduce some guidelines for strategic choice rather than introducing a fixed formula to be pursued in all cases.

Among the major considerations that should be stressed in the strategic choice process are the following:

1. As a first step in choosing a particular competitive strategy, it is useful to assess the firm's or the industry's strengths and weaknesses compared with its rivals. In general, the firm must be sure it has a grasp of the external forces that influence its business, especially competition.
2. The nature of the competitive advantage the business had. Identifying the nature of competitive advantage can begin from the analysis of strengths and weaknesses relative to competitors. The advantage could be in technology, marketing or price and this could be a sufficient guide to choosing the appropriate competitive strategy.
3. Anticipating competitor reaction is another possible guide in choosing strategy. Ideally, a competitive strategy seeks to pre-empt effective counter measures. There must be some impediment to block the other competitors' retaliation. Competing, through incorporating new technology, for example, may provide a sufficient enough impediment.
4. Defining the costs and benefits of pursuing a particular strategy would also be of value in making the choice decision.
5. Strategic choice decision should also be made in the light of management's perception and attitudes. Glueck⁽⁹³⁾ argues that managerial perception of external dependence, attitude toward risk, awareness of past business strategies, managerial power relationships and organisational structure are of crucial importance in deciding which strategic option to pursue.

6. The nature of the industry development stage. In some industries, there are no opportunities for technology-oriented strategy, it is solely a cost game, while in other industries, cost is relatively unimportant because of product characteristics and buyer loyalty.

In this context, the stage of the product life cycle is seen as a fundamental variable in determining and choosing an appropriate competitive strategy. In the introductory stage of the life cycle, the major determinants of competitive business strategy are the newness of the product and the rate of technological change in product design. Accordingly a technology-oriented strategy is the most suitable in this stage. In the maturity stage, the major determinants of competitive business strategy are the nature of buyer needs, the degree of product differentiation, the degree of market segmentation, the ratio of distribution costs to manufacturing value added, and the frequency with which the product is purchased. Accordingly, a marketing oriented strategy will be vital in achieving competitiveness in this stage. Finally, in the decline stage of the product life cycle, the major determinants of competitive strategy are price, elasticity of demand, buyer loyalty, and the degree of product differentiation. Accordingly, a cost-oriented strategy supported with some marketing efforts would be appropriate for gaining success in this stage.

As a final note, one might argue that the firm, contrary to conventional wisdom, should use a mix of these strategies. The literature pertaining to the use of quality, a marketing-oriented strategy, and low cost emphasises that they are basically incompatible. The rationale is that higher quality usually requires the use of more expensive components, a less standardised production process, and the adoption of other manufacturing and management techniques incompatible with achieving low costs. In addition, achieving a high quality position may require expenditure in other areas beyond the direct costs of manufacturing and distribution.⁽⁹⁴⁾

However, recent evidence suggests that the incompatibility between quality and cost may be false and that the two strategies may be linked much more than conventional wisdom dictates. Some of these studies proved that the most effective world competitors incorporate superior quality and reliability into their cost structure. They recognised that high quality and low cost are not opposing factors. Instead, they are compatible, twin elements of sound practice.⁽⁹⁵⁾ The most noticeable example is Japan. In many industries, Japanese manufacturers are believed to be ahead of their counterparts in both quality and costs, and the observed cost advantages cannot be accounted for solely by differences in wage rates, capital investment or factory automation. Similarly, IBM's leadership in computer manufacturing proved to be a function of a successful combination of key elements of the above mentioned strategies. Customer knowledge, product innovation, quality, competitive pricing, total communication programme and sound after sale service - all of these factors contributed to creating a strong leadership company.⁽⁹⁶⁾

This does not mean the advice is to follow all the three strategies simultaneously, but rather that there is a key strategy which can be supported by some activities drawn from the other strategies. In other words, if a firm, or an industry, puts emphasis on new product development as a strategy driver, i.e. a technology-oriented strategy, all the strategic thinking will be directed at exploiting this advantage. At the same time, some marketing efforts like market research and advertising as well as cost effective activities might be of help in ensuring success for such a technology-driven strategy. So, all the three alternative strategies are interlinked.

Section (2)Business Competitive Strategy : Some International Comparisons

The objective of this section is to progress from the broad coverage of the different aspects of the competitive strategy formulation process to the more specific competitive strategies adopted and pursued in practice by producers in some relevant countries in the world market place. Articulating the various aspects of such strategies might be of help in differentiating between the successful and unsuccessful models and, accordingly, in assessing what lessons can be learned from the successful ones.

It should be pointed out that considerable data relating to business and competitive strategy aspects of countries like the U.K, the U.S, Japan and Germany is recorded in the preceding chapters, therefore we shall here confine our attention mainly to diagnosing and identifying the major characteristics of such strategies.

(1) Competitive Strategies of Japanese Companies

It was made clear in different parts of our literature review that in macro economic terms Japanese trade performance has been impressive. In general, Japan is regarded as a striking example of a country with a successful business strategy, competing on an international basis and with an intensity that has caused the demise of many European and American industries.

In searching for the factors behind this phenomenon, Rose⁽⁹⁷⁾ suggests that the Japanese approach to business strategy in international markets is not traceable to any specific, single factor, other than what may be described as a clear understanding of the dynamics of international competitiveness. In many industries, the Japanese have shown a better intuitive understanding of the economic forces at work in their competitive environment.

In a powerful article, Ohmae⁽⁹⁸⁾ describes a number of routes to competitive superiority used by Japanese Companies. In his view, the remarkable competitive performance of Japanese industry in recent years is due to pursuing four routes including,

- Focusing on the key factors for success in the industry. They identify which areas really held the key to success in the industry and pour money and effort into them, in order to find a position of relative competitive superiority. One approach to identifying these key areas for success is to segment the market, the second is to discover what distinguishes winner companies from losers and concentrate on key success factors rather than spreading corporate resources too thinly across other functional areas of product-market segments.
- Pursuing aggressive initiatives to gain novel competitive advantages. According to this route, if the principal competitor is well established in a stagnant, slow growth economy, the only way to tackle him is to upset the key success factors on which he has built his advantage. This involves questioning the status quo in the market place and doing some innovative thinking to arrive at unconventional strategies.
- Exploiting corporate relative advantages. In this case the company, by comparing its product with that of its competitors, should be able to identify unique product strengths on which to develop market share. In other words, there is creative seeking of relative advantage over competitors, to develop market share.
- Utilising available degrees of strategic freedom. The final route to superior competitive performance turns on the concept of the degree of strategic freedom available to a company. For example, in the photography market, it is claimed that user benefits may be increased by improving the film, upgrading the mechanical system, or improving the optics. The firm producing all three product lines has three degrees of strategic freedom, while the specialist producer of film has only one.

