The Relationship between the level of domestic demand in Britain and the exports of the British motor car industry.

Submitted for the degree of M.Sc. at the University of Aston in Birmingham by John Hellyar Rickard, M.A. (Oxon.), April 1969.

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Summary:-

This thesis examines possible links between fluctuations in the level of domestic demand in Britain, especially between 1955 and 1968, and the level of exports of the British motor car industry. Two relevant hypotheses are considered, one related to the short run, the other to the long run.

Firstly, the "Internal Pressure Hypothesis" postulates that, in the short run, home sales and export sales are inversely correlated and that Government measures that restrict home demand cause exports to rise. A theoretical approach and an aggregate study fail to substantiate the hypothesis and it is thought desirable to examine it in the light of the experience of an individual industry. The motor car industry is ideal for this because of the distinguishable relationship between Government policies and home demand. However, an examination of the period 1955-1968 reveals little evidence to support the hypothesis and reasons for this are examined.

Secondly, the "Export with Growth Hypothesis" postulates that a depressed home market has an adverse effect on exports in the long run. The theoretical links between internal growth and export performance are examined. It is suggested that, in practice, many factors influence exports and that market distribution, the size and growth of individual companies and their model policies have had an important influence. Fluctuations in home demand offer only a partial explanation of the relatively poor export performance of the British motor car industry. Arguments for the need of a strong home market are considered and little evidence is found that a stagnant home market has had a permanently damaging effect on exports. A counter argument that a restricted home market may have stimulated beneficial structual changes in the industry is considered.

Finally the effects of devaluation are examined and it is suggested a substantial rise in exports has been achieved despite the restriction imposed on home demand. Under these circumstances, control of internal pressure and growth are reconciled.

Acknowledgements.

I wish to acknowledge the valuable help of Professor E. S. Kirkby, Professor of Economics at the University of Aston in Birmingham who kindly acted as supervisor for the research and preparation of this thesis. Information and comments were provided by representatives of the British motor car companies who have asked me to emphasise that their personal views cannot be regarded as official company policy. The Society of Motor Manufacturers and Traders provided much of the statistical data included in this thesis. Additional help came from a number of motoring journalists, in particular members of the editorial staff of the "Autocar". I am most grateful to all these gentlemen for their co-operation and assistance.

A Note on Statistical Data

Much of the statistical data was provided by the Society of Motor Manufacturers and Traders and where so stated, it is possible to compare the figures in one table with those in another. Other data was taken from Company Reports and can be regarded as official figures. However, where no source is given for a table, the data have been derived from personal contact with representatives of the motor manufacturers and motoring journalists and some of the figures may be informed estimates so that direct comparisons are not reliable.

Contents.

Introduction

The research for this thesis began in 1966 when the notion of planned growth, as expounded in the National Plan, was cast aside and the British Government decided to resort to traditional deflationary measures to correct the adverse balance of payments. Considerable uncertainty was expressed about the effect of these measures on exports. I felt that even if there were any beneficial effects on exports these would be temporary; and this cast serious doubt on the wisdom of relying on deflationary measures to cure a persistent weakness in the British balance of payments.

Research revealed that there existed amongst economists two apparently contradictory sets of arguments. The first set I call the "Internal Pressure Hypothesis": this claims that exports and home sales are inversely correlated. The second set I call the "Export with Growth Hypothesis": this claims that exports and home sales are positively correlated.

The "Internal Pressure Hypothesis" is consistent with the view that deflationary policies are necessary to improve the balance of trade. Since exports and home sales are inversely correlated, a rise in home sales reduces exports and leads to a deterioration in the balance of trade, and a reduction of home sales by Government deflationary measures increases exports and leads to an improvement in the balance of trade. In particular, by reducing the pressure of home demand, it is claimed that resources are released to achieve a higher level of exports. Such an argument has been used frequently by the British Government to justify the deflationary measures that have been customarily imposed during the 1950s and 1960s. For example, the "Economic Survey 1956"(1) published just before the budget, gives the official view:

'The growth of consumers' demand must be checked so that more of our production can be exported'.

Certainly, it is accepted that deflationary measures reduce the level of imports, particularly if the marginal propensity to import is greater than the average propensity to import, and that this effect causes an improvement in the balance of trade. However, if there is no beneficial effect on exports, or indeed if, as the

second hypothesis suggests, export performance in the long run suffers, then other policies that reduce imports but have a less serious effect on home sales might seem to be more appropriate. A study of the relevant economic theory was made and is presented in Section One. It was found that no theory is adequate to substantiate or refute the "Internal Pressure Hypothesis" Similarly, an aggregate study of the economy as a whole did not provide a clear-cut conclusion. It was decided, therefore, to concentrate the research on one industry. The motor industry was chosen because it had the features discussed in Section Two, which make it highly suitable for testing the hypothesis.

At the time that it was decided to devote the research to a study of the motor industry, considerable public controversy on the matter arose. Representatives of the industry claimed that they had been "unfairly victimised" by selective policies which reduced the level of home demand for motor cars; and in the long run this reduced their ability to export. The importance of this view was recognised when the Economic Development Committee for the Motor Industry was invited to examine it and subsequently published its report (2). This report was not made available to the public until after the main part of this research had been completed. Nevertheless, representatives of the motor companies were most helpful in providing detailed discussion of their arguments.

The "Internal Pressure Hypothesis" is examined in Section Three in the light of the motor industry's arguments and in the light of the experience of the motor industry between 1955 and 1967. It is suggested in this thesis that there is no evidence that reduced home demand has led to a rise in exports. On the other hand, the motor industry's representatives failed to recognise that deflationary measures may be the only way of reducing the level of imports and it is felt that the motor industry's claim that it had been "unfairly victimised" is an exaggeration.

The second hypothesis, the "Export with Growth Hypothesis" postulates that home sales and exports are positively correlated and that rising home demand has a favourable effect on exports. Many economists support the view that, by imposing restraints on the level of home sales, the long run growth of the capacity of the car industry is impeded and so its ability to export is limited. However, it is quite a different matter to accept the rider frequently implied by the motor

industry, that uninhibited internal growth will necessarily be accompanied by export growth. An analysis of theories related to internal growth and export growth is made in Section Four and compared with the arguments of the motor industry which I call "The Industry's Case".

The "Industry's Case" is that a strong home market is an essential prerequisite to a successful export performance. This implies that the explanation of Britain's relatively poor export performance is that home demand has been restrained. It was felt that, while this may be a contributory factor, other factors might be equally, if not more, important. An historical assessment of Britain's export performance in motor cars was made with comparisons of other countries. This is presented in Section Five. It is suggested that the general decline in Britain's share of world markets could be explained, in part, in terms of market distribution, which is discussed in Section Six, and in terms of other factors such as the internal structure of the industry and the economies of scale, the proportion of production exported, model policy and marketing policies. These points emerge from a brief international comparison in Section Seven.

In Section Eight, the "Industry's Case" for a strong home market is examined in detail. Most of the arguments are plausible and it is accepted that many foreign competitors have benefited from a strong growth element in their home economies. However, it was not possible to find strong and conclusive evidence that a deflated home market has had a serious long term effect on the ability of the British motor industry to export. Indeed, a counter-argument is suggested that the decline of home sales may have stimulated or accelerated the changes in the internal structure of the motor industry that have taken place since 1966 and that will render it far more competitive overseas in the long run. However, it is accepted that, as a general rule, growth conditions are desirable for a successful export performance.

Over the fundamental issue of economic policy, it is not possible to deduce from this thesis any simple solution for the policy maker. One of the fundamental problems of prescriptive economics is that the preliminary questions which must be asked in an attempt to diagnose the problems, do not admit of a simple positive or negative answer. The answer is usually hedged with conditions and reservations

and it is with these that controversy arises. It may be that the two hypotheses considered in this thesis are not directly opposite or mutually exclusive and each may contain an element of truth but they apply to different time scales. Professor S. J. Wells refers to this point (3) when, comparing Japanese experience with that of Britain in the 1950s, he writes:

"Perhaps the lesson to be learned from Japanese experience is that occasional recourse to disinflationary policies can be salutary, providing they take place against a back-ground of long-term advance."

There remains, however, the problem of creating this long term advance without the frequent restrictions necessary to maintain external equilibrium. It is to be hoped that this will be achieved by Britain's devaluation in November, 1967. A brief analysis is made of the effect of devaluation in Section Nine, when it is suggested that this has made export growth possible. Internal demand has been restricted but it has been possible to create external growth conditions desirable for the motor industry. Under these conditions, it is possible to reconcile the "Internal Pressure Hypothesis" with the "Export with Growth Hypothesis".

Section 1.

The "Internal Pressure Hypothesis" is examined

A. theoretically
B. empirically
C. statistically

for the economy as a whole.

Section 1. Part A.

The Theoretical Origins of the "Internal Pressure Hypothesis".

The "Internal Pressure Hypothesis" is concerned with the short run effects of the level of internal demand on the level of exports. It consists of arguments that suggest that the two are inversely correlated, namely that a high level of internal demand is associated with a fall, or lack of growth, of exports, and that a reduction in the level of internal demand is associated with a rise in exports.

Two different arguments can be used to explain the possible causative relationship between home demand and the level of exports in the short run: firstly the price and cost effect; secondly the supply transfer effect. It is useful to distinguish between these two effects to establish the meaning of the "Internal Pressure Hypothesis" in this thesis.

The "Price and Cost" effect.

The demand for British exports will be influenced if the pressure of internal demand within Britain causes a rate of price inflation that is greater than in foreign markets and in the economies of Britain's export competitors since British exports are rendered less competitive. The effect is either that the price of British goods rises faster than that of competitors so that the demand for British goods falls, or, if it is a market with a fairly homogeneous product whose prices are determined by international costs, British exporters find that they cannot increase their prices sufficiently to cover their increased costs: their profit margins fall and they reduce their supply. The National Economic Development Council stresses the importance of this when it writes (4)

"The fact that wage costs in the United Kingdom have risen about 3% per annum faster than the average of other countries, whereas our export prices of manufacturers have risen only about 1%

per annum faster, suggests that the profitability of exporting manufactures may have fallen relatively to what has happened in other countries."

The above argument is used to suggest that inflation has been one of the causes of the poor performance of British exports in the period from 1950 to 1963. But this is not to say that the government can use deflationary policies to bring inflation to an end in the short term and so bring about an immediate rise in exports.

Firstly, it is a very doubtful that traditional monetary and fiscal policies have succeeded in bringing inflation to an end. For example, Professor F. W. Paish writes (5).

"It has been observed that inflationary pressure and rising prices have been most in evidence, not in periods when output has been rising rapidly, but after the rise has been slowed down or checked."

Secondly, even if it is possible for a government eventually to stabilise prices (perhaps by a prices and wages freeze) the general lack of flexibility downwards of prices in the post-war economy means that prices would not fall to an extent that would be necessary to correct, in the short run, an adverse trend in exports. Any beneficial effect would be long term as the price competitiveness of British products improved gradually.

While significant as a long term factor this "Price and Cost" effect is not considered to be of central importance to the "Internal Pressure Hypothesis" since it can be used only to explain the effects of inflation on exports and not to the effects of deflation, or correctly, disinflation.

The Supply Transfer Effect.

The central core of the "Internal Pressure Hypothesis" is that products can be transferred between the home and the export markets. The argument is that, in the short run, there is a fixed total quantity of goods available or a fixed production capacity, within the economy, and the home market and the export market are competing for these goods. At high levels of internal demand, the quantity of resources devoted to exports, or the quantity of goods available for exporting, is lower than would have been the case at lower levels of internal demand. Since exports are, in general, less profitable than home sales, a rise in home demand will be met by reducing

reducing the supply to export markets and, conversely, a fall in home demand will increase the supply to export markets.

It may be that the "Price and Cost" effect is implicit in this argument; for example it could be used to explain why the home market is more profitable than the export market. Although this may be true for Britain, it is not necessarily an essential part of the "Internal Pressure Hypothesis" since other factors may account for the preference of manufacturers to sell in the home rather than the export market. For example, transport costs and the greater cost of maintaining a sales service overseas may make the return on exports lower than the return on home sales. Also home sales are usually more secure since they are not subject to arbitary government restrictions such as quotas or to changes in the exchange value of currencies.

Relevant Economic Theory:-

In standard texts on the inter-relationship between international trade and cyclical fluctuations in the level of income, there appears to be very little theoretical analysis of the effects of internal deflation on the level of a country's exports. A.Lamfalussy refers to this omission in standard analysis (6) when he writes:

"Let us first examine, shortly, the channels through which autonomous cyclical disturbances can be transmitted to the rest of the world. The first of these channels is the area's marginal propensity to import i.e. the change of imports relative to a change in the area's income. The second channel, which is often neglected in theoretical writings (but closeley watched by policy-makers) is the response of exports to an autonomous change in the area's income". Lamfalussy suggests that this second channel could be called the "marginal propensity to export' which would be defined as the induced change in the level of exports divided by an autonomous change in the level of income. Since exports and income, in this context, would vary inversely, the marginal propensity to export would be negative.