In Ohame's view, these four routes to competitive superiority all aim to contract starkly with conventional "reciprocal" head-on competition. The effectiveness of such approaches is clearly visible in Japan's postwar record. As a latecomer to the industrial world, Japan had to face up to extremely strong competition from the western economies. Wisely, most Japanese companies have sought to avoid head-on competition with their strong foreign rivals. Instead they have tried to build on their key success factors.

The following characteristics of the Japanese firm's competitive strategy are specified as potentially revealing indicators of their successful penetration in world markets:

(1) Aggressive use of price competition. Any discussion of Japanese competitive strategy is likely to lead quickly to the issue of pricing policy. Both in domestic and foreign markets, it appears that Japanese firms rely more heavily on price as a competitive weapon against each other and against competitors in foreign market than in the case with U.S. or European Companies. Aggressive use of price is aimed at gaining sales volume and achieving market penetration. (99)

There are many elements of Japanese management practices that help to explain pricing behaviour. The first element is the financial structure of the typical large Japanese Company. Japanese firms' financial strategies, incorporating high debt and high breakeven characteristics, have helped to create a finely tuned growth system: A system which normally sets lower prices and ultimately achieves lower costs and still lower prices. The second element is the rapid capacity growth of Japanese firms. A prime driver of rapid capacity growth is competition between Japanese firms themselves. Companies with too low capacities may soon face closure because successfully pursuing a rapid market growth policy is conditional on reaching high production volumes.

Taken together with Japanese financial practices, rapid capacity growth means that the Japanese firm is not only able to price lower while maintaining required levels of return and a high growth rate, but also it has a powerful incentive to price lower in order to maintain full capacity.⁽¹⁰⁰⁾ The third element in explaining pricing behaviour of Japanese Companies is the investment policy. A common requirement for achieving a low cost position is the willingness to invest in physical capital. In most of Japan's successful industries, Japanese Companies have invested more heavily and consistently than their western competitors. As opposed to profit policy pursued by most American and European Companies, major Japanese investments are evaluated for their impact on competitive cost position and market share for the whole business over a period of several years.⁽¹⁰¹⁾ Finally, in some businesses the benefits of large scale and experience effects are seen as essential to a low cost position. On this issue, it is argued that Japan has the largest scale facilities in the world in a range of products from Carbon Steel, to their electronic components. At the same time, it has been found that a learning curve effect explains Japanese manufacturing firms' cost advantage. There are a number of studies that bear out such results in Japanese industries such as shipbuilding, steel and motor cycles.

The implication of such management practices is that where necessary, volume targets can be achieved through the aggressive use of price competitiveness. Accordingly, where the key factor for success in some market segments has been price, where there have been opportunities to undermine existing entrenched competitors, and where the relative advantage has been economic, the Japanese firms have been fully prepared to compete on a price basis. Rose⁽¹⁰²⁾ highlights this point by stating that "the typical Japanese manufacturing company makes dedicated efforts to increase its market share. If the company can only achieve this goal by cutting price, it will normally do so, despite the possible short-term penalties". However, when moving abroad, the Japanese firms apply this strategy first in the most price-sensitive markets, i.e. the developing countries where they will not be challenged by stiff competition.

Then, later, having benefited from the penetration of these markets, they can enter the major markets, again on the basis of price competitiveness. In fact, volume-oriented, price-based competitive strategy has been highly effective in a number of situations. The television, steel, car, and shipbuilding industries are a few examples.

(2) The crucial role of quality. The next key aspect of Japanese competitive strategy is the great attention paid to the quality of their products. There is a continuous critical effort to improve quality. It has been documented that, "Although the Japanese start at the lower end of the product line, they rarely remain there. In motor cycles, they increased volume so rapidly that they earned enough to be able to afford highly specialised machine tools. Fortified with more efficient equipment than their rivals, they sealed the product ladder until they had driven practically every competitor, American or European, out of the U.S. market".⁽¹⁰³⁾ It is indicated that the high quality standards of Japanese products are a result of the following:⁽¹⁰⁴⁾

- Paying more attention to the product specification process. In this context, the level of performance and cost is always regarded as something to be improved even further. In addition, a very close watch is kept on competitors' specifications to ensure that their own specifications do not lag behind those of their competitors.
- A good inspection system which is designed not to accept and reject, but to put things right.
- A management style which appreciates that the Company's future depends on keeping on top of technological and scientific developments.

Relevant to the question of quality is the Japanese approach to competition in high technology products. The results of some relevant studies reveal that Japan has moved from producing relatively simple products and making them in quite a labour-intensive way, to producing more complex products and using more capital-intensive methods of production.⁽¹⁰⁵⁾ Successful Japanese competition based on having high quality is obvious in industries like computers and semi-conductors.

The continuous search for high quality and new products coupled with a more relaxed and contended labour force has led to higher productivity and lower costs, all of which increase the competitiveness of Japanese firms.

(3) Marketing orientation. Explanations offered for the Japanese success phenomenon are many and interrelated, including socio-cultural features which support a strong competitive drive, government industrial policies, manufacturing skills, high industrial efficiency, superior financial system and so on. Yet, one particular aspect has attracted great attention in recent years: the quality of Japanese marketing. A great deal of evidence suggests that marketing has been a significant element in formulating and implementing Japanese competitive strategy. To begin with, Japan is seen as one of the very few countries where the marketing philosophy is well understood, widely accepted, and effectively applied. Japanese marketing management has been described as a "classic textbook case" of applying the marketing philosophy, carefully studying consumer wants and needs in international markets, developing products incorporating desired features, and establishing effective marketing programmes to support them.⁽¹⁰⁶⁾ Also relevant is the fact that an international orientation is an important aspect of Japanese marketing philosophy. As Japan increased its competitiveness in world markets, product planning, pricing, distribution and promotion activities all had a definite international focus. In a landmark article, Lazer and Associates⁽¹⁰⁷⁾ claim that Japanese marketing strategy rests on:

- Low Price. The initial marketing thrust, they contend, is an emphasis on low prices, which capitalised on the advantages of cheaper labour and the selection of market segments.
- Improving quality while maintaining low prices.
- Segmentation. Japanese products are attuned to the local requirements and the wants and the needs of different market segments throughout the world. They monitor them continuously and with insight and have been successful in developing new products to meet their needs.

In the same vein, Kotler and Fahey⁽¹⁰⁸⁾ characterise Japanese marketing strategy in three stages of market competition:

- Entering the market. Japan's market entry strategy involves segmenting the market, targeting a segment that competition is not adequately serving, designing the product for the market segment, entering at a low price, offering high quality and service, developing strong distribution, and backing the product with heavy promotion and advertising.
- Taking over the market. Once Japanese firms have entered the market, they direct their efforts toward competitive leadership. The drive for product market dominance takes two related forms; product development strategies in the form of product improvement, product up grading, and product proliferation. The second includes market development strategies such as market segmentation, market sequencing, and market flexibility.
- Market maintenance. The Japanese market maintenance strategy seems to involve doing more of what won them the market in the first place, i.e. product development and market development.