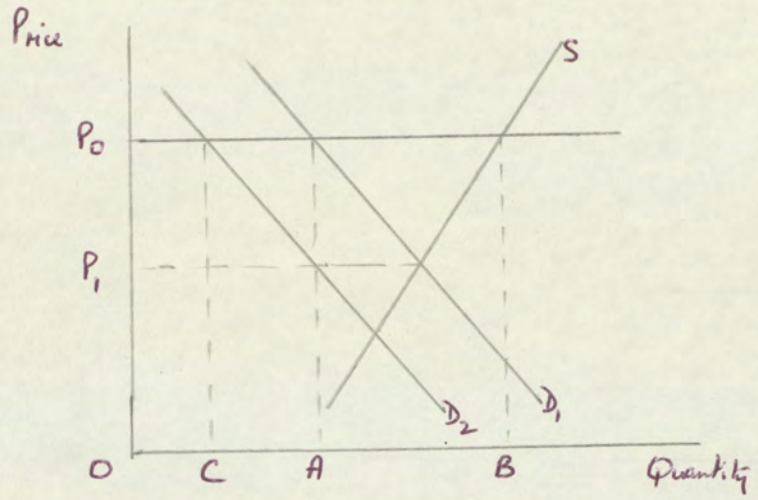
Standard elementary analysis of the international repercussions of internal changes in the level of aggregate demand is based on the concept of the marginal propensity to import, with the addition of an "export feedback effect" when one country's imports form

a large proportion of the National Product of another country which, in turn, has a high marginal propensity to import from the first country. It is assumed that the level of exports of a country is determined by the level of foreign demand and that the supply of goods to the export market is unaffected by the internal level of demand (7). Such analysis is aceeptable only if prices remain constant or if exports consist of products which could not be sold on the home market and if there is no competition for factors of production between the exporting industries and the industries producing for the home market. However, for a country such as the United Kingdom, a theory of the determination of the level of exports, at least of manufactured goods such as motor cars, cannot be developed by such analysis. Motor cars are sold at home and overseas and production can be varied between cars for export and cars for home sales.

Changes in the price level are considered in the standard analysis so that, if a rise in internal demand causes prices to rise, exports fall, the fall being determined by the price-elasticity of demand. But as is mentioned above, this "price effect" is not a necessary part of the "Internal Pressure Hypothesis" and the marginal propensity to export can exist because of the "supply transfer effect", regardless of a "price effect".

The "Supply transfer effect" will exist, and the marginal propensity to export will be greater than zero, if the economy is fully employed, and, in particular, if firms are working at full capacity, and if conditions such as transport costs make the home market more profitable than the export market. The marginal propensity to export is greater, the greater the degree of substitution between home and export markets for producers, the greater the price and cost advantage in selling in the home market compared with selling in the export market, and the greater the degree of competition for factors of production between the exporting part of an industry and the home market producing part.

Assuming that the marginal propensity to export is not zero and that the conditions described above apply to a greater or lesser extent, it is possible to develop the analysis further.(8) K.M. Savosnick offers the following analysis on the effects of an internal deflationary policy on exports.



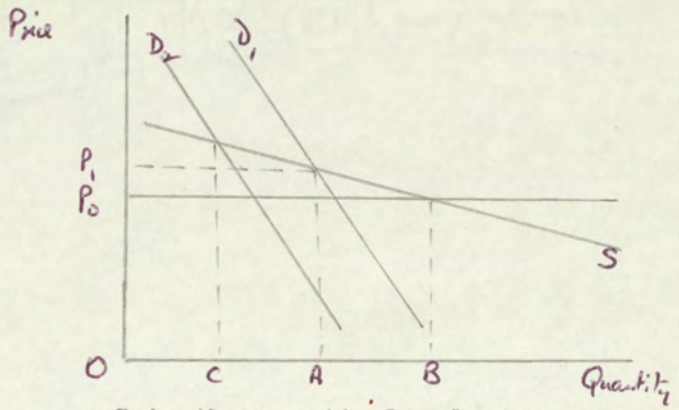
S is the supply surve for an exportable product, that is also sold on the domestic market. The export price of the product is P_0. This price is determined by external demand and it is assumed that this is infinitely price elastic. Though not specified by Savosnick, this is, presumably, based on the assumptions that the export of these products is a very small proportion of total world production and that these products are homogeneous so that the price is determined by world demand and supply, which are not influenced by the home country. It also implies that the home country can sell as much as it is willing to produce at price P_0.

Domestic demand is represented by the demand curve D_1 Firms, for some reason, prefer to sell at home rather than abroad, and so sell OA quantity of goods at home, and AB abroad. If deflationary measures are then imposed, the level of domestic demand falls from D_1 toD_2 . Home sales then fall to OC and firms increase their sales abroad by CA to CB. And, vice versa, an autonomous rise in home demand causes export sales to fall.

However, this analysis of Savosnick is inappropriate for the British motor industry for two main reasons. Firstly, Savosnick assumes that the world price is above that which would prevail at home if no products were exported i.e. P_0 is above P_1. In fact the home price of motor cars is above the export price because the home market is protected and the foreign markets are subject to greater price competition. Secondly, the supply curve for the motor industry is unlikely to be in the conventional form, sloping downwards from right to left. The long run average cost curve of motor firms is

probably 'L' shaped (9) and so the supply curve would slope downwards from left to right. This implies that the economies of scale are such that firms are prepared to sell at a lower price if the quantity demanded is greater.

Savosnick's method of approach can be adapted to take into account these two objections.



S is the negatively sloping supply curve of the motor industry. D_1 is the domestic demand curve, and the domestic price is P_1. P_o is the foreign price of motor cars (i.e. the selling price of British cars in foreign markets) and foreign demand is assumed to be infinitely elastic at that price. Firms are prepared to sell OA quantity cars at home, and AB quantity abroad. The supply curve is constructed to take into account the fact the higher price on home sales yields a greater profit margin so that firms are willing to sell quantity AB at a lower profit margin abroad, reaping the benefits of the economies of scale at the same time.

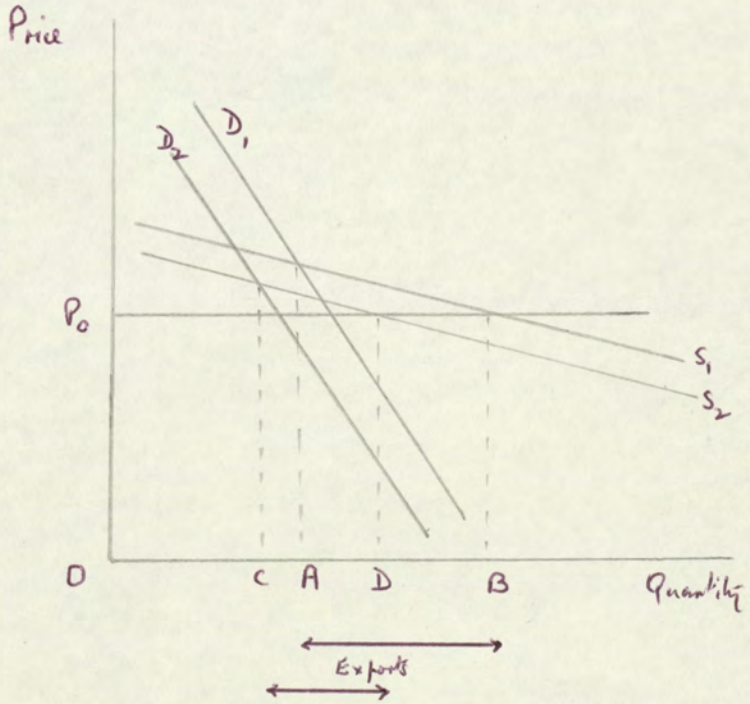
If deflationary measures at home cause internal demand to fall from D_1 to D_2, the level of home sales will fall from OA to OC. Firms may raise home prices to recoup losses in profitability, a point that is consistent with actual price changes, such as in 1967 and 1968. Firms are also more willing to sell more abroad, namely an increase from AB to CB. Thus an autonomous shift in home demand causes an inverse change in the level of foreign sales.

However, this analysis too is open to two major objections. Firstly, it assumes that foreign demand is infinitely price elastic at price P_o. Such an assumption would be consistent only with a market for a homogeneous world commodity, which is certainly not the case for the market for motor cars. Motor cars are differentiated

considerably by specification, style performance, after-sales service and general reputation, even for cars in a similar price and size bracket. Thus it would be quite wrong to assume that an increased willingness to sell on the part of British producers would be matched by an increased willingness to buy by foreigners at the same price.

Secondly, the construction of a given supply curve is questionable. It is likely that a change in the profitability of the domestic market, brought about by deflation, would cause firms to want to revise their supply curve. For example, the supply curve may shift downwards to the left, implying that firms will supply less at price P_o, because it is unprofitable to produce quantity OB if they cannot sell quantity OA at the higher price of P_1 on the home market. Firms prefer unemployed capacity to selling the same quantity as before, but at lower profit margins. The third diagram, which shows a new supply curve S_2 that is drawn when demand falls from D_1 to D_2, illustrates that the level of sales in the export market falls from AB to CD.

The above analysis suggests that a simple deductive argument based on certain assumptions is not capable of offering the solution to the effects of deflation on exports. A solution depends on knowledge of the nature of foreign demand and the industry's supply curve. And, since generalisations on these two matters are not possible, the solution to the problem must be sought from an empirical approach.



Section 1. Part B.

An Empirical Approach.

An example of the empirical approach to the "Internal Pressure Hypothesis" is provided by W. Beckerman (10). He considers the factors that influence growth and export performance and he writes (11) -

"One explanation of our poor export performance that must be taken seriously is that excessive pressure of home demand has diverted potential exports into the home market".

Beckerman's argument is that we can assume the overseas import demand schedule and the total domestic supply schedule of a particular product to be constant in the short run. A fall in domestic demand will increase the supply available for export. Beckerman adds a further point which overcomes one of the weaknesses of the theoretical approach of Savosnick described in the previous section. Beckerman suggests that, instead of assuming that external demand is infinitely price elastic, an increased supply of British exports would cause world prices to fall and foreign demand would increase to absorb the increased supply. He thus adds a price change to make the transferability of supply effect more credible.

Beckerman (12) attempts an empirical investigation of this hypothesis. He compares:

a) the pressure of demand for labour in the United Kingdom and our share in world trade of manufactures,

b) home purchases of plant and machinery and our share in world trade in the same category of goods,

c) home purchases of plant and machinery and the share of total domestic production of these goods that were exported.

He found no significant correlation in any of the three cases and concluded that, for some firms working at, or near full capacity, home sales and exports would be inversely correlated; for other firms, an expansion of home demand, by raising the rate of capacity utilization and reducing costs, provided a stimulus to greater exports and, vice versa, falling home demand discouraged increased exports. And as these two opposite reactions cancel each other out, it is understandable that his analysis gave such a weak correlation.

Beckerman also suggests that, even where deflation does improve exports, the "Internal Pressure Hypothesis" is a weak guide to policy for two main reasons. Firstly, any improvement in exports is likely to be only temporary since any subsequent rise in internal demand will deflect supply from exports to the home market once again. Secondly, even if the internal economy is kept in a permanent condition of deflated demand, it can give only a once - for - all increase in the level of exports and will not lead to a faster rate of growth in exports, unless, of course, there is to be a continuous fall in the level of domestic demand or a continuous rise in the supply schedule. The first possibility is not feasible for both political and economic reasons, and the second possibility is unlikely since deflationary policies designed to restrict economic activity are unlikely to be accompanied by accelerated growth of supply.

Thus, according to Beckerman, the "Internal Pressure Hypothesis" for which there is some, if limited, empirical evidence, can, at best suggest that deflation brings some temporary improvements in exports.

The Attitude of Management

A more permanent result of deflation might occur if it were to lead a change in the attitude of management (13). T. Barna suggests that the all-important factor in determining the export performance of a firm is the management. He writes:

"It is evident from all this, [i.e. his research,] that the attitude and abilities of management have a lot to do with the firm's contribution to export".

Barna suggests that managerial sluggishness with regard to exports must be altered. Thus, if a firm is faced with a falling home market, and also greater inter-firm competition, it may be induced to undertake exporting more enthusiastically. A firm might pursue fresh export markets, or a firm that had not exported before might now consider it worth while. While the home market is buoyant many firms are not prepared to make the effort to sell in export markets which are much more competitive as well as being less profitable. But, once having succeeded in establishing themselves in foreign markets, they continue to export even when home sales subsequently revive.

It would be difficult to identify such a change in managerial attitude with deflation since it could equally well be stimulated by other, long run changes, such as changes in market

structure, tariff changes and changes in the internal structure of the indsutry. Nevertheless, there can be no doubt that managerial attitudes are vitally important in determining export performance and that the human factor must be taken into account; so attempts are made in this thesis to assess what motivates management in its export policy.

Section 1. Part C.

A Statistical Study of the Hypothesis for the Economy in the Aggregate.

General support for the "Internal Pressure Hypothesis" is given in an article by Messrs. R. J. Ball, J. R. Eaton & M. D. Stever, (14). These writers use advanced statistical techniquess to show that the level of internal demand and the level of exports of manufactured goods in aggregate were inversely correlated during the period 1954 - 1964 in the United Kingdom. While their findings support the "Internal Pressure Hypothesis", in general, their methods and their results were neither simple nor conclusive and are subject to many reservations.

The aim of the article is to investigate the theory that (15) "at relatively high levels of internal demand, other things being equal, the quantity of resources devoted to exports, or the quantity of goods available for exporting, is lower than would have been the case at lower levels of internal demand." Their main argument for this is that home sales are relatively more profitable than export sales and so the supply of exports will be affected by the degree of unused capacity which, in turn, will depend upon the pressure of internal demand. For this investigation, they employ two statistical techniques, each of which, they admit, is open to a number of objections, but they feel that the results of the two methods, taken in conjunction, provide significant results.

The main statistical problem is to eliminate long term effects on exports so as to isolate the effects on exports of changes in internal demand. They admit that the quality of the product, service and technical development have important effects on exports, but they classify these as 'long term'. They also ignore the possibility of a reduction in prices and include price changes under long term changes. In demanding that these factors remain constant in order to examine the "Internal Pressure Hypothesis" they are, of course, denying firms the major means by which they can increase their exports, in the short run, if they wish to because of falling home demand.

The first method employed in the article is standard multiple regression procedure that "cleans" the dependent variable of the long term influences. They admit that (16) to allow explicity for these factors raises serious difficulties of measurement which pose immediate problems. But one wonders how they can adequately quantify the effects of such long term factors as service or technical development. Any arbitary measurement must be open to most serious objections.

However, more fundamentally, this first method begs the question as to whether these so called "long-term factors' should be excluded. For example, a firm faced with a depressed home market - especially if such a situation is thought likely to continue for some period - might take steps to alter its foreign price, or change the quality or improve its overseas service. Indeed, one wonders how a firm can increase its exports except by a change of these so called 'long-term' factors. If this is so, the 'long-term' factors become dependent variables of internal pressure as well, and the change in exports that is dependent on them is, in part, dependent upon the level of internal demand.

The second method used in the article is to use a time series that can be decomposed into a set of components - trend, cyclical, seasonal and random. They attempt (17) " to isolate a cyclical component of roughly the periodicity of the fluctuations in demand pressure." Again arbitary rules were necessary to decompose the basis time series and this argumentation begs the question of whether trend and cyclical components should be considered separately, particularly in a period so short as 11 years, where one cannot be certain where cycles begin and end or whether a complete cycle exists at all.

Thus the first major objection to the analysis contained in the article is that it is inappropriate to isolate long term factors from cyclical factors; and, as arbitary rules must be employed, the results must be open to question.

The second major objection to the analysis is that a study of this sort, which employs variables that are aggregate for the whole economy, faces problems of measurement which would prevent a simple, convincing conclusion being reached. For example, the writers had difficulty in choosing an appropriate measure of internal demand pressure.

They used a measure based on the rate of unemployment. But this is inadequate since changes in demand pressure may affect the level of capital utilization rather than changes in the labour force employed. Firms may hoard labour when demand is low (especially for skilled labour which may be difficult to attract back to the firm when demand rises again) and employ overtime or multiple shifts when demand is high. Their analysis is, therefore, subject to this major weakness of the measurement of the key variable, namely internal demand pressure. If, on the other hand, a study is made of a particular industry, where it is possible to distinguish between production for the home market and production for exports, this problem does not arise.

Moreover, the relationship between the home market and export is likely to vary considerably from industry to industry, depending, for example, on the degree of substitution between the two markets that is possible, the proportion of total production that is exported and the needs of marketing facilities to increase sales. And so the effect on different firms of a fall in internal demand is unlikely to be uniform and studies in the aggregate confuse many conflicting reactions. The writers of the article admit (18):

"It is our belief that a wholly adequate study of this theory should be based on investigation of the performance of particular industries. This is principally because the manner in which particular industries will react to pressure is likely to be very different, comparing one industry with another, because of differences in technology and market structure, and therefore aggregation over industries with different speeds and forms of adjustments may reveal very little".

The results of the analysis are far from being unequivocal. In general, they support the "Internal Pressure Hypothesis". For example, the authors write (19):-

"A cyclical component is discernible that is inversely correlated with the pressure of demand in the United Kingdom".

However, this conclusion is hedged with other conflicting results. For example, they write (20).

"The basic conclusion of the first method of approach was that the measure of world demand contributed significantly to an explanation of export performance, irrespective of the inclusion of relative prices or the various measures of demand pressure", and

and

"These, together with many other results, confirm the view that the movements of world demand as reflected in real world expenditures on exports is highly correlated with the movement of U.K. exports both in the long and short run".

Thus they point out that there is a positive correlation between home demand and world demand and so it is difficult not to find a positive correlation between home demand and exports. And their concluding remarks do little to help to resolve the conflict. They conclude:

"The fact that potential exports may have been lost at particular periods because of the pressure of demand does not entail the conclusion that a lower degree of pressure over the whole period would have solved our problems. It is hard not to believe that a low relative growth rate has affected our ability to maintain our position in world markets. A policy to create a margin of unused resources in the short run may possibly conflict with a policy to raise total resources in the long".

Thus, while this article provides a most interesting study of the statistical problems involved, it does not give simple, conclusive evidence to support the "Internal Pressure Hypothesis" and it suggests that the matter can be better resolved by the study of a particular industry.

Section 2.

The British Motor Industry: Preliminary Considerations.

A. The importance of the motor industry in the British economy.

B. A definition of the "motor car industry" for the purposes of this thesis.

C. Factors that cause fluctuation in the demand for motor cars.

D. The relationship between government policy and the demand for motor cars 1955-1967.

Section 2. Part A.

The Importance of the Motor Industry in the British Economy.

(In this section, 'the Motor Industry' refers to the Minimum List Heading 381 of the 1958 Standard Industrial Classification and covers "establishments engaged in the manufacture and assembly of motor vehicles and parts and accessories for such vehicles including bodies but excluding electrical equipment". A definition of the "Motor Industry" that is applicable to the rest of this thesis is discussed in the next section).

The motor car industry was chosen for this thesis because it has features which make it particularly suitable for testing the "Internal Pressure Hypothesis". Also, because changes in the level of production of the motor car industry have important repercussions on the British economy as a whole, it is of concern to the policy makers.

T A B L E 1.

	1954	1958	1960	1963	1966
Index of Production (1958=100)					
- all industry	94.1	100.0	112.4	119.0	133.1
- motor industry	81.2	100.0	138.8	155.8	173.1
Net Output (£m. 1958 prices)					
- all industry	8,863	9,419	10,587	11,209	12,537
- motor industry	300	369	512	575	639
Net Output of Motor industry as % of all industry	3.4	3.9	4.8	5.1	5.1

Motor Industry Production compared with the Production of all Industry in the U.K. 1954 - 1966 (22).

1. The Motor Industry as a Growth Industry:-

The material in Table 1. shows that output in the motor industry increased by 113% between 1954 and 1966 compared with a growth of only 41.5% in total industrial production and the motor industry in 1966 accounted for 5% of industrial output compared with a little over 3% in 1954. A. G. Armstrong calculates that (23)

" a little over 9% of the growth in industrial production between 1954 and 1966 can be attributed to the growth in output of the motor industry".

2. The Direct and Indirect Requirements of the Motor Industry.

Many industries rely on direct purchases by the motor industry, for example, iron and steel, glass, rubber, engineering, electrical goods and metals. Armstrong estimates that (24)

"In total the direct inputs into the motor industry accounted for 2.4% of industrial production in 1954 and 3.3% in 1963."

Armstrong, using an input-output matrix, goes on to calculate the indirect requirements, that is, the inputs of those industries that supply the motor industry ~~that~~ which can be attributed to eventual inclusion in the products of the motor industry.

Armstrong finds that (25)

"direct and indirect requirements of the motor industry from other industries amounted to 3.9% of industrial production in 1954 and 5.5% in 1963. The motor industry itself accounted by 5.1% of industrial production in 1963 so that overall the motor industry accounts for nearly 11% of industrial production".

Thus the motor industry has accounted for a substantial and increasing proportion of industrial production and, also, changes in the motor industry's requirements from its suppliers have a very rapid effect on supplies, so that factors ~~that~~ which influence the motor industry have a significant impact on the performance of the economy as a whole.

TABLE 2.

Value of exports of the motor industry compared with Total U.K. exports (at current prices).

(Source: Annual Abstract of Statistics).

	Total Exports *£m.	Motor Exports £m.	% Motor Exports of Total Exports.
1955	2,876.7	384.7	13.4%
1956	3,143.3	395.0	12.6%
1957	3,373.8	445.1	13.2%
1958	3,249.8	476.9	14.7%
1959	3,422.8	545.8	15.9%
1960	3,647.6	617.1	16.9%
1961	3,796.0	572.9	15.1%
1962	3,904.6	644.4	16.5%
1963	4,211.1	703.3	16.7%
1964	4,411.6	742.7	16.8%
1965	4,723.8	783.3	16.6%
1966	5,042.2	802.1	15.9%
1967	5,025.9	735.8	14.6%

* excludes re-exports.

TABLE 3.

NEW REGISTRATIONS compared with IMPORTS.

Cars only.

Units: complete vehicles.

Source: Society of Motor Manufacturers and Traders.

	New Registrations	Imports	% imported.
1955	511,420	11,131	2.2
1956	407,342	6,885	1.7
1957	433,171	8,828	2.0
1958	566,319	10,940	1.9
1959	657,315	26,998	4.1
1960	820,088	57,309	7.0
1961	756,054	22,759	3.0
1962	800,239	28,610	3.6
1963	1,030,696	48,163	4.7
1964	1,215,929	65,725	5.4
1965	1,148,718	55,558	4.8
1966	1,091,217	66,793	6.1
1967	1,143,015	92,731	8.3

3. The Importance of the Exports of the Motor Industry.

In absolute value, the exports of the motor industry, including components, spares and accessories, represent a high proportion of the total value of the United Kingdom's exports. Table 2. shows that in the years 1962 - 1965, it was over 16%. Hence it can be suggested that any policy which influences the level of the motor industry's exports will have a considerable impact on the total volume of exports of the country. Moreover, as the percentage rose up to 1964 but has fallen since, it must be a matter of official concern to find a policy that will favour increased motor car exports.

4. Fluctuations.

The motor industry is noteworthy for the extent of the fluctuations in production. For example, Armstrong (26) calculates that between 1953 and 1966 the average growth rate of industrial production was 3.4% per annum and the mean deviation was 2.4. The motor industry had the largest mean deviation of all industries, namely 8.4 compared with the stable Food, Drink & Tobacco Industries of .5, and the other highest figures are 6.1 for iron and steel and 6.2 for metal goods. Thus the output of the motor industry is extremely unstable, even more than that of the capital goods industries. The reasons for this instability, in particular the effects of changes in government policy, are discussed later in this section. The importance of this is that the motor industry provides an excellent case study of the effects of fluctuating demand at home on the level of exports.

5. Strong Home Market Position.

The motor industry has a strong position in its home market. Table 3. shows the proportion of new registrations that were imported. In the years 1962-1966 the average was under 5%. A number of factors may explain this. Firstly, there are import restrictions which increase the selling price of foreign cars. Until July 1968, the maximum tariff rate was 25%, when it was reduced to 17½% as part of the Kennedy Round reductions. Since January 1967 the rate for E.F.T.A. . . . . .

countries has been zero. This alone does not account for the small proportion of imported cars, since many foreign producers are able to cut their prices to sell models at prices comparable with British models. The second factor is the preference to buy British cars to be sure of speedy and efficient spares and servicing. Most large garages hold a franchise for a British firm and the retail outlets for foreign cars are usually the smaller or less accessible garages. However, this position may well be changing in 1968. The third factor is that, while some buyers like the distinction of driving a foreign car, there is still a strong sense of loyalty in the British buying public. Compared with a strong home market, British manufacturers face fiercely competitive export markets. The result is that profit margins are far greater for home sales than for export sales and, given the choice, motor manufacturers would prefer greater home sales to greater exports.

6. The Proportion of Production Exported.

The export of motor vehicles accounts for a substantial proportion of total production. (For motor cars it has varied between 35% in 1966 and 49% in 1957.) Because of this, it can be suggested that when firms are working at or near full capacity, their exports can be increased only by reducing home sales and increased home demand can be satisfied only by reducing exports. Unlike a firm in another industry that exports a very small proportion of its total production, a British motor firm is geared to a high level of exports and the export market and home market inevitably compete for the resources of the firm.

Conclusion.

The British motor industry has a significant and increasing effect on the total level of production and the level of exports of the British economy. It also has characteristics of an industry for which, prima facie, one would expect the "Internal Pressure Hypothesis" to apply.

Section 2. Part B.

A Definition of the Motor Industry - for the Purposes of the Thesis.

The title of this thesis refers to the British motor industry and, since this is a somewhat vague term, it is useful to attempt a more precise definition that can be used uniformly in this thesis. The Standard Industrial Classification (1958) Minimum List Heading 381, is too broad a definition for convenient management since it includes all firms producing a wide range of motor vehicles, the component manufacturers and specialist suppliers, as well as firms producing related engineering products such as caravans and marine engines.

For the analysis in this thesis, two limitations are made to this global definition. Firstly, only final assembly firms are considered. It is admitted that these firms are essentially assemblers and, in fact, play the lesser role in the actual production of a vehicle since the value added by the final assembly firm is a relatively small proportion of the total value of the vehicle. For example, Maxcy and Silberston (27) calculate that the 'bought-out' content (that is all materials, raw, semi-finished and finished components) varied between 60.5% and 79.6% of the total cost of a car. And G. Turner (28) estimates that B.M.C. rely on over 4,000 different suppliers. Moreover, the export of parts and accessories represents a large proportion of the total value of the industry's exports, as is illustrated below:

	Total Value of exports a)	Value of exports of parts & accessories b).	Percentage b/a.
1966	£802.1m.	£277m.	34.5%
1967	£735.8m.	£275m.	37.4%

(Source S.M.M.T.)

This proportion is increasing - in 1951 the proportion was 21.5%. A number of large component manufacturers, notably Dunlop for tyres and Lucas for electrical equipment, are exporting independently of the sale of British cars. And other firms, such as the Birfield Group,

export components to foreign assemblers: Saab and Volvo in Sweden buy a large proportion of their components in Britain.