Finally, the results of a more recent study reveal differences between Japanese and Western, especially British, marketing strategies, as follows:⁽¹⁰⁹⁾

- A. While the marketing of western companies is oriented towards profitability, the Japanese attach greater importance to market share. This in turn dictates low prices, a concern for rapid product line extensions and high expenditure on advertising, promotion and dealer incentives.
- B. Japanese companies seem more adept at exploiting "Strategic Windows", i.e. opportunities created by new market segments, changes in technology or new distribution channels.
- C. The organisation structures of Japanese firms are said to emphasise market focus rather than functions.

The result is that Japanese firms compared to other competitors may be far better prepared to capitalise on global market opportunities.

(4) In-depth understanding of competitive environment. The final aspect of Japanese competitive strategy reflects their deep understanding of the major forces prevailing in their competitive environment. Many European and American businesses have been threatened by Japanese competition which has been able to identify competitive strengths that have formed the basis for an aggressive strategy. Part of this competitive understanding originates from severe competition in the home market. In order to survive competition at home, companies had to improve the quality of their products and had to introduce automated large-scale production to reduce their costs. The home market in Japan is large enough for companies who can survive competition at home to realise that they could also sell their products competitively in world markets.

In short, Japan's success is seen as a result of adopting and pursuing an aggressive business and competitive strategy in relation to their international competitors. This strategy is one of manufacturing and marketing built on a good technological base. These three factors working together in an integrated fashion constitute the major explanation of Japan's success story.

(2) Competitive Strategies of German Firms

Germany is another example of a country which has built her trade strategy on a full understanding of the dynamics of international competition. Broadly speaking, Germany is an attractive source of supply for many international markets, especially the European markets.

Her economy has grown in a consistent manner for many years. One major reason behind this achievement of economic power is the strong belief that German Companies must operate successfully in foreign markets if they are to survive.

The German record of competitive success can be traced as follows:

1. Giving more attention to the role of innovation and product quality. In the area of product development, it has been found that West Germany is a net exporter of technology and that Germany has made particular gains in high technology exports. In general, there is much concern over the country's standing in the battle for technological supremacy, especially in comparison with the U.S. and Japan.

With regard to product quality, it is commonly accepted that German products have an enviable world-wide reputation for quality. German producers consider that the quality of their products is their main competitive weapon in the international market place, providing a base for policy which is reflected in putting a high priority on maintaining a top quality product.

This strong position in both new product development and product quality is the result of factors including managerial and worker attitudes that reflect a determination to get everything "just right", greater attention being paid to quality control, and the effective organisation and planning of production functions.⁽¹¹⁰⁾

2. The power of other aspects of non-price competition. It has also been claimed that German producers have enjoyed great success because, even at time of a very strong Deutchmark and price disadvantages against competitors, they gained an excessive market share because of their non-price competitive strengths. Beside their technological excellence and high quality, German suppliers are found to be excellent in terms of the speed and punctuality of their deliveries. In the same vein, competing on non-price grounds means for the Germans the development of a sound service network. Although they know that the provision of technical service is expensive, the Germans consider it as a powerful competitive weapon which extends their strength in product innovation and product quality. Armington⁽¹¹¹⁾ highlights this point by indicating that "The trend increase in Germany's non-price competitiveness has progressively moved the composition of German manufactured exports

towards less internationally standardised, more consumer-oriented products, in the selling of which Germany has acquired market positions relatively sheltered from changes in price competitiveness".

3. Market-orientation. Another important factor which illustrates the routes used to attain the highly competitive position reached by German firms is their marketing philosophy. In general, the German marketing approach could be described as follows:

- West German companies have a greater proportionate number of specialist export sales staff who are used in a more concentrated way.⁽¹¹²⁾ The marketing staff in German companies have an exceptionally high reputation, not only for their technical competence but also for their commercial ability.
- The willingness of German marketers to travel the world seeking clients.
- German firms are prepared to customerise the product, i.e. tailor the product to the particular needs of the customer. With reference to this point, it is indicated that the variety and quality of German goods fits almost exactly what the customer wants.⁽¹¹³⁾ It is also noted that German firms segment their markets according to geographical territories or according to product.
- The importance given to direct and regular contact with customers in order to keep a finger on the market pulse and to monitor the degree of customer satisfaction with their products and services. At the same time, they tend to keep buyers informed of developments and follow up in respect of product application in customer firms.
- Awareness of the need for market research and responsiveness to customer complaints.
- Finally, as mentioned earlier, German companies have a good reputation for delivery as well as the provision of extensive after-sale service. One study points out that market orientation in Germany means the delivery on schedule of finely engineered products that will not only sell well but do so over

time. Backed by a reliable service network, such products generate a self-perpetuating reputation for quality, which German companies regard as the best possible marketing tool.⁽¹¹⁴⁾

4) Willingness to accept lower profit margins and return on capital. As exports represent about half of German manufacturing output, many German manufacturers must export to survive. This situation, coupled with companies' slow growth rates and the desire to go head-to-head against world class competitors like the Japanese, makes them willing to accept lower profit margins and returns on capital.

5) A management orientation toward the long-term growth and stability of the company instead of short-term profit maximisation. The requirements for survival make inferior short-term results acceptable if they help to lay the foundations for long-term success.

In this case, German managers, like the Japanese, are free from the expectations of stockholders and security analysts for a strong quarterly analysis. This situation is the result partly of tradition and partly of the influential role that banks play in German industry.⁽¹¹⁵⁾

The results of a more recent study confirm the above mentioned aspects of German business and competitive strategy. The study outlines the routes of competitive superiority pursued by German firms as follows:⁽¹¹⁶⁾

- Emphasis on a technically strong management.
- High levels of competence in the workforce.
- Strong customers orientation.
- Consciousness of competitive pressure.
- Long-term orientation.

In brief, product technology, product quality and marketing orientation are the major forces behind German's competitive success in world markets.

(3) Competitive Strategies of British Firms

Our earlier review demonstrated the long-term relative decline of British industry since the second world war. Many justifications were introduced as being responsible for this decline ranging from poor management practices, unfavourable industrial relations, lack of effective policies, less ability to innovate and introduce new products, unfavourable government policies and so on. Hussey⁽¹¹⁷⁾ claims that there is another contributing factor represented in the continued strategic failure of the British business sector in general. In his words "Whole industries have declined and disappeared and although in some cases this has been because of natural change in economic advantage, in others it has been because foreign competition has had a superior strategy to the British firms". He adds "There is no natural reason why Japan should have been able to destroy the British motor cycle industry, or become world leaders in the car industry: superior strategic thinking features highly as a reason". Support for this view comes from an earlier study by Channon.⁽¹¹⁸⁾ In a major U.K. study, he noted a number of strategic failings in much of British industry. Among these are concentration on the soft options of the former empire rather than on the richer markets of Europe and the U.S.A, misdirected R & D, failure to plan new product development, a rate of productivity increase lower than that of major competitor countries, and stress on quality as perceived from production viewpoint instead of on attention to the needs of the market place.

Again, a telling illustration of the U.K. business strategy is found in the report on the motor cycle industry prepared by the Boston Consulting Group in 1975.⁽¹¹⁹⁾ A summary of the findings was provided in the previous chapter. However, it might be worthwhile to repeat the strategic reasons behind the collapse of what it was

regarded as a sound British industry. In general, it has been argued that the U.K. business strategy, with regard to this industry, has been less effective because:⁽¹²⁰⁾

- It focused almost entirely on short-term profitability at the expense of the long term viability and growth.
- The implications for product mix and volume, and their interaction in the market, were largely ignored.
- The importance of volume and its effect on cost structures were ignored, or simply not perceived and understood.
- Expenditure to protect and develop volumes of sales were avoided or made on an insufficient scale, and were among the first casualties resulting from cost-cutting campaigns in pursuit of short term profitability.

These are the policies that have led generally to British industry's low and falling share of world markets. The Japanese did exactly the reverse and were able to penetrate the market successfully at the expense of other competitors, especially the British.

The evidence of British strategy failings can be outlined in general, as follows:

1) The misuse of marketing. There is much evidence to suggest that British industry has many deficiencies regarding its marketing strategy. In general, it has been pointed out that there is a tendency for management to produce products with advanced engineering or design for its own sake, rather than to cater for market needs or manufacture products which are capable of showing an adequate return on investment. This means that British industry, in general, is production oriented, without due regard to the needs of the market place.⁽¹²¹⁾

Another example of poor strategic thinking in the marketing field is the fact that most British companies directed their overseas expansion towards the soft option of the Commonwealth, many ignoring the richer markets of North America and Europe.⁽¹²²⁾ Regarding the British marketing strategy in Europe, another study provides

evidence that British producers have not yet adopted a team approach to marketing in Europe, an approach which recognises the level of sophistication and expertise, both of customers and competition, in these highly developed markets. In general, British producers seem to have the following characteristics:⁽¹²³⁾

- They involve their production staff more than design staff when dealing with foreign customers.
- They are keen to obtain new business abroad perhaps at the expense of existing customers.
- They tend to offer existing products instead of analysing customers' specific needs.
- They sell on the basis of initial price rather than on a total cost approach which would take account of the long term cost consequences of a product purchase.
- They show a serious lack of understanding of how foreign firms operate.
- They lack skills in understanding foreign buyers' problems and in analysing customers' requirements.

Finally, the findings of a more recent study based on interviews with the top marketing decision makers in 15 leading Japanese Companies operating within the U.K, and with their counterparts in 15 major British competitors, show that there is a striking contrast between the two national groups in the clarity of their strategic objectives regarding their markets and in their determination to achieve these objectives. This contrast can be illustrated as follows:⁽¹²⁴⁾

First; In entering a new market, the British usually arrive late, and few have a strong commitment to it. In contrast, the Japanese stated that their moves were part of a planned global expansion.

Second; Having entered the market, the Japanese established aggressive growth or "market domination" as their goal, while maintenance of the status quo or the prevention of decline were the most typical British objectives.

- Third; Market segmentation and positioning, which represent the heart of modern marketing, were unclear concepts in the minds of a large number of British managers compared with their Japanese counterparts. In addition, while the Japanese were most concerned about new products and quality levels being developed by their competitors, the British worried more about price competition. In other words, while the Japanese tend to position themselves in the quality, high added value sector of the market, the British allow themselves to be positioned by their competitors at the price-sensitive commodity end.
- Fourth; In identifying their own perceived advantages in the market place, 87 per cent of the Japanese managers cited superior quality and reliability as key characteristics, while only 47 per cent of the British made the same claim. The most frequently mentioned advantages which the British saw themselves possessing were low prices, a traditional brand and being British.
- Fifth; The two groups seemed to attach very similar importance to advertising. However, the Japanese tend to spend more on sales promotion, and the British on personal selling.
- Finally; No significant differences emerged in distribution strategies, but the Japanese gave a much higher rating to dealer support.

The study came to the conclusion that, although there are some excellent companies in the British sample, it could be said in general that British Companies were often finance or production-oriented, they focused on short term profitability and their strategies generally failed to reflect the dynamics of the market.

2) Less attention to non-price aspects. More related to the above aspect of British competitive strategy is the characteristic related to the attention given to non-price factors as a competitive

weapon. Many claim that one of the most common weaknesses in the U.K. business practices, and perhaps the most telling, is a general dependence on price competition to gain and hold export business, compared to the strength of foreign competitors in non-price factors of competition. Britain's gradual loss in the area of non-price competitiveness has tended to change the commodity composition of markets in which she competes, from markets for highly differentiated, customer-oriented manufactures to markets for more undifferentiated standard products, where the price factor is relatively more important and where lack of aggressive sales and service is less harmful. (125)

Accordingly, it is argued that British industry has missed opportunities and has lost markets due to less attention being paid to non-price aspects. These range from failure to innovate and to match changed requirements, through specific shortcomings in the design or performance of products, to a general reputation of British goods for inferior quality, late delivery and unreliability in service.

3) Concentrating on short-term profitability. Much evidence reveals that most British producers emphasise short-term profitability as a major element in formulating their strategies. To achieve that end, British companies typically act as follows: (126)

- Raise prices irrespective of the effect on their competitiveness in the markets, especially against overseas competition.
- Change cost structure through better material yields and fewer workers in the overhead departments.
- Especially in times of recession or with decreasing margins, the British Company will attempt to minimise costs and by doing so, possibly restrict activities such as marketing which could maintain or enhance profitability.
- Have less incentive to invest in R & D for future and no enthusiasm for future products that do not show immediate profits.

The report on the motor cycle industry confirms this approach which led to the loss of market share by British firms working in the industry.

4) Lack of selectivity in establishing business goals and programmes. A generally recognised weakness of Britain's international trading effort is that British firms try to serve too many markets with too few resources. The effort is too fragmented to be effective or efficient. Such fragmentation inevitably results in inefficient delivery, second rate distribution facilities, uncompetitive service, and so on.