However, the independent activities of the component manufacturers are ignored in this thesis, except in so far as their fortunes are closely geared to the production and export policies of the main assemblers.

Secondly, it was necessary to impose a further limitation, even within the broad classification of final assemblers since, in the industry as a whole, there is such a wide range of products, including motor cars, light commercial vehicles, heavy lorries, buses, agricultural tractors and trailers, and earth moving equipment. The main problem, when considering such a diverse range, is that of measurement. Value is not usually a convenient unit of measurement because of the problem of changes in the value of money and the problem of realistic conversion into foreign currencies for international comparison. Thus, it is desirable to use a 'vehicle' as a standard unit of measurement. But it would be unrealistic to count, for example, a light commercial vehicle and a bus as equal units. Also the production of many commercial vehicles is a specialized matter that presents particular problems which are not common to the production of all vehicles.

Thus it was decided to restrict the analysis of this thesis to motor passenger cars alone. The problem of measurement is still there (for example, there is a wide value range between a 'mini' and a Rolls Royce) but it is more reasonable to conceive the notion of an average car, that is average in size, cost and price, than if commercial vehicles are included. Thus, the figures, unless otherwise stated, used in the following analysis are in vehicle units which represent an average car.

A further complication does arise when measuring exports since many exports are in completely knocked down (c.k.d.) form. These are shipped to foreign factories, usually wholly or partly owned by the parent company, where they are assembled, often with a proportion of locally produced accessories. In 1966 the proportion of exports c.k.d. to total exports was 37%; in 1964 it was 41%, and in 1961 36%. The number of vehicles exported in the following analysis includes those c.k.d.

Section 2. Part C.

The Factors that cause fluctuations in the Demand for Motor Vehicles.

Both the hypotheses discussed in this thesis, the "Internal Pressure Hypothesis" and the "Export with Growth Hypothesis" assume that government policy has a strong, if not predominant, influence over the demand for motor cars in Britain. It is true that there are several selective weapons ~~that~~ which the Government can use apply specifically to motor cars. There are the hire purchase restrictions, namely a legally imposed minimum deposit and maximum repayment period, purchase tax on cars, the road fund tax and petrol tax. Other controls, such as legally imposed safety standards, may also have some influence on the demand for cars.

The advocates of the "Internal Pressure Hypotheses" would argue, no doubt, that such selective controls are desirable to stimulate greater exports in such an important industry. And, on the other hand, the motor manufacturers themselves argue that the use of these selective controls makes their industry particularly vulnerable to changes in short term government policies. The E.D.C. Report (29) claims that "the motor industry has been used to a considerable degree as a regulator of the whole economy. While the government must have some convenient, quick-acting and effective way of controlling ~~common~~ consumer demand, the use of the motor industry for this purpose has had a detrimental effect on the industry's sales, and consequently its costs, profits and, ultimately, its international competitiveness."

Certainly, as was shown above, production fluctuates in the motor industry more than any other industry in Britain. It is the purpose of this section to examine the precise effects of government policy on the level of demand for cars since this will have an important bearing on the application of the two hypotheses.

For this study, it is necessary to consider the nature of the demand for cars. Even with the exclusion of commercial vehicles, the question is complicated by the fact that motor cars have a dual role. They are purchased by consumers as a consumer durable and by firms as an investment, capital goods. And the situation is further complicated by the fact that many individuals run cars for personal use that are directly or indirectly paid for by employers.

W.F.F. Kemsley (30) estimated that of new cars purchased in 1964:-

private use entirely	-	47%
business use entirely	-	14%
mixed use	-	39%

TABLE 4. Expenditure on Road Vehicles.

	Consumers' expenditure on Motor cars* £m.	Gross Fixed Capital Formation ** £m.
1955	354	221
1956	282	209
1957	323	196
1958	425	232
1959	522	268
1960	600	327
1961	546	339
1962	620	304
1963	891	358
1964	1032	426
1965	976	441
1966	935	488
1967	1061	457

* Consumers' expenditure on cars, motor cycles, new and second hand: 1958 prices £m.

** Gross Fixed Capital Formation in road vehicles, other than buses and coaches: 1958 prices £m.

Source: National Income & Expenditure.

Cars for Business Use.

The purchase of cars by firms is an investment decision, and will depend upon the factors that determine any investment decision, namely the rate of replacement, business expectations in general and the availability of finance. Most large firms pay cash for their cars, or use trade credit, so their purchases are unaffected by short term changes in selective policies. Only small firms are likely to use hire purchase and to be affected by hire purchase controls. Table 4 shows Gross Fixed Capital Formation in road vehicles, other than buses and coaches. This, of course, includes all forms of commercial vehicles but two points of interest are apparent. Firstly, investment expenditure fell in 1956, as did expenditure on private cars, but by less. In 1957, expenditure on private cars rose but investment expenditure fell again. Secondly, investment expenditure did not fall in 1961, as did expenditure on private cars, but fell instead in 1962. It seems reasonable to suggest, therefore, that investment expenditure is not so sensitive to changes in government policies but is affected far more by the general atmosphere of business expectations, and is lagged by one year after consumer expenditure.

If this is so, it means that a considerable proportion of car purchasers, varying between 14% directly purchased for commercial use and 53% that are wholly or partly used for business purposes, are not sensitive to the selective controls.

Cars for Private Use.

The demand for cars for private use, like the demand for other ~~common~~ consumer durables, is subject to uncertain fluctuations in the short run because of the nature of the purchase and the circumstances under which purchases are made.

In the long run, the increase in car ownership follows an upward trend, comparable to the over-all increase in real income. Table 5. shows the growth of vehicles in use in the United Kingdom; an average increase of about 600,000 a year. However, it is unlikely that the growth of car ownership has a significant effect on short term fluctuations of demand. A technical break-through such as the introduction of the B.M.C.'Mini', which in 1959 cost under £400, might bring new cars within the range of some people who had not been able to afford motoring before. But, in general, the increase in car

TABLE 5.

GROWTH IN CAR OWNERSHIP IN THE UNITED KINGDOM -

	Vehicles in use	Growth (1955 = 100)
1955	3,609,400	100
1956	3,980,511	110.3
1957	4,282,438	118.6
1958	4,651,021	128.9
1959	5,080,510	140.8
1960	5,650,461	156.5
1961	6,113,764	169.4
1962	6,706,159	185.8
1963	7,546,650	209.1
1964	8,436,193	233.7
1965	9,131,075	253.0
1966	9,746,887	270.0
1967	10,554,193	292.4

Source: S.M.M.T.

ownership is gradual and most first-time car owners buy second-hand cars, and this has only an indirect effect on new car sales (by influencing trade-in values). Thus short-term fluctuations in demand for cars has a greater effect on producers than the annual rise in car ownership.

The purchase of new cars is largely "replacement" demand. Cars wear out gradually over a period of several years and potential buyers do not wait for their present cars to disintegrate before they buy a new one. Even for those who have a policy of buying a new car at regular intervals, say every 2 years, the exact timing of the purchase can vary. The purchase of a new car is motivated by a number of objective and subjective factors and it is variations in these factors that causes the demand for cars to be so volatile. The relative importance of these factors will now be considered.

TABLE 6.

New Registrations of Passenger Cars.

	Quarters	Quarterly figures.
1955	1	124,307
	2	137,589
	3	120,373
	4	119,996
1956	1	119,158
	2	123,988
	3	85,584
	4	72,198
1957	1	81,022
	2	124,639
	3	115,297
	4	105,505
1958	1	141,400
	2	155,708
	3	128,920
	4	130,420

(Source: Monthly Digest of Statistics).

1. Seasonal Fluctuations.

The demand for new cars is subject to fairly regular seasonal fluctuations as is shown in Table 6. In every year, 1955 to 1958, new registrations were higher in the 2nd quarter than in the 1st. New registrations were lower in the 3rd quarter than in the 2nd and, except for 1957 were lower in the 3rd than in the 1st as well. And except for 1958, registrations were lower in the 4th quarter than in the 3rd. Thus the peak buying period is May when motorists are planning for summer excursions. Demand begins to build up in March, just before the Budget, remains high for the second quarter and then falls off. February and December are the months of lowest demand.

This pattern in itself creates problems for the motor industry since motor cars cannot be easily stored. Steps have been taken to offset this seasonal trend. For example, new models are usually introduced at the Motor Show which is held in October to boost winter demand. Also the new regulation of having an identifying registration letter in the number plate has been changed as a result of representation by the motor industry so that the letter is altered annually in August, instead of January, again to boost sales in the latter part of the year.

In the past, the problem of seasonal demand was, to a certain extent alleviated by the fact that the bulk of British car exports went to British Commonwealth countries in the Southern Hemisphere which had the opposite pattern to Britain. But now that the North American and the European markets are of increasing importance, exports increase rather than diminish the problem of seasonal fluctuations.

2. Model Changes.

The demand for the products of an individual car manufacturer is affected by ~~its~~ his own model changes and the model policy of ~~its~~ his competitors. While total demand for all cars for a given year is unlikely to be affected, model changes influence the ~~training~~ timing of purchases and the fortunes of individual companies. For example, the introduction of the Cortina in 1962 and the new Vauxhall Viva in 1966 had the affect of switching demand from competitors, such as Rootes and B.M.C.: this reason is often given by motoring correspondents for the decline of market share held by B.M.C. and Rootes.

3. Replacement Cycle.

Since the demand for new cars is replacement demand, it

is possible that there is a replacement cycle of perhaps 2 or 3 years' duration. A high level of new car sales in one boom year, perhaps as the result of a high general level of prosperity when existing car owners replace their cars more speedily than they otherwise would, has the overall effect of reducing the average age of the car fleet. This saturates the market temporarily and the following two years are likely to reveal a fall in demand and then, as the cars bought in the peak year ~~age~~ fall due for replacement, so an 'echo' effect takes place. The higher the boom in one year, the lower the slump in the two following years. In fact it is difficult to find evidence of this: the analysis given in the next section shows a cycle of about 5 years which is more easily explained by other factors. But modern cars between the age of 3 and 5 years are beginning to show signs of wear which stimulates owners to buy a new one, so that, although not easily identifiable, this cyclical force may be present and once purchasers become bunched in one year, an 'echo' effect is likely in 3 to 5 years' time. There is, thus, an inevitable tendency towards cyclical fluctuations of demand.

4. Price Effects.

Demand is likely to be influenced to a certain extent by price changes. The dramatic rise in car purchases of 28.8% in 1963 (see table 7) is attributable, in part, ~~for~~ to the fall in purchase tax from 45% to 25% in November, 1962. Maxcy & Silberston (31) estimate a price elasticity of demand of approximately 1.5 for a fall in price in the United Kingdom. But there is now evidence that a rise in price causes an equivalent fall in demand.

However, more important than actual price changes are expectations of price changes. For example, in November, 1967, the month of devaluation, new registrations of cars were 91,539 compared with 52,563 in November, 1966. Admittedly 1966 was a year of generally depressed sales, but the 1967 figure is also 9,000 more than the 1964 November figure of 82,673, and 1964 was a boom year and annual figures have not reached such a peak since.

This sudden rise of sales in November 1967 was in spite of the mid-November increase in credit restrictions (from a 25% deposit with 36 months to repay to a 33.1/3% deposit and 27 months to repay) and despite the fact that November is usually one of the slackest months for car sales.

The explanation must be that motorists were anticipating price rises, and possibly further government restrictions. Because of devaluation, imported raw materials were going to cost more and cars contain a substantial proportion of imported materials (32) (A. G. Armstrong estimates that the requirements of the motor industry of imported goods in 1963 were £236m. This would represent just over 10% of the total cost of production). Moreover, it was announced in November, 1967 that the budget would be early in 1968 and, inevitably, ~~this~~ it was expected to be a severe one, possibly with a rise in purchase tax. Thus, there was a strong incentive to buy a new car in November, 1967 because of expected price increases.

5. Hire Purchase Controls.

Hire purchase controls take the form of a legally imposed minimum deposit and maximum repayment period. The use of this selective weapon is one of the major complaints by the motor industry ~~of~~ against government economic policy. However, the relative importance of these controls as a cause of fluctuating demand is a matter of controversy. In this section the differing views of four writers are considered and an attempt is made to reconcile them with the figures in table 7, which gives the number of new cars sold subject to hire purchase and compares them with the new registrations of cars and with changes in hire purchase regulations, for the years 1955-1967.

Firstly, C. A. Blyth (33) examines the slump in the motor industry in 1956-1957 and suggests that while H. P. restrictions had some effect on the demand for cars, they were not the cause of the fall in demand. (34) He writes:-

"When the demand for cars is strong, hire purchase controls can only ~~be~~ temporarily curb sales: buyers need a little time to save or search out other forms of finance. From this it might follow that during 1956 when sales of cars did fall for about a year, i.e. when there was something more than a temporary curb to sales, hire purchase controls were not the cause".

Table 7 supports this view in that it shows that in 1956 H.P. sales fell ~~less~~ less proportionately than total car sales and the proportion of new cars sold on H.P. actually rose despite the increase in H.P. restrictions. Clearly, there was some other factor causing car sales to fall which was more important than the H.P. restrictions.

Source: S.M.M.T.