In general, this wide diffusion of effort is likely to weaken the attack on any particular geographic area or export market. It is argued that the lack of selectivity in international trade is only the most obvious example of a widespread tendency in British industry to go after market opportunities with a shotgun instead of a rifle and to squander its potential competitive advantage by failing to reach critical mass in any area.⁽¹²⁷⁾

5) Failure to look beyond the market to the competitors. As a final note, it is claimed that lack of competitor-orientation is among the various aspects shaping British strategy for its business. In this regard, British business strategies have failed in most cases to recognise the dynamics of competition, i.e. they failed to realise that in order to win today, they need to understand their competitive environment, the major forces prevailing in that environment, and how these forces could affect the formulation of their adopted strategies. In addition, these strategies were not based on a realisation that in order to meet the competitive challenge, they need to be highly professional, committed and aggressive.

Although the above comments do not constitute an exhaustive or complete statement of how British industry competes in world markets, it is certainly illustrative of the action of many British Companies in the world market place.

4) The Competitive Strategies of American Firms

Over the past two decades or so, the U.S. has suffered an erosion in its competitive position in world markets and in its domestic market. Much of the current literature evaluating the U.S. competitive position refers to deficiency in the U.S. business philosophies more than any other factors. Many studies have pointed to a number of strategic failures similar to those identified in the U.K.

In a review of the various aspects of strategic business practices pursued by American producers that account for the marked decline in their competitive position in world markets, the following are said to be relevant:

1) The slowdown in technological innovation. American industry has produced a dazzling array of technological innovations that have radically altered the lives of most of the world's population. However, there is tangible evidence that suggests that there has been a slowdown in the rate of technological innovation during the past decade. The causes of technological decline are related to such factors as reduced R & D expenditure, shrinking pure research budget, low capital investment and fewer new ventures.⁽¹²⁸⁾ The major effect of technological slowdown on the U.S. competitive position would be that the nation would fail to renew its competitive advantage in the creation of new products embodying advanced technologies. In this concern, a recent study by Johnson⁽¹²⁹⁾ analysed the extent to which differences in the R & D investment strategies of Japanese firms during the period 1965 to 1981 may have contributed to the competitive edge they seem to have over their U.S. counterparts in many industries. The results of the study reveal that this relative superiority of Japanese firms appears to be attributable both to the failure of many U.S. firms to take full advantage of opportunities to commercially appropriate the products and technologies developed by domestic and foreign competitors, and the differences in government policies, e.g. patent laws and enforcement policies, subsidies and tax incentives for R & D.

2) The inability to provide competitive quality. Many studies reveal that the downfall of American competitiveness in relation to other competitors, especially Japan and Germany, is related to the lack of emphasis on quality by the U.S. producers.⁽¹³⁰⁾ One particular concern has been the apparently superior manufacturing capacity of competitors in Germany and Japan, especially in two areas long thought to optimise American manufacturing know-how: Automobiles and Consumer Electronics. The Japanese virtually eliminated American T.V. manufacturing activity and, with the Germans, made it appear that American built automobiles were not only more expensive, but also of lower quality than those made by America's major foreign competitors.⁽¹³¹⁾

One reason behind this decline in quality is that American managers still think that the competitive problem in respect of quality is much less serious than it really is. American managers often claim they cannot establish how their product quality compares with that of their competitors, who may well have chosen an entirely different quality mix.⁽¹³²⁾

3) Ignoring the customer's changing needs and wants. By contrast to Japanese and German marketing practices which are described as internationally oriented, American companies tend to choose an internal, domestic focus and exhibit very little interest in emerging international opportunities, particularly in "totally foreign" markets such as those of Japan. It is commonly argued that one of the major pitfalls of American marketing strategies, and one of the main reasons for failure, is that products offered are not designed specifically to meet the wants and needs of the foreign markets. Rather, American Companies often approach other markets as an extension of their domestic market to be served by current product lines, which is hardly consistent with the concepts of the marketing concept.⁽¹³³⁾ In addition, even in the home market, the marketing practices are seen as inefficient.

It was the neglect of consumers and markets by established and entrenched American Companies that gave the Japanese and the European

firms their opportunities in the American home market. In the car market, for instance, the European and Japanese car makers have simply been better competitors: They anticipated market needs, they built a better product, one that is more reliable, has better workmanship, and is better engineered, and they did this efficiently.

Also, while domestic automakers regarded small cars as low-technology, cheaply designed products aimed mainly at buyers unable to purchase a large vehicle, the foreign manufacturers provided high quality small cars that were recognised as better by American Consumer. (134)

The same pattern has revealed itself in many other markets including electronic goods and other moderate to high technology items such as cameras, small kitchen appliances, stereo equipment, motor cycles and bicycles.

In short, foreign producers recognised clear voids in consumer markets since the demands for quality, product features, value, after-sales service, and so on were not being met.

Accordingly, it is concluded that failure by American firms to deliver products that meet the changing needs and wants of customers both in home and foreign markets is one major reason for their lack of competitiveness.

3) Placing more attention on short-term financial returns while paying too little attention to the firm's long term welfare. Most American Companies tend to focus on profit areas as the primary unit of managerial responsibility. This development necessitates greater attention being devoted to short-term financial measurements such as return on investment for evaluating the performances of individual managers and management groups, thus increasing the structural distance between those concerned with exploiting actual competitive opportunities and those who are required to concentrate solely on the quality of their work and therefore obliged to rely on objectively quantifiable short-term criteria. (135)

This approach is highlighted in a recent study concerning the competitiveness of American industry. The study asserts that the compensation systems in the American Companies, the financial requirements for investing in new projects and the criteria for management-by-objectives, goals and performance appraisals all point to an exceedingly short-term orientation. The study refers to the fact that the closing of major steel complexes, as well as similar plant closures in the automobile, tyre and other manufacturing industries is a dramatic concession from today's chief executives that management has not been keeping its plants up to date in order to meet foreign competition. Such a concession represents decades of maximising profits to look good in the short term, while ignoring the long-term consequences.⁽¹³⁶⁾ The impact of pursuing a policy of short-term financial returns has also affected the rate of innovation in the American industry. In general, innovation is encouraged by an environment that does not usually penalise failure, which contrasts with the short-term profitability orientation. This short-term approach seems to constitute the essential difference between the strategy of American Companies and the strategies pursued by their overseas competitors, especially Japanese and German Companies.

4) Failure to manage the business as an international entity. It has been shown that many U.S. Companies view overseas markets as providing only incremental volume to support the home operation. Accordingly, they are willing to withdraw from markets which are seen as highly competitive. By contrast, Japanese Companies, with a relatively smaller home market, follow an aggressive export strategy, which often begins by exporting to third world markets. These markets although small, collectively add significant sales volume, which allows the Japanese Company to overcome its relatively smaller home market disadvantage. Most importantly, this strategy strengthens the Japanese competitor; by virtue of the added scale and experience that is used to challenge the U.S. Company in its home market.⁽¹³⁷⁾ In general, one strategic fault of U.S. business practices is the failure to view international business as one integrated chessboard on which every move is planned for its strategic effect on the whole game.

5) Reluctance to enter and remain in the competitors' home market. Another pitfall of the business strategy adopted by the major U.S. firm is their reluctance to enter their competitors' home markets, particularly in Japan, France, and Germany.⁽¹³⁸⁾ Although there have been a few investments by the U.S. Companies in these markets, these firms have not often been willing to sustain the necessary losses for a long enough time to trap the full competitive benefits of the investment. By contrast, Japanese firms often expect to lose money or accept low margins when entering U.S. or European markets, and will sustain this situation for long periods if necessary.

6) Failure to think competitively. In the U.S. market, while the Japanese have shown a better understanding of the economic forces at work in their competitive environment, the U.S. producers have failed to respond with any integrated trade strategy which reflects their understanding of their competitive environment, and have instead continued to react on the basis of ad hoc political pressures.

In general, the U.S. has suffered a decline in its competitive position in many product areas as a result of the improvement in the competitive position of other countries and the failure by U.S. producers to respond to such competitive moves. In this regard, Moyer⁽¹³⁹⁾ indicates that failure by U.S. producers to recognise the areas in which competitive battles are waged, added to failure to distinguish between factors affecting international competitiveness that are under the management control and those that are exogenous to the firm constitute one major reason for the alleged decline of U.S. competitiveness. Further evidence to support this view is given by O'Keefe.⁽¹⁴⁰⁾ In his words, "The U.S. has been and still is ill equipped to cope with competition, which has become a major reason for unemployment and a primary cause of the recession". He adds, "we are accustomed to the concept of fortless America with our huge, homogenous domestic market and the insulation of the vast oceans that formerly separated us from our competition. We are not only unaccustomed to competition, but we don't know how to cope with it and, in our naivety and ignorance of world affairs, have put

impediments of our own in the way of effective competition". In the same vein, Rothschild⁽¹⁴¹⁾, in a more recent study, provides the reasons that account for the failure by U.S. producers to think competitively, as follows:

- The postwar success of American producers has created a superiority attitude and complacency that ignore and downplay competitive thinking.
- Ignoring and underestimating the concerns, problems, and needs of customers. Most American Companies forget the fact that competitive analysis cannot be separated from customer analysis and that it is relative advantage, not merely internal strength, that counts.
- Collecting information but not intelligence. Most American Companies collect information about competitors, customers and other forces, but they do not ask what the information means and whether it requires a change in strategy.
- Finally, most American firms failed to think competitively because they do not realise the full value of competitive analysis.

These are some aspects that shape American strategic thinking and behaviour and that lead, in turn, to the slowdown of America's competitive position both in home and foreign markets.

International Competition: lessons for less competitive producers

Having introduced the various aspects of how the producers in some relevant countries compete in the world market place, the following question arises: What lessons can be learned from the world's most successful competitors, i.e. firms in countries like Japan and West Germany?

Although making generalisation about the characteristics of successful competitive strategy can be difficult, the evidence available offers some help in establishing a basis on which competitive advantage in the international market can be built. Based on the experience derived from knowledge of the strategies

used by successful firms in Japan and West Germany, one might suggest that a good strategy should have the following characteristics:

1. Innovation should be considered as a focal point of the firm's, or industry's, competitive strategy. Not only are competitive pressures intensifying in nearly every industry in the free market economies, but the rules of the game are changing. In a changing world environment, the game is being won by creative, fast moving, opportunity-seizing firms or industries. In other words, in order to remain competitive internationally, any individual firm, or an industry, will have to reorient their strategies. The re-orientation is likely to be especially great for firms, or industries, where success in world markets has rested upon unique product innovation.

2. Quality should be considered as a fundamental part of strategy. The experience of successful producers in both Germany and Japan, and even the experience of the few successful firms in both the U.K. and the U.S., indicated that quality is a major factor in gaining competitive advantage. Generally speaking, as international competition for the new products grows, and as the products themselves move towards maturity, the basis for success in world markets will be a function of price, service and quality assurance rather than the product itself. Moreover, the experience of German firms proves that high quality can provide a shelter from price competition.

Both German and Japanese firms benefit from the intangible strength associated with an international reputation for quality, reliability and so on, while this advantage is often denied to the majority of British or American firms.

3. Marketing is a key factor. One major conclusion of the previous discussion about how different producers compete in the international market is: to compete successfully against any other

competitors there is a need to adopt a systematic and integrated approach to marketing activities and effectively to relate the marketing activity to other corporate activities.

The experience of successful firms indicates also that the effective use of marketing as a competitive weapon requires:

- A full understanding and implementation of the market segmentation concept. Without this understanding, major market windows will be left open to other competitors and major market sectors will be conceded without a fight.
- Successful approaches to product differentiation. product differentiation proved to be an important determinant of success in competitive battlegrounds. It is often the secret for extending the life of the business and making it more expensive to enter or even follow. Also, to be successful, the product must often be adapted or modified to meet the particular requirements of the customers in different markets. One element in Japan's success all over the world markets has been the adaptation of Japanese made products to local market conditions.
- Moreover, pricing, distribution, promotion and service approaches need to be adapted to changing market conditions as product markets evolve.
- A management attitude that identifies and applies marketing as a philosophy of business.

4) A management orientation that places emphasis on a long-term outlook. In this concern, it is proved that the Japanese example is of special interest to its aggressive, volume-oriented, growth-minded philosophy, and the strategies associated with this approach. Domestically as well as internationally, Japanese firms were able to maximise their own share in whatever markets they chose to enter. For them, market share represents deferred and compounded profit returns.

5) The importance of strategic freedom and flexibility. It has also been shown that an effective competitive strategy needs a degree of strategic freedom and flexibility. For example, Japanese firms are seen as achieving success by using price as a key competitive factor when entering new markets, and where indeed it continues to be a key factor. At the same time, they have successfully managed the transition from price to non-price competition, through product development, service competition and up-graded marketing.

This means that the Japanese firms have a relatively free hand in using the most appropriate competitive weapon according to their understanding of the competitive environment and the weapons required for dealing with such an environment.

6) The need for thinking competitively. Besides the above-mentioned characteristics, successful competitive strategy is seen as one which is based on a full understanding and assessment of the competitive scene. Broadly speaking, the Japanese and German firms have shown a better understanding of the competitive forces prevailing in their business environment. They were able to identify their own competitive strengths and advantages which are appraised in the context of what customers, retailers, and distributors need, want and appreciate. They were then able to inject their strengths into plans that could effectively deal with the competitive forces. Competitive analysis gave them valuable aid by providing a new or different overview of the business, identifying relative success factors, assessing relative position in the market, anticipating competitive moves, generating alternate strategies, and assessing the potential success of a proposed change in these strategies.

In short, successful competitive strategy is one of technological, marketing and manufacturing strategy, backed with full understanding of what is going on in the competitive environment.