TABLE 7.
The Effects of H.P. Controls

	New Registrations (1)	% change over previous year	New Vehicles subject to H.P. (2)	% change over previous year	% 2/1	H.P. controls Month	Deposit - Repayment time
1955	511,420		85,330		16.7%	Feb.	15% - 24
						July	33.1/3% - 24
		- 20.4%		- 18.3%			
1956	407,342		69,725		17.1%	Feb.	50% - 24
						Dec.	20% - 24
		+ 6.3%		+ 29.6%			
1957	433,171		90,345		20.9%	May	33.1/3% - 24
		+ 30.7%		+ 31.8%			
1958	566,319		119,048		21%	Oct.	None
		+ 16.1%		+ 25.2%			
1959	657,315		149,000		22.7%		None
		+ 24.8%		+ 9.8%			
1960	820,088		163,532		19.9%	April	20% - 24
		- 7.8%		+ 5.3			
1961	756,054		172,218		22.8%	Jan.	20% - 36
		+ 5.8%		+ 2.4%			
1962	800,239		176,403		22.0%		"
		+ 28.8%		+ 49.2%			
1963	1,030,694		263,127		25.5%		"
		+ 18%		+ 25.2%			
1964	1,215,929		329,325		27.1%		"
		- 5.5%		- 3.2%			
1965	1,148,718		318,816		27.8%	June	25% - 36
						July	25% - 30
		- 5%		¾ 13.4%			
1966	1,091,217		276,204		25.3%	Feb.	25% - 27
						July	40% - 24
		+ 4.7%		+ 9.1%			
1967	1,143,015		301,467		27.2%	June	30% - 30
						Aug.	25% - 36

Secondly, the Intelligence Unit of the "Economist" (35) claims that H.P. restrictions do not influence long-term trends but only the timing of purchases. Their argument is that, since the Second World War, car sales in the United Kingdom have never fallen for two years running and have often risen for three or four. They hold that H.P. restrictions merely curtail sales temporarily and that they pick up in the following year.

This argument may have been true in 1960 when cars sold subject to H.P. increased in number by only 9.8% of the previous year, compared with a rise in total registrations of 24.8%. And this coincided with the re-introduction of H.P. controls in April 1960. In 1961, when total car sales fell by 7.8%, the sale of cars by H.P. actually rose by 5.3%. It is possible that some H.P. sales were postponed for a year because of the restrictions.

On the other hand, this argument does not seem to be valid for 1965 and 1966. In 1965 H.P. sales fell and this was followed by an even greater fall in 1966. On this occasion the controls, strengthened in June 1965 and increased in July 1965, February 1966 and in July 1966, had an increasing effect over the 18 months. And as the proportion of total sales made subject to H.P. fell in 1966, against the rising trend, it seems reasonable to suggest that H.P. controls were particularly effective in the 1965-1966 period.

Thirdly, the precise effect of hire purchase controls has been the subject of controversy between J. R. Cuthbertson (36) and A. Silberston (37).

It is Cuthbertson's hypothesis that charges in hire purchase regulations have little immediate effect on the demand for cars but affect the demand for cars 2 or 3 years hence, thus setting up cyclical effects. He claims that the immediate effect is small because a very high proportion of those who intend to use hire purchase for buying a new car have a used car to 'trade-in' and the value of the used car covers the deposit. In another article (38) he sums up this hypothesis:

"...(the hypothesis) suggested that fluctuations in the car market were to a large extent the delayed result of H.P. controls. Its essence was, firstly, that the practice - apparently widespread among vehicle owners - of trading-in and beginning a new contract as soon as the old one is completed caused new H.P. business to be closely related to the trend of contract completions; and, secondly, that contract maturities had become "bunched" as a result of frequent delays in maximum

credit terms so that the market was subject to alternating periods of booming sales and excessive slackness".

However, an investigation of H.P. car sales reveals no obvious cycle of 2 to 3 years. H.P. car sales follow the same pattern as total car sales, namely, a 4 - 5 year cycle.

A. Silberston also disputes the Cuthbertson hypothesis and suggests that there is no close link between the termination of H.P. contracts and new car sales since people are just as likely to buy another consumer durable on H.P. as a new car when the existing contract is terminated. Moreover, he goes further and queries whether there is any direct effect at all of H.P. controls on car sales because -

a) only about 25% of new cars are purchased on hire purchase

b) new car buyers have a used car to trade-in which covers the deposit.

c) buyers can often find alternative finance if hire purchase controls make it an unattractive way of borrowing.

d) Fluctuations in income levels and expectation of future price and income levels are more important.

Silberston suggests that the greatest effect of hire purchase restrictions is indirect. Hire purchase controls influence second-hand car purchases more than new car purchases (where about 50% of sales are on H.P.). And when second-hand purchases fall, 'trade-in' values fall too and this may discourage car buying. Silberston concludes

"Fluctuations in production and income are by far the most important factors affecting the total volume of new car sales".

And Cuthbertson admits:

"the consumer has a disconcerting way of changing his habits when least expected and it would be foolish to ignore the power of general economic conditions to influence his behaviour".

From these four, differing points of view, it is difficult to draw any conclusion about the effects of H.P: controls on new car sales. Moreover, the figures in table 7 offer little guide. Before 1966, the only evidence that increased restrictions curbed sales was in 1960 when H.P. sales rose much less than total sales. But this was offset by a slight increase in H.P. sales in 1961 compared with a fall in total car sales. The effect here was that the increased restrictions caused some H.P. sales to be delayed by one year.

On the other hand, in 1966 H.P. sales fell more, proportionately, than total sales which would suggest that the severe restrictions of February and July in that year were having an effect, independent of other effects.

This may be because in July 1966 the restriction of 40% minimum deposit and 24 months repayment period was the most severe since February 1956. Total registrations in the five months following July 1966 were 23% below those in the same period of 1965 and 35% below those of the same period in 1964. Accurate H.P. figures on a monthly basis are not available but the E.D.C. Report (39) estimates that the value of hire purchase transactions on new cars was between 40% and 50% below the previous year's in the same months. In this year, 1966 it seems that H.P. restrictions at such a severe level did have a significant effect. Thus, apart from the example in 1966, it would be wrong to claim that changes in H.P. controls are a major cause of fluctuations in the demand for motor cars. The E.D.C. Report admits:

".....the use of such selective measures as changes in purchase tax or hire purchase restrictions to reinforce the general measures is likely to accentuate the fluctuations which the general measures would have caused anyway". Yet, despite this, the E.D.C. Report continues to perpetuate the myth that selective controls have a damaging effect, when it states:

"changes in hire purchase regulations have been such a significant factor in causing unstability in the U.K. car market". It must be concluded that such a claim is an exaggeration.

6. General Economic Conditions.

From the discussion of the previous five factors it has been shown that the demand for new cars is naturally volatile. The question is, however, what is the predominant influence? As the demand for cars is influenced by a number of factors, some objective and some subjective, then it may not be possible to give a more precise answer than to say: "the general economic conditions".

The National Institute of Economic and Social Research (40) found that during the period: 1948-1960 the predominant influence on the demand for cars was real disposable income. But as real disposable income varies in the aggregate very little during periods as short as a year, it is difficult to attribute substantial fluctuations in demand to this alone. The E.D.C. Report provides the answer to this when it suggests that a small rise in income has a proportionately greater effect on the demand for new cars:-

"Among existing owners rising incomes have a buoyant effect on car demand by encouraging more frequent replacement, often with a "trading-up" factor involved as well, and by ~~viewing~~ increasing the number of multi-car

owning households. Conversely, during periods of general decline or stagnation in incomes, potential new owners tend to defer entering the market and existing owners to postpone replacement of their vehicles ..... Even when no special factors intervene, therefore, demand for motor cars as for other consumer durables, is particularly sensitive to changes in incomes".

Conclusion.

The conclusions from this analysis are that the demand for cars is naturally volatile because of the nature of the product and that the major influence on demand is the general economic situation as reflected in either-rising or falling incomes. In so far ~~that~~ as government policy determines the general economic situation, the demand for cars is determined by government policy, but by overall government policy and not just the selective policies. Thus the predominant influence is the government's deflationary or reflationary policies, that is monetary and fiscal policies and prices and incomes policy. The fluctuations in demand are unavoidable if we accept that "stop-go" policies themselves are unavoidable. A. Armstrong (41) supports this argument when he concludes

"The motor industry is in the unfortunate position of supplying a product the demand for which reacts very sharply to changes in general prosperity and purchases of which can be postponed without hardship for some time"..

TABLE 8

CHANGES IN ECONOMIC POLICY AND THE DEMAND FOR CARS.

	Bank Rate %	Budget	Wages Policy	Purchase Tax on cars.	New Registrations (CARS).	% change over Previous Year.
1955	3½ - 4½	Deflationary autumn budget.		50%-60%, Oct.	511,420	- 20.4%
1956	5½	Disinflationary budget.		60%	407,342	+ 6.3%
1957	5 (Sept.7)	Tax cuts - expansionary budget.		60%	433,171	+ 30.7%
1958	6 - 4	Mild expansionary budget.		60%	566,319	+ 16.1%
1959	4	Substantial tax cuts.		April 50%	657,315	+ 24.8%
1960	5-6-5	No change budget.		50%	820,088	- 7.8%
1961	5 - 7 (July)	Deflationary budget.	July freeze	55% July	756,054	+ 5.8%
1962	4½	Mild expansion	Guiding light 2 - 2½%	45% April 25% Nov.	800,239	+ 28.8%
1963	4	Expansion with tax cuts.	3 - 3½%	25%	1,030,694	+ 18.0%
1964	5 - 7 (Nov.)	Expansion especially in public sector.	"	25%	1,215,929	- 5.5%
1965		Deflationary budget.	April 3½% norm.	25%	1,148,718	- 5.0%
1966	6 - 7	" "	July freeze	27½%	1,091,217	+ 4.7%
1967	6½ - 8	" "	Severe restraint	33½%	1,143,015	

Section 2: Part D.

The relationship between government policy and the demand for motor cars 1955 - 1967.

It was suggested in the previous sections that the cyclical fluctuations in the demand for and production of motor cars are the result of overall government policies. Table 8 lists changes in various aspects of government policy. Bank rate is used as being symptomatic of general changes in credit policy. The budget and wages policy indicate the other general policies. And changes in purchase tax and hire purchase controls are the selective policies.

A cycle in new registrations is clearly distinguishable. 1955 was a year of peak demand. In 1956 demand fell, rose slowly in 1957 and was followed by three years of rapid growth, 1958 to 1960. In 1961 the downswing came again with a fall in demand. Demand rose slowly in 1962, and rapidly in 1963 and 1964. Since 1965 the pattern has changed, however, and demand has fallen ~~each~~ in ~~year~~, 1965, and 1966 ~~and~~; in 1967 **it rose slightly.**

This cycle is identifiable with changes in government policy, though as was suggested in the previous section, it is not possible to ~~attribute~~ identify any particular aspect of government policy as the main cause of fluctuations in demand.

In 1954, the economy was showing signs of strain and, with a dramatic rise in imports, the balance of payments went into deficit. Deflationary measures were taken in 1955, with an autumn budget, ~~that~~ which, among other tax increases, increased the purchase tax on cars, monetary restraint and the re-introduction of H.P. controls in February and their further strengthening in July. In 1956, despite a fairly neutral budget in April, further measures were taken during the year, including a disinflationary autumn budget, following the Suez crisis and petrol rationing.

In 1957 restrictions were eased and the economy allowed to expand. The demand for cars increased. The Sterling Crisis in September, and the high bank rate that was necessary, was essentially a monetary phenomenon and had little direct effect on internal credit. The balance of payments swung into surplus with the export boom to N.America and the British economy expanded.

The period 1961 to 1964 followed the same pattern. Restrictions were imposed in 1961: there was a deflationary budget, monetary restraint, and increase in the purchase tax on cars in July as part of the Chancellor's use of the 'Economic Regulator" and, this time, the Chancellor took stern measures to control wages inflation by imposing a wages freeze. In 1962 sales and production in general were at a low level and the government, faced with increasing unemployment, took steps to mildly inflate the economy, while attempting to control inflation by a "guiding light" of 2 - 2½% for wage increases. In November 1962 the purchase tax on cars was cut and in 1963 the economy inflated again by an expansionary budget. 1963 was a year with a dramatic rise in demand for cars. In 1964 the economy was boosted further with a pre-election expansionary budget, especially with rises in government expenditure.

Since 1965 the restrictions have increased. The budgets of 1965, 1966 and 1967 have been deflationary. Wage increases have been subject to a freeze in July 1966 and severe restraint in 1967. And apart for a brief period between June and Novermber 1967, H.P. restrictions have been gradually increased. The result is that, for the first time since the Second World War the demand for motor cars has fallen two years in succession, and even in 1968 demand was still less than the peak in 1964.

Section 3.

A. A statistical test of the "Internal Pressure Hypothesis" for the motor industry.

B. Arguments given by the motor manufacturers to explain the lack of inverse correlation.

TABLE 9.

Production, Home Demand & Exports of United Kingdom 1955 - 1967.

Units: CARS. Source: S.M.M.T.

	Total Production	Growth	New Registrations	Growth	Exported Total	Growth	% of production Exported.	Share of * world markets. %
1955	897,560	100	511,420	100	388,564	100	38	33.3
1956	707,594	78.8	407,342	79.6	335,397	86.3	47	28.5
1957	860,842	95.9	433,171	84.7	424,320	109.2	49	29.0
1958	1,051,551	117.2	566,319	110.7	484,034	124.6	46	27.3
1959	1,189,943	132.9	657,315	128.5	568,971	146.4	48	26.0
1960	1,352,728	150.7	820,088	160.4	569,889	146.7	42	25.0
1961	1,003,967	111.8	756,054	147.8	370,744	95.4	37	21.1
1962	1,249,426	139.2	800,239	156.5	544,924	140.2	44	23.3
1963	1,607,939	179.1	1,030,696	201.5	615,827	158.5	38	22.7
1964	1,867,640	208.0	1,215,929	237.8	679,383	174.8	36	22.7
1965	1,722,045	191.9	1,148,718	224.6	627,567	161.5	36	21.9
1966	1,603,679	178.7	1,091,217	213.4	556,044	143.1	35	16.6
1967	1,552,013	172.9	1,143,015	223.5	502,596	129.3	32	14.6

* Share of world markets is derived by expressing Britain's exports of cars as a percentage of the total of cars exported by the world's main producers, namely, Germany, France, Italy, U.S.A., Sweden and Japan.

Section 3. Part A.

A Short term Statistical Analysis of the "Internal Pressure Hypothesis" as it applies to the Motor Industry.

Table 9. shows sets of figures for which the test of inverse correlation can be applied. These are the level of exports, and the level of new registrations in the United Kingdom. The percentage of total production exported is given, as well as Britain's share of world trade, that is the proportion of British exports of cars to the total exports of the seven leading car manufacturers: namely, W. Germany, France, Italy, U.S.A., Sweden and Japan. This last figure is given as being the best guide of Britain's export performance.

If the "Internal Pressure Hypothesis" is correct, one would expect to find evidence of:-

a) a situation where home sales fell and exports rose, or Britain's share of world trade rose.

b) a situation where home sales rose and exports fell, and Britain's share of world trade fell by more than the trend.

With superficial examination of Table 9, no example of either is apparent. Home sales fell in 1956 but exports fell too. Clearly there was no switch of sales from home to export markets in that year. It is true that home sales fell by more than exports, that is by 104,078 vehicles compared with 53,167 and that the percentage of production exported improved, but on the other hand, Britain's share of world trade fell from 33.3% to 28.5% so that it could not be claimed that Britain's export performance improved.

In 1961, the second occasion when home sales fell, again exports fell and, this time, the fall in exports was the greater, home sales falling by 64,034 vehicles and exports by 199,145 vehicles. And again, Britain's share of world trade declined.

Home sales fell in 1965 and 1966. Once more exports fell and Britain's share of world trade declined.

Likewise, there is no example where home sales rose and exports fell. Indeed in 1957 and 1962 when home sales fose, exports rose faster and on both occasions Britain's share of world trade actually improved, reversing the trend. The only occasion when this facet of the hypothesis might apply is in 1960 when home sales rose

dramatically and export sales remained constant. But even then, Britain's share of world trade fell by only 1% which is less than the fall in 1958/59 or 1960/61. And in 1963 and 1964, when home sales were rising faster than exports, Britain's share of world trade was fairly constant.

Thus, by superficial observation, there seems to be no evidence of inverse correlation between home sales and exports.

F. Fishwick (42) attempts a more sophisticated statistical analysis of the Internal Pressure Hypothesis. He suggests that a simple linear correlation would be mis-leading because it is necessary to compensate for the fact that both series of figures are expanding over time. He computes:

" a co-efficient of partial correlation between

a) production for export and

b) the ratio of production for the home market to its (exponential) trend value, time being the other independent variable. The resulting co-efficient (+0.581) is such that one may be 98% certain that the number of cars exported varied positively with home demand over the fourteen years". (i.e. 1953-66).

Thus Fishwick concludes that the home sales and exports are positively and not negatively correlated. He writes:

"This first statistical comparison enables one to reject the view that when home sales were above 'normal', production was diverted from exports and, correspondingly that below 'normal' home sales led to increased exports."

Fishwick goes on to make a second analysis, this time comparing Britain's share of world trade with home sales since, as he points out,

"Booms and slumps may occur in export markets at the same time as they do here and this would give rise to positive correlation of home and export sales volumes".

Even then he finds that the partial correlation between Britain's share of world trade and home demand is +0.634 "which would indicate 99% confidence that the two series are positively correlated".

Time Lag.

However, both the superficial analysis and the analysis of Fishwick do not take into account that the "Internal Pressure Hypothesis"

may be subject to a time lag of, say, one year.

As already mentioned, home sales fell in 1956 and in 1957 still had not reached the 1955 level. Thus in both 1956 and 1957 there was an element of slackness. In 1957 exports rose and Britain's share of world trade improved. The same pattern appears in 1962. Home sales fell in 1961 and in 1962 Britain's share of world trade rose. It could be claimed, therefore, that during the slack years 1956 and 1961, plans were laid for an export drive that came to fruition in the following years. On the other hand, this pattern coincides with the opening up of new markets - in 1957 there was the 'second car' boom in N. America and in 1962 Europe was a booming car market. The question, therefore, remains whether the export drives were the result of falling home sales or the knowledge that export potential was there. Professor S. J. Wells writes (43) -

"It would, of course, be possible to argue that had it not been for restrictions imposed in 1957, British motor manufacturers would never have had the incentive to fight their way into the North Amercian market in 1958 and 1959".

This question was put to representatives of B.M.C. and they insisted that falling home sales had nothing but a depressing effect on management and that the export efforts were made despite their falling profit positions. However, one could not expect management to admit that export drives were planned only when home sales had fallen.

The effect in 1965 was different. Home sales fell and in 1966 exports fell for the second year running. Quite clearly, this time, there was no sales incentive from falling home sales. Or, at least, if there was, foreign markets were not in a position to respond to an export drive. And in 1966 Britain's share of world trade fell a dramatic 5%. If the "Internal Pressure Hypothesis" worked on the two previous occasions, it did not work in 1966. But, it will be argued in the 'long run section' that the weak position of the British motor firms in 1966 stimulated another change, namely a sudden effort to rationalise the structure of the industry, mainly by amalgamations and the re-organisation of management. Again it is debatable whether these changes would have taken place but for the depressed state of the home market.

Conclusion:

Statistical tests suggest that the "Internal Pressure Hypothesis" does not apply to the motor industry within the time scale of one year. This point has now received official recognition: an unpublished study carried out by the Board of Trade(43) was unable to identify unambiguously any close statistical relationship between home demand pressure and motor exports. The next section is concerned with a detailed examination of possible reasons for this lack of inverse correlation.

Section 3: Part B.

The Industry's arguments on the "Internal Pressure Hypothesis".

The following arguments have been put to me by various representatives of British motor firms, either during our interviews or by correspondence. The arguments are, of course, personal views and were not given as official statements by the firms themselves.

The arguments are considered in two groups, relating to two aspects of the "Internal Pressure Hypothesis" namely,

a) that when home sales fell, exports rise
b) that when home sales rise, exports fall.

Exports during Deflation.

It is the manufacturers' argument that, in the short run, exports are determined primarily by the level of demand in the export markets and very little can be done to influence it in the short run. It is only in the long run that changes can be made, for example, in the models, and in dealers' and after-sales service, that will increase the competitiveness of the products.

Price Cutting.

In theory, a firm should be able to bring about an increase in the demand for its products by reducing the market price. However, in the motor industry, there is no evidence that firms are willing to cut their prices in the short run. Indeed, they regard a price policy as essentially a long term matter that is settled whenever a new model is introduced.

The cost structure of a motor firm is such that economies of scale accrue only with substantial increases in output. Thus if a firm cut its market price it would need to sell proportionately more cars before unit costs fell also to give the same profit margins. Maxcy and Silberston (45) estimate that a 10% reduction in price would require a two-thirds increase in volume of output before the company could restore its profit levels to those held before. Such a situation is most unlikely.

Small price falls would not generate sufficient increased demand since potential buyers are unlikely to be very sensitive to small price differentials.

Many car buyers have strong subjective feelings on the relative merits of particular models and particular manufacturers, and small price changes are unlikely to cause them to change their minds.

A substantial price cut, on the other hand, might bring about a switch in demand. However, Maxcy and Silberston calculate that "For any practically conceivable structure of costs and margin of profit, the elasticity of demand needs to be extremely large, possibly well over 7, before a short-period price cut can be expected to increase profits".

Even if sales were booming, an elasticity of demand of 7 would be most unlikely. If there were such a switch of demand, other car producers would soon cut their prices as well so that the demand for the products of one firm would not rise by that volume necessary to maintain profits.

A further objection to a short period price cut is that, if we assume that the correct elasticity of demand is available, this will require the firm to substantially increase its output which, also, may not be possible. In the model that Maxcy and Silberston use, a firm needs to be working at 45% capacity if it is to be able to increase production by the necessary amount.

Maxcy and Silberston conclude on this matter -

"Whatever the cause of the decline in sales, a company will not ordinarily attempt to recover its position by means of price reductions. If a general slump is responsible, all car manufacturers will normally cut back production and will probably decide to wait until total demand improves. Many of them will be able to reduce output to 50% of capacity and still make some profit".

Technical Qualities.

Motor manufactures claim that the most important single factor influencing the demand for their product is its technical qualities. The success of a particular model depends upon its style and appearance and the engineering and performance qualities that it has and its public "image" compared with similar models made by competitors and sold within the same price bracket. To achieve a successful model is the constant aim of the car producers. However, the economies of mass production and the cost of development and tooling are such that it is not practical to replace a model in periods less than two years. And no firm can do more than accomplish minor modifications in the short run.

The most successful British cars in export markets have been quality and performance models. For example, Rolls-Royce has universal respect. The Rover 2000 TC has sold well, particularly in the U.S.A., because of its appeal of quality and safety. Sports cars such as the E-type Jaguar, M.G., Austin-Healey, Standard TR3, Sunbeam and Mini-Cooper

are successful export models because of their technical qualities and because foreign competition is less strong in these fields. However, the potential market is limited to a market of wealthy enthusiasts and, for sports cars, younger motorists. There is relatively little scope to increase the demand for these in the short run.

It is with the family saloons, the "bread-and-butter" cars, that motor manufacturers find competition fiercest and profit margins lowest. Success depends upon offering the model at a reasonable price, with a good after sales service and with a reputation of quality and reliability. These factors can be influenced only marginally in the short run, for example by an advertising campaign, by extending free credit or by giving dealers an incentive bonus, but such a sales drive would require months of planning.

A sales drive is further complicated by the fact that in many markets British producers have to rely on foreign agencies which over which they have little control. Moreover, in countries ~~that~~ which have their own motor industry, the largest and most successful dealers will hold a franchise for a national company and are unlikely to sell British models. Thus British companies may have to rely on small garages whose location and facilities are inferior. Or, a large garage may hold the franchise for a number of imported marques. For example, in the U.S.A. many dealers in British cars also sell Japanese models. Thus a sales drive requires careful preparation and co-operation from the foreign dealers. And new dealerships arrangements overseas can take two or three years to develop before a full commitment is entered upon by both sides.

Finally, a successful attempt to increase market penetration overseas must be backed up by an efficient spares service. Large spares depots are necessary to avoid long delays that would be caused by transporting parts from Britain. Such depots are expensive and require lengthly and detailed planning. For example, it was not until 1967 that B.M.C. announced that they had established a computorized H.Q. outside New York ~~that~~ which has 90% availability of spares on current models, bringing them into parity with American producers.

Thus, there seems to be no way ~~by~~ in which British firms can successfully increase their sales abroad in the short run. Price cutting is ruled out because it is uneconomic. The other factors that influence demand can be changed only after a detailed sales drive. However, as will be discussed later, it is possible that a carefully

planned sales drive will yield successful results for the following years and there are examples where this has been achieved. The question that remains, however, is whether the sales drive was stimulated by the fall in home sales.

Question of Transferability of Supply.

The previous section suggested that it is not possible for motor producers themselves to stimulate increased demand in the short run. However, ~~supposing~~ it may be that it is not necessary to stimulate increased demand and that demand in the export markets is naturally buoyant for a reason ~~that~~ which is unconnected with the events in the home market. Such a situation arose in the U.S.A. in 1957 when a boom developed in small cars, to satisfy two car families and to serve for congested city use. 1968 provided a similar example. Devaluation enabled firms to cut the foreign price while retaining their previous profit margins and this led to an increase in demand in foreign markets.

The question that then arises is, how quickly and easily is it possible to increase supply to the foreign markets? There are two aspects of this problem, firstly the ease with which actual vehicles can be transferred and, secondly, the rate at which management can adjust to the new situation.

The actual vehicles exported usually vary in technical details from the home market vehicle. Apart from obvious differences, such as left-hand drive, other technical changes are necessary. For example, stronger suspension units may be necessary for countries with rough roads; hot and dusty countries require improved cooling and air filtering; some markets require more powerful heaters, others air conditioning. But more important than these are the safety regulations imposed by foreign governments. The best example is the new regulations imposed by the Federal U.S.A. government in January 1968, causing a wide range of requirements such as exhaust emission control, lighting, positioning of controls, collapsible steering columns, outside projections and bumper heights. (It is estimated that these new regulations cost the British car industry £5m. and increased the cost of production per car by £50 initially).

In discussing this problem with representatives of motor firms, it was suggested by them that this problem of transferability of vehicles is not very serious. The basic vehicle remains the same and it is just a matter of minor details. The question of individual require-

ments of foreign governments has its effect mainly on the long term design of cars and, gradually, all these safety features will be available in cars, both for home and export markets.

However, there remains a problem since it is not just a matter of diverting a batch of cars from dealers in Britain to the docks for export. It is fundamentally a managerial problem, to synchronise production and distribution to meet changing circumstances. For example, Peter Garnier of Jaguar described the lengthy process that is involved in planning production. "The whole process starts with a factory forecast for home and export sales for the coming 12 months. This allocation is broken down into a schedule for each of the 142 overseas distributors who, after examination, break it down into the number of examples required of each model".

Within this overall pattern of a 12 months programme, the individual models to be exported are determined by a 3 month production plan. The schedules of the types and varieties of vehicles - with the multitude of options of colour scheme, interior finish, specific mechanical extras or modifications, determine production within the 3 month period and govern the number of items to be ordered from suppliers (body shells, castings, forgings, electrical equipment and so on). The result, for Jaguar, is that the quantity of exports is, under normal circumstances, tied to a 3 month time scale at least and, probably, a 12 month programme and within these limitations, there is very little room for a substantial switch of resources from home to exports.

It could, of course, be argued that Jaguar is an exception in so far as the models are in the luxury class and require individual attention. However, the first few months after devaluation in November 1967 provided an interesting example to support this suggestion of poor transferability. On 13th March, 1968, the "Times" reported:

"B.M.C. dealers throughout Europe have lost thousands of orders in the four months since devaluation because they have not had the cars to sell".

Thus, even when demand is increased and also home sales are low, because of this lack of transferability, it was not possible ~~to~~ which rapidly increase supply to export markets. One explanation ~~that~~ the Times gives is:

"The supply position was made even more acute by the need to modify models bound for Germany, from the production lines at Longbridge and Cowley, to comply with new Federal safety regulations".

Foreign Assembly of c.k.d. parts.

The proportion of vehicles exported in c.k.d. form varies from firm to firm and from market to market, and few accurate figures are available. In the year 1965/66 B.M.C. estimated that 47.3% of all the vehicles that they exported were in c.k.d. form. The existence of such a large proportion of exports in this form must also reduce the flexibility of supply to foreign markets. Supply depends not only upon the increased flow of c.k.d. parts by British factories but on the capacity and efficiency of the assembling factory in the foreign market. In the short run, it may not be possible to increase capacity and this imposes a further restraint on the possible increase in exports.

Export Incentives.

The confidential report of the Board of Trade (44) mentions evidence provided by the motor manufacturers which shows that export prices are on average substantially below home prices for the highest volume export models: approximately 24% below in the E.E.C.. markets, 22% below in E.F.T.A. and 16% below in other markets. Profits earned on each export sale are in consequence substantially lower than on each home sale. Indeed, the foreign receipt price may be below full average costs at capacity working or even marginal cost in certain markets. B.M.C. say that they do not plan to make any profit in some markets, but hope to recoup any losses by selling spares and accessories. And Fords, in an article in praise of the Cortina which broke all records as the best selling export model, admit that, in most foreign markets, it did not sell at a profit. Unfortunately, the firms concerned are not willing to reveal detailed calculations of profit margins and their pronouncements beg the question of what they mean, in this sense, by 'profits'. Nevertheless, it is apparent that there is little incentive to increase exports since the return is so small. And when profit margins are being squeezed by falling home sales, they may well prefer excess capacity to pursuing increased but unprofitable sales overseas. Moreover, it is not just that actual profit levels are lower for export, but also that profit certainly is much less because foreign markets are more volatile than home markets, mainly because of the greater degree of competition. For example, on October 1st 1968, Mr. Agnelli of Fiat announced that Fiat would not wish to increase its sales to the United States because if they exceeded 20% of total exports, their sales and profit certainly would be reduced.

Conclusion on Exports during Deflation

There seems to be very strong arguments to reject the aspect of the "Internal Pressure Hypothesis" that deflation leads to an increase in exports. As suggested, it is unlikely that demand for exports would rise, and, even if it did, it is unlikely that a rapid increase in supply could be achieved. And finally, there is little incentive for firms to bring about such a switch into exports.

Exports during Inflation.

The other aspect of the "Internal Pressure Hypothesis" is the negative side, namely that at a high level of demand, supply of vehicles to the export markets is reduced. Since profit margins are better at home, ~~so~~ one would expect firms to sell more at home and less abroad.

However, it would never be possible to prove such an argument since it is not possible to say what would have been the level of exports had the level of internal demand been different. The analysis of Table 9 was not able to find a year when home sales rose and exports fell or when home sales rose and Britain's share of world trade fell more than by the trend. Thus there is no positive evidence to support the argument.

However, certain points need some consideration.

Delays in Delivery.

One would expect an effect of high internal pressure to be long delays of delivery in foreign markets. This weakness is constantly discussed in the press, usually with a letter or comment from a foreign purchaser who has become frustrated by the delay in fulfilling his order. The motor manufacturers, when asked about this problem, gave two answers. Firstly, they said that the delays in delivery mentioned in the press often refer to delays in particular models or models with special specifications (for example, a particular colour) and that such delays were inevitable when they manufacture such a wide range of options on a basic vehicle. Secondly,where the shortage was more general, they blamed delays in transport, such as a shipping strike , or strike of car delivery drivers.

Arguments such as these seem poor excuses but the point of interest here is that no mention is ever made of the need to supply the home market. T. Barna (13) found that with many firms,

delivery dates were substantially improved by internal re-organisation rather than by dhanges in national conditions. And he suggests:

"It is not so much the high level of demand as sudden increases in it which appears to have an adverse effect on delivery dates". And the reason he gives for this is the inadequency and inflexibility of management to deal with changing situations.

Total Working Capacity.

It is the industry's case that, even in periods of peak demand, there is sufficient working capacity to meet further increases in demand. For example, in 1963, a year of high home demand when exports rose also, though by less than the increase in home sales, it was estimated that firms were working at the following percentage of capacity:

B. M. C.	65%
Ford	71%
Vauxhall	55%
Rootes	47%
Standard	57%

The notion of "full capacity working" is an arbitrary one and Maxcy and Silberston suggest that most firms plan to work at 75% of full capacity which provides some flexibility. Nevertheless, the margins shown above are sufficient, whatever the method of calculation, to suggest that firms had no reason to reduce exports because resources were required to fulfil the more profitable home market orders.

Conclusion.

There seems to be no evidence to lead us to accept the "Internal Pressure Hypothesis" and there are many good arguments to lead us to reject it. There remains only the doubt that exists about the role of management. It was suggested earlier that the ability and attitude of management is the all-important factor in determing export policy and success. If deflation at home were to stimulate changes in management, as it may have done in 1956, 1961 ~~and~~, 1966 and 1967, then deflation at home does have some effect on the level of exports.

For example, when home sales fall, an export-drive may be undertaken for some of the following reasons:

1.) to maintain a level of turnover.

2). to maintain a level of production and avoid undue excess capacity.

3). to satisfy other aims of management, such as the prestige to be derived from announcing export successes at a time of national economic crisis.

4). because managerial changes were implemented as the result of the "failure" of falling profits during the deflationary spell, and the new management needed to prove its worth.

5). as the result of structual re-organisation of the industry both within firms and between firms, and in particular mergers.

All these factors are not capable of measurement and no representative of the motor firms, quite naturally, would give any creditability to them. Yet the slumps of 1956 and 1961 were followed by successful export drives in 1957 and 1962 respectively. It worked differently in 1966: no export drive succeeded, perhaps because of the generally depressed state of world trade. However, there was a major reconstruction of the industry, in particular the creation of British Leyland Motors which incorporates B.M.C., Leyland, Standard Triumph, Rover and Jaguar and creates the second largest (to Volkswagen) motor manufacturer outside the United States. This should lead to great advances in exports. Even if all these changes were partly the result of long term factors, there can be little doubt that the deflated home market precipitated and accelerated the changes.

Section 4.

A Theoretical Approach to the "Export with Growth Hypothesis".

Section 4.

A Theoretical Approach to the "Export with Growth Hypothesis".

Introduction:-

The substance of the "Export with Growth Hypothesis" is that there is a close, and, in a sense, a necessary correlation between the internal growth of an economy and the level of exports of that economy. The exact nature of the hypothesis varies. In its simplest form, it can be shown that these countries ~~that~~ which have a high level of growth also have a good export performance, but such a correlation says nothing about possible cause and effect relationships. In trying to find an explanation, it can be suggested that only an economy, whose total resources and production potential are rising, is capable of taking advantage of rising demand in world markets: internal growth becomes an essential prerequisite to increased exports. Alternatively, increasing exports are necessary to enable an economy to expand without balance of payments difficulties and accompanying corrective measures of restraint, because internal growth is usually associated with rising imports.

The "Motor Industry's Case" is a special version of the above arguments. The representatives of British motor car firms argue that a strong home market is essential for successful export performance and that the limitations ~~that~~ which the Government has imposed on the growth of home demand have reduced the competitive ability of the British motor industry in foreign markets. They claim that, if demand at home is allowed to rise, export performance would improve. The precise details of this argument are discussed in section 8.

Opposed to the notion that exports and internal growth of demand necessarily go together are those who advocate that an element of slack is necessary in the economy to free resources for exports and to reduce the inflationary pressure ~~that~~ which accompanies growth and ~~that~~ which causes prices and costs to rise. They suggest that one of the main causes of the poor export performance of Britain is that its costs and prices have been rising faster than in other parts of the world. Such a view suggests that cost inflation outstrips any possible gains that come from growth, such as increased productivity.

This section will deal briefly with three aspects of the "Export with Growth Hypothesis":-

1. Beckerman's"Virtuous Circle".
2. The Brookings Report.
3. The Paishite View.

1. Beckerman's Virtuous Circle.

W. Beckerman holds that rising exports and internal growth are necessarily related. He observes(47) that:

"Apart from France, all the fast-growing countries, namely Germany, Italy, the Netherlands, Austria and Switzerland, had favourable foreign balances throughout most of the period from 1953 onwards, and rapid increases in exports. The slowest growing countries, namely, Belgium Canada, Denmark, the United Kingdom and the United States had the slowest increases in exports and precarious foreign balances". Figures to support this statement are provided in Table 10. These show that the United Kingdom has had the lowest growth rate and the slowest growth of exports of the countries considered.

TABLE 10.

GROWTH RATES OF PRODUCTION AND EXPORTS COMPARED.(46).

	Annual growth in industrial production 1954 - 1964.	Annual growth in exports of manufactures. 1954 - 1964 (volume).
United Kingdom	3.1%	3.3%
U.S.A.	4.5%	5.1%
France	7.2%	8.7%
West Germany	7.3%	11.1%
Italy	8.4%	18.6%
Japan	15.0%	17.0%

Beckerman suggests that rising exports and growth are linked in a "virtuous circle". Rising exports encourage the expansion of production capacity, technological progress ~~that~~ which is "embodied" in the increased investment, and economies of scale, all of which in turn lead to increased international competitiveness and, therefore, increased exports. Moreover the increased exports pay for increases in imports and so make it unnecessary for the government to impose restraints to maintain external equilibrium.

Conversely, there is a "vicious circle" in Beckerman's reasoning, where falling export sales lead to slow growth rates, low investment, slow technological advance, a fall in international competitive ability and hence falling exports.

However, Beckerman does not suggest how the virtuous circle can be brought about. He implies that the increase in exports must come first. For example (48) he writes:

"Differences in growth rates among reasonably advanced countries are largely the result of differences in expectations that may be held concerning future long-run demand prospects".

"For an economy in which foreign trade is a large proportion of output, the most important determinant of confident expectations about the long-run rate of increase in demand is the buoyancy of exports".

The problem facing Britain since the Second World War has been to achieve this initial export success. And while accepting Beckerman's argument, this does not mean that stimulating internal growth will itself necessarily guarantee export success as the "Motor Industry's Case" seems to suggest. The solution may be devaluation, and this is discussed in Section 9.

2. <u>The Brookings Report</u>.

The report of the Brookings Institute on the British economy suggests that the relationship between growth and exports is more complicated than the simple approach of Beckerman's "virtuous circle". They point out, for example, that (49) "a correlation between fast growth and rising export shares does not indicate the direction of causation".

As an alternative to the notion of "export-led growth", they suggest that growth is a necessary pre-requisite to increased exports because, in periods of rising world demand, only countries with expanding output are able to satisfy new requirements and so maintain their market shares. Such an argument implies that Britain must stimulate growth to

achieve greater export success, which is consistent with the "Motor Industry's Case". However, such a policy has the immediate drawback that it may lead to inflation, and rising imports, and in turn an adverse balance of payments position. The Brookings Report admits:

"In 1959-61 and 1963-65, when the British economy entered periods of sustained growth, balance of payments crises forced the government to take restraining measures, which brought the expansion to an end".

Thus actual growth is limited by potential growth and at the full employment of all resources inflation causes exports to fall, imports to rise and the government to take restraining measures. The problem for the British economy is to increase growth potential that will facilitate actual growth without inflation.

However, for a particular industry the situation may be different. For example, the motor industry may gain more from constant and steady growth than it loses from the effects of inflation. This suggestion will be examined in detail in section 8. But, even if it is true, there remains the problem of reconciling the requirements of the motor industry with that of the economy as a whole. For, as the Brooking's Report observes (50)

"Britain would probably have enjoyed more rapid and more productive capital formation had the difficult position of her international reserves not forced stop-go policies, but she would not have attained efficient and trouble-free growth from "full steam-ahead" without restraint upon aggregate demand".

3. The Paishite View.

Professor F. W. Paish suggests (51) that an element of slack is necessary for export success, for assoon as an economy reaches its maximum growth point of full employment, inflation and overstrain result, with rising costs, the development of bottlenecks and shortages, the lengthening of order books and delays in delivery and consequent falls in exports. For example (52) he writes:

"Between 1959 and 1966, the index of British labour costs per unit of output rose by 28%. Export prices of British manufactures increased by 17%, or by much less than labour costs. But during the same period, the prices of manufactured exports from France rose by 15%, from Germany by 12%, from the United Stated by 6% and from Italy by 1%, while export prices of Japanese manufactures fell by 10%. This suggests that, while, with the rise in British costs, the rise in export prices of British manufactures has been too little for them to be profitable, it has been too much for them to be competitive".