How to respond to the competitive challenge

After assessing the lessons that can be learned from the world's most successful competitors, the discussion should be extended to find an answer to this question: Given the Japanese and German record of success in the international market place, what can less competitive firms or industries do to meet this challenge?

Knowing that the competitiveness problem is not only the problem of private enterprise or industry in a particular economy, but rather it is the problem of the economy as a whole, one might suggest that the effective response to competitive challenge can only be achieved through some necessary changes in both the present business practices and government policies. In other words, an effective response requires both business and government action. The following is a proposed outline of such action.

First: The Business Action - On the business level, the required changes to meet competitive challenge include:

- The development of long-term plans based upon volumes of production and sales in key, well defined markets. The success of such a move requires a positive attitude towards concentration on benefits from large scale production, change in attitude to investment, and a long-term management outlook towards profits.
- Accelerating product development and maintaining manufacturing flexibility. This requires improving the process of designing and developing new products to replace the previous generation of products, and moving quickly to high manufacturing and marketing volumes. (142)
- Producers in countries like the U.K. and the U.S. should know that high quality standards can provide an effective way of competing, and that a good reputation in the international market place is often based on the production of quality goods.
- Cost effective policies should be developed to meet the change in international competitive conditions in various industries. Typical improved opportunities commonly include: adopting

highly automated production systems to provide high quality and low cost products, reducing assembly costs, plant rationalisation, and forging links with other companies to create multiple cross-sourcing. (143)

- Pursuing aggressive marketing policies to sell the projected volume both in home and foreign markets. The adopted marketing strategy should help in:
 - (1) Maintaining an outward orientation alert both to the changing requirements of customers and to challenges from competitors.
 - (2) Identifying the market segments and trying to serve the resulting segments better than other competitors.
 - (3) Filling product gaps that attract other competitors, especially Japanese competition.
 - (4) Cutting prices if necessary to match other competitors actions.
 - (5) Developing and maintaining more positive approaches to distribution, promotion and after sale activities.
- A greater degree of flexibility in developing business policy is required to permit ready and speedy adjustment to changes in competitors' and consumers behaviour. Perhaps the continual monitoring of competitive and consumer moves in all areas of operation is where the greatest change in business policy is required to increase the chances of competitive success.
- Ensuring selectivity in product/market strategies. This may include limiting the product range and the number of markets to be served, and directing resources to just a few competitive areas where there is an advantage either actual or potential.
- Supporting the attitude required to enter and remain in the competitors' home markets. Although this sometimes seems to be difficult and may not show a profit, it can provide significant competitive value. A competitor challenged in its home market is prevented from using that market as a source of capital with which to make large penetration investments in other markets. The competitor is also prevented from cutting its price when attacking the firm's home market, where it has small volume relative to its total world volume. Finally, by participating

in a competitor's home market, the national firm can gain valuable information about competitors' strengths, weaknesses, and plans.

- Viewing both national and international markets as one integrated market in which every move is planned with reference to its strategic effect on the whole position.

Second: The Government Action

Although the success of any proposed strategy directed at enhancing competitiveness in international markets rests ultimately on action by industry or the business sector itself, the government also has a crucial role to play. Our review in the previous chapter came to the conclusion that government must be recognised as potentially influencing many, if not all, aspects of industry's competitiveness both directly and indirectly.

In general, the government's response to a foreign competitive challenge rests on giving priority to providing a more positive climate in which industry can prosper and be able to compete successfully with competitors. Such assistance to industry includes the following:

- As rapid technological innovation is proved to be an important driving force in today's competitive environment, government can seek to assist industry, or specific industrial sectors, in meeting the technological challenge to international competitiveness, or to support costly new technological developments in strategic areas such as nuclear energy and computers.
- Governments can also seek ways of improving their policy approaches relating to the encouragement of investments, particularly investment of the longer term structural nature which is important for sustained recovery.
- In a number of mature industries where the industrial structure is stable and the patterns of competition have been entrenched, changes in the characteristics of product demand or in the most

efficient production system are necessary to alter the pattern of competition. In the case of such industries, the costs of adjustment are too high for individual firms. Therefore the government's role is required to implement the transition process.

- Providing a new look at relations between industry and government. This includes the relaxation or dismantling of regulatory provisions in order to relieve the cost burden on industry and remove obstacles to its development and efficient performance. In other words, deregulation should be one of the top priorities of governments if they want to improve the competitiveness of their industries.
- Any positive move by the government to assist national competitiveness should include tax incentives and export credit improvements to enable national producers to contend more effectively with foreign rivals.
- Monitoring foreign industrial policies and non-tariff restraints. Here the government should make a serious effort to analyse the impact of foreign industrial policies and targeting practices, and assess the rational reaction in each case. This may include trying to negotiate new rules of international trade that would make the competition between the national and foreign firms more fair. ⁽¹⁴⁴⁾

These and other actions by government are seen as important means of helping local industry to reverse the current decline in its competitive position in the international market place.

The need for adopting a national competitive strategy

Accepting the view that the effective response to competitive challenge is both a business and government function, one might suggest that instead of taking these actions separately, it is better to co-ordinate and harmonise them and channel into one plan representing the national view for competing in world markets. In other words, it should be a business plus government or "bi partisan" strategy that reflects the desire to improve a country's competitive position in the world market place.

In fact, there are numerous areas of common concern facing both industry and government, of which the competitiveness of the industry is the most important. Success in meeting this challenge will largely depend on how effectively industry and government can work together to achieve common goals in the interest of overall national competitiveness.

In many countries, government and the private sector have established common goals, particularly in regard to international business issues.

Brazil, for example, uses the state as a tool of development, in concert with private enterprise.⁽¹⁴⁵⁾ Countries like Japan, France and Mexico adopt similar roles. Such collaboration is undertaken for the sake of the general national interest.

This attitude towards establishing a co-ordinated government-business strategy for competing in world markets present an interesting problem for corporations in countries like the U.K. and the U.S, where government intervention is viewed as being regulatory in nature. The resulting policy gap has put many industrial sectors in these countries at a systematic disadvantage i.e., a growing disadvantage in competition not only in the foreign markets but also in the domestic market.⁽¹⁴⁶⁾

Appreciation of this situation is shown in comments made by many industry leaders and economic analysts who are now taking the lead in invoking government power and assistance. They emphasise the need for a national response to competitive challenge as a central objective for both business and government institutions. In the U.S, for example, this point is illustrated in a recent article.⁽¹⁴⁷⁾ It is pointed out that "While other nations have recognised the new economic imperative and have integrated their domestic foreign policies into aggressive, co-ordinated national strategies to meet the challenge of international competition, the U.S. has not". The writer adds, "As a nation, we must develop a consensus that industrial competitiveness is crucial to our social and economic well-being".