Professor Paish's solution to the problem of inflation is a margin of permanently unused capacity of between 5% and 7% which corresponds to a level of unemployment of between 2% and 2½%. This suggestion is consistent with Professor A. W. Phillips' estimate (53) that just over 2% unemployment would be associated with a rise in wage rates of 2½% a year and that would keep wage rises within a rise in productivity of 3.1% that occured between 1953-1960.

A second advantage of an element of slack, in Professor Paish's view, is that it encourages greater technical and managerial efficiency. For example, he writes:(54).

"A condition of excess demand, in which all a dissatisfied customer can do is to go to the bottom of another supplier's long order-book, provides an ideal climate for keeping inefficient firms alive and thus for slowing down the improvement in the average efficiency of the system as a whole".

While this may be a rather extreme view, it will be suggested in section 8 that one of the results of the period of depressed home demand for motor cars, 1964-1968 has been a dramatic re-organisation of the structure of the British motor industry and an increase in managerial efficiency.

However, while the Paishite view provides a serious warning to policy makers, in itself, it does not offer the solution to the problem of growth or a successful export performance, for merely to create slack does not guarantee export success as was shown in section 3 of this thesis. Lord Balogh, in reviewing Britain's position in 1968 (55) wrote:

"While an over-expansion of demand (be it caused by Budget deficit, or private investment or consumption) will certainly suck in imports and prevent exports, deflation and unemployment will not necessarily preserve our competitiveness in domestic and world markets".

Conclusion:

The problem of export success and internal growth provides a dilemma for the policy maker. It is reasonable to accept the notion of Beckerman's 'virtuous circle" that growth and exports ideally go together. The problem, however, is to bring about such an ideal situation where a country faces the 'vicious circle'. Merely stimulating internal growth results in inflation and an adverse balance of payments. Alternatively, to follow the Paishite view leads one to advocate permanent disinflation

yet there is no guarantee that this will stimulate exports either. Professor S. J. Wells sums up this point (56).

"In an economy which is consistently working at full capacity and where that capacity is not increasing, businessmen will have little direct incentive to export. But merely to deny them the full benefit of the home market is likely to be self-defeating. The restriction of home demand, especially when the restrictions are discriminatory, is almost certain to discourage long-term investment planning and to diminish the willingness of firms to take risks by installing extra capacity".

The object of the second half of this thesis is to examine just how serious a depressed home market has been for the British motor industry, in the light of the industry's own argument. The details are in section 8. But also, other factors that may have influenced export performance, notably the market distribution of Britain's exports and the nature of the structure and techniques of the various foreign manufacturers, will be examined to see if there are other, perhaps more important, reasons that explain Britain's relatively poor motor car export performance. Finally, the situation in 1968 is examined, following the re-organisation of the industry itself and devaluation, to see if the solution to the dilemma of exports and growth has been found.

Section 5.

A Comparative Assessment of the Export Performance of the British motor car Industry. 1955 - 1967.

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A Comparative Assessment of the Export Performance of the British Motor car Industry. 1955 - 1967.

This section discusses the pattern of the decline of British car exports and attempts a comparison with the performance of foreign competitors to assess what can be meant by the statement that the British performance has been disappointing.

Prior to 1955.

1955 was chosen as the starting point for this study because that year marks the return to normal patterns of production and competition in world markets. Prior to 1955, British motor manufacturers had been in a much stronger position than their continental competitors. In 1945 the British firms made a very rapid and efficient change-over to civilian production. The pre-war level of production of 500,000 units was reached in 1948 and this was doubled by 1954: Britain was the first country outside the U.S.A. to achieve this level. The continental producers were much slower to expand capacity: for example, in 1950 the production of cars in the U.K. exceeded the combined totals of West Germany, France and Italy. Such a situation gave Britain outstanding export opportunities. Scarce dollars limited the world demand for cars from the U.S.A. The British home market was heavily restricted (for example, second-hand car values were often above new car prices and at one stage almost double, and long waiting lists for new cars extended into the mid 1950s). The Government was willing to allocate the supplies of sheet steel, which were severely rationed throughout the British economy, in exchange for export efforts that yielded needed scarce currencies.

1955 marked the peak of this post-war export success story. Britain had 33.3% of world export markets and was the world's largest exporter of motor cars. But the very fact that Britain had major competitive advantages up to 1955 ~~that~~ which had led to its dominant position also meant that, as these advantages were lost, so the dominant position was lost too. The weakness in the British export performance has been the failure to maintain the position gained in 1955 and to adapt to a changing world situation. As continental competitors gained advantages denied to Britain, so Britain's relative position declined.

Moreover, the easy success of the British motor industry prior to 1955 created certain weaknesses that hindered rather than stimulated adjustment to new conditions. For example, Britain developed its major markets in the U.S.A. and the Commonwealth countries rather than in Europe and the design of cars reflected Anglo-Saxon ideas rather than continental ideas. This was because currency control and tariff restrictions were least in these markets. But the markets that have expanded most since 1955 have been those in Europe, and Britain has been very slow to take advantage of this fact.

Secondly, in the immediate post war period, the emphasis was on quantity rather than quality. The excess of demand over supply meant that the successful firm was the one that could produce the greatest number of cars in the shortest period of time, out of the limited supplies available. The standard of some of the raw materials was poor and good quality steel was particularly scarce. The result was that British cars very often gained a reputation abroad of poor quality and it takes many years to change a reputation once it has been established in the minds of customers. Moreover, selling in the Commonwealth markets was easy and it is alleged that during that time agents and purchasers were prepared to accept poor service and long delivery dates which created a false sense of security to British firms that were slow to realise the importance of these factors in later years. The continental firms, on the other hand, notably Volkswagen and later Fiat, paid meticulous attention to quality and service in order to break into markets new to them.

Thus by 1955, the British motor industry was very successful in selling abroad but, because of the ease of this success, was particularly vulnerable to the growth of competition, firstly from West Germany and later from France and Italy.

TABLE 11. EXPORTS AND THEIR GROWTH

Units: cars.

Source: S.M.M.T.

	UNITED KINGDOM		WEST GERMANY		FRANCE		ITALY		U.S.A.*		THE WORLD TOTAL	
1955	388,564	100	357,380	100	132,859	100	69,397,	100	211,614	100	1,149,939	100
1956	335,397	863	421,379	117.9	151,436	114	78,398	113	174,895	82.6	1,161,195	101.0
1957	424,320	109.2	515,882	144.4	218,565	164.5	110,953	159.9	141,969	67.1	1,417,267	123.2
1958	484,034	124.6	648,332	181.4	320,141	241	161,130	232.2	121,751	57.5	1,751,564	152.3
1959	568,971	146.4	737,861	206.5	514,755	387.4	216,881	312.5	104,384	49.3	2,211,426	192.3
1960	569,889	146.7	841,033	235.3	491,978	370.3	197,935	285.2	177,126	83.7	2,298,413	199.9
1961	370,744	95.4	878,160	245.7	369,147	277.9	234,893	338.6	104,453	49.4	2,026,150	176.2
1962	544,924	140.2	975,650	273	469,897	353.7	305,429	440.1	126,969	60.0	2,503,350	217.7
1963	615,827	158.5	1,217,269	340.6	522,613	393.4	291,877	420.6	144,493	68.3	2,886,717	251.0
1964	679,383	174.8	1,356,929	379.7	441,949	332.6	313,097	451.1	181,487	85.8	3,133,782	272.5
1965	627,567	161.5	1,434,241	401.3	487,171	366.7	307,534	443.2	106,038	50.1	3,132,330	272.4
1966	556,044	143.1	1,475,547	412.9	501,024	377.1	371,632	535.5	177,580	83.9	3,339,609	290.4
1967	502,596	129.3	1,359,817	378.0	546,980	411.7	404,401	582.7	280,582	132.6	3,431,887	298.4

* Sales to Canada are excluded.

TABLE 12.

Units: % SHARE OF WORLD MARKETS.
(FOR CARS).

	UNITED KINGDOM	WEST GERMANY	FRANCE	ITALY	U.S.A.
1955	33.3	25.4	10.2	4.7	18.4
1956	28.5	29.9	10.9	5.4	15.1
1957	29.0	31.0	13.4	6.3	10.0
1958	27.3	33.6	16.4	7.7	6.9
1959	26.0	32.5	20.9	8.2	4.7
1960	25.0	34.3	19.4	7.1	7.7
1961	21.1	39.3	16.2	9.6	5.2.
1962	23.3	37	17.2	10.7	5.1
1963	22.7	39	16.6	8.9	5.0
1964	22.7	40.2	13	8.9	5.7
1965	21.9	42.1	14.4	9.0	3.4
1966	16.6	44.2	15	11.1	5.3
1967	14.6	39.4	15.9	11.8	8.2

Long Run Trend since 1955.

Table 11 gives details of the motor car exports of Britain and the other major world producers, and the growth rates of exports compared with the growth of total world exports. Table 12 gives the share of the world import markets gained by each country. Certain obvious points emerge from these tables:-

1. Apart from the U.S.A., Britain's export performance has been inferior to that of all the other producing countries. Britain's share of world markets has fallen from 33.3% in 1955 to 14.6% in 1967. The share gained by the European producers increased during this period. The volume of British exports has increased by only 29.3% between 1955 and 1967, less than all the other producers, and the total level of world exports has increased by 198.4%.

2. West Germany has been the most successful exporter of motor cars during this period. From 1955 to 1966, exports rose by 312.9%, compared with the world increase of 190.4%. Its share of world markets has risen from 25.4% in 1955 to 44.2% in 1966, though it fell to 39.4% in 1967. There are two outstanding features of this success. Firstly, West Germany has experienced a constance rise in exports up to 1966, despite fluctuations in world demand: for example, in 1961 when world sales fell by 272,000 units, West German exports rose by 37,127 units. Secondly, West Germany has increased the proportion of total production exported from 44% to 59% and, as will be discussed in section 7, this has been achieved with a home market of the size comparable to that of the U.K.

3. France achieved a dramatic rise in exports from 1955 to 1959. In 1955 French exports were much lower than those of the U.K. (132,859 units compared with 388,864 units) and by 1959 French exports were almost the same as the U.K.(514,755,compared with 568,971). And in 1959, the French share of world markets rose to 20.9%, having been 10.2% in 1955. It seems reasonable to suggest that this dramatic rise was the result of the late post-war recovery of the French motor industry. However, this rise has not been sustained. By 1967 France's share of world markets had fallen to 15.9%. Between 1959 and 1966, France regained its 1959 peak in only one year, 1963, whereas the U.K. exceeded its 1959 peak in four of those years. And U.K. exports exceeded French exports in each year except for 1967. Thus, compared with France since 1959, the British export performance has not been disappointing, particularly as France had the advantages of membership of the E.E.C., which were denied to the U.K. during that period.

4. Italy is an example of an economy that since 1955 had grown very rapidly, having started from a level much lower than the other European countries. And this growth has been based upon export success. In 1955 Italy had only 4.7% of the motor car world market and increased this to 11.8% by 1967. The rise was curtailed temporarily in 1963 when Italy experienced a very sudden rate of cost and wages inflation (in 1962 retail prices rose 17%). But by 1965 Italy regained the 1962 export level and has expanded since. It will be suggested in section 7 that Italy's success is partly the result of tremendous internal growth in demand and partly the result of the dominant position of one firm, Fiat, which will provide a serious challenge to British producers in the 1970s.

5. The exports of the U.S.A. fell after 1955 and did not regain that ~~position~~ level until 1967. The figures partly obscure the true position, since Canada and the U.S.A. are considered to be one country for the calculations and trade between the two is excluded. Even so the fall in the U.S.A. share is marked, from 18.4% in 1955 to 8.2% in 1967. However, this is a special case for a number of reasons:-

   a). the U.S.A. is the world's largest import market which prevents easy comparison between the other producers and the U.S.A.

   b). American motor companies generally seek investment opportunities abroad rather than pursue the physical export of cars, especially in Europe.

   c). Most American cars are unsuitable for overseas markets where smaller and more economical vehicles are required.

TABLE 13.

	SWEDEN			JAPAN		
	Cars Exported	Share of World Markets %	% of Total Production Exported.	Cars Exported	Share of World Markets %	% of Total Production Exported.
1960	49,131	2.1	45	7,013	.3	4
1961	45,596	2.2	42	11,531	.6	5
1962	53,835	2.1	42	16,011	.6	6
1963	63,192	2.2	37	31,445	1.1	8
1964	73,125	2.3	45	66,965	2.1	12
1965	84,186	2.7	46	100,703	3.2	14
1966	104,692	3.1	60	153,090	4.6	17
1967	123,020	3.6	63	223,491	6.5	16

Table 13 gives figures for the export performance of Japan and Sweden ~~that~~ which since 1960 have been increasing their shares of world markets. Sweden is a special case since it has only two major manufacturers, Volvo and Saab, both of which produce a narrow range of quality vehicles in relatively small numbers. It is unlikely that Sweden will provide a serious challenge to British exports. Japan, on the other hand, is expanding very rapidly in the small and medium sized vehicle market. It still exports a relatively small proportion of total production (16% in 1967) but the total level of production is rising very rapidly, also the percentage of that production exported. As Japanese cars become established in export markets and their scale of production increases, they may well provide the most serious challenge of all to British cars, especially in markets outside Europe.

Conclusion on Long Run Trend.

Except