Similarly, Drucker⁽¹⁴⁸⁾ argues that there is no alternative but to build an awareness and a concern for trade and comparative economic strength into government policy making. He sets out three approaches (1) an "international" model, which would simply make sure that the economic and foreign trade consequences of proposed government policies are weighed, but without any aggrandising ideology; (2) a "nationalist" model, which would examine policy with a commitment to strengthening the economic position in the world market; and (3) a "marchantalist" model, in which bolstering the nation's competitive position in the world market is a principal objective.

In brief, most industries in countries like the U.S. and the U.K. feel that they are competing against not only aggressive firms but also governments, while their own governments sit on the side lines. Accordingly, it seems that the help of government in these countries is crucial to improving and accelerating the country's response to international market forces. Once the adoption of this role by government is accepted, both the business sector and government agencies will take part in developing a national strategy for competing in world markets.

Nielsen⁽¹⁴⁹⁾ recently discussed the idea of adopting national strategies for developing market share in world markets. He claimed that this approach has the following merits:

- It can be a logical extension of the large corporation strategic market planning.
- It can help a country to take larger and necessary risks involved in entering new world markets.
- Administrative co-ordination through the development of national strategies for world markets can be more efficient than the classical and neo-classical economic models. For example, Japanese government officials consider one of their basic tasks to be guiding and encouraging industries that they expect to become increasingly competitive internationally. They discourage industries that seem unlikely to remain competitive. In a sense, they provide non-market mechanisms that hasten the response to market force.

- It can increase social control of economic life.
- Finally, and more important, developing national strategies for world markets can help in defending the country against the effective strategies of competing countries. When countries like Japan, France, Brazil and Mexico succeed in achieving competitive advantage in world markets through adopting market share to them, it may be necessary to move toward developing national strategies for world markets at least for the purpose of self-defence.

However, what must be emphasised is that both business and government must understand their roles and responsibilities clearly.

On the one hand, the government must develop the capacity to think coherently about what the national interest is and devise policies that are capable of helping business to achieve this interest. Again, policies such as R & D assistance, law modifications, tax code revision, capital provision and the like, should be considered. Also, the government can seek to encourage other countries to limit their unfair trade practices in order to establish free market competitive conditions internationally.

On the other hand, the business sector must have the primary responsibility for aggressive protection of the national interest by becoming fully competitive in world markets. In general, industries should join hands to compete against their foreign counterparts through devising better management practices, generating positive attitudes towards innovation and new product development, adopting and implementing aggressive marketing strategy, seeking better labour-management relations, devising better manufacturing systems and so on.

It is worth emphasising that such an approach to government-business relations will not take the form of an industrial policy which, however important, is only one aspect of the proposed national strategy. The proposed approach requires strategic planning at the level of the firm, the industry and the national government. By focusing on critical success factors, the firm and the industry in

general can establish themselves in the market place. With the help of government, they can move faster and with less risk. Over time, they can perhaps reshape the industrial and competitive profile of the country.

A simple version of such business-government approach to competitive challenge is presented in table 4/1. The table illustrates the required strategic action by both government and business in regard to each competitive situation.

The proposal to develop and adopt a national competitive strategy to promote international economic advantage may appear to be too ambitious, but the researcher believes such a policy would be more effective in dealing with the various issues prevailing in the world environment in recent years.

TABLE 4/1

Government-Business approach to Competitive Challenge

Competitive Position	Strategic Action	
	Business Action	Government Action
(1) There is a potential to develop significant competitive advantage.	Compete head-on, apply new technology to raise productivity and competitiveness in existing business.	Low-cost investment financing, R & D assistance, tax free, purchase and sale preferences and government insurance of business risks.
(2) There is a competitive advantage only in certain sectors of the industry.	Concentration on clearly defined sectors strengths; divest/diversify out of non-competitive sectors.	Help smooth the transfer of resources to sectors selected for specialisation.
(3) Foreign competitors enjoy unfair advantages from government subsidy, protectionist, etc.	Lobby to restore free competition. If this fails, seek similar support.	Use government pressure to achieve free competition.
(4) National and foreign competitors have complementary strengths/weaknesses.	Develop joint-venture with other competitors.	Assist domestic business to identify and attract joint-venture partners.
(5) Local factors such as high wage costs make the industry uncompetitive despite having significant competitive advantage in specific areas.	Move production off-shore.	Work with management and unions to identify and develop industries where there are competitive advantages.
(6) The industry is clearly uncompetitive in terms of critical success factors.	Get out of the industry/diversify.	Promote investments by competitors with strategic advantage, e.g. superior technology.

Source: Adapted from Martin D. Beresford, "Joining Battle with Japan", Management Today, December 1981, p.61.

Summary and Conclusions

This chapter set out to provide insights into the concept of competitive strategy: the meaning, the evolution and the types. The chapter is also designed to illustrate how firms in different countries formulate their competitive strategies in practice, and the lessons that could be learned from the most successful ones.

A start was made by examining the concept of strategy in general, leading to the concept of competitive strategy and how it is developed and formulated. In this regard, it was found that understanding the competitive environment is necessary for assessing the nature of the competitive game and how it is and will be played. Thereafter, the study proceeded to discuss the various approaches to competitive strategy formulation, giving special emphasis to Porter's industry structure analysis.

In his view there are three generic strategy approaches to outperforming other firms in an industry, namely overall cost leadership, differentiation, and focus. These strategies are seen as alternatives, it rarely being possible to use a mix of these strategies. The discussion then went on to demonstrate the link between competitive strategy formulation and the role played by the marketing function. In this regard, our conclusion was that this relationship is critical and the marketing function provides a key input to the strategy formulation process.

Bearing in mind that little attention has been devoted to the development of international competitive strategy, an attempt was made to make a contribution in this area. Three types of competitive strategies were discussed, each of which emphasises one of the three major factors of competitive success, namely technology, marketing and low cost. It is argued that a sound strategy will always view these three elements in perspective and seek to optimise their relationship.

In section two, the purpose was to introduce some comparisons between the competitive strategies pursued by producers in some relevant

countries, showing how each of them competes. It was believed that this in turn, might provide the factors distinguishing between success and failure and help less competitive producers to reconsider their method of competing. Our conclusion was that, while firms in countries like Japan and West Germany show a better intuitive understanding of the various forces at work in their competitive environment, producers in the U.K. and the U.S. show less understanding of these forces.

The major lessons to be derived from the experience of the more competitive producers is that factors such as product innovation, product quality, aggressive marketing and cost effectiveness should be considered as focal points of any competitive strategy formulation.

Finally, the study laid stress on the view that, for economies like the U.K. and the U.S. to face foreign competition and improve their competitive position in general, there is a need to adjust to new kinds of business-government collaboration. In general, there is a need for framework through which government and business can arrive at a consensus about business strategy, if these economies have to restore their competitive edge.

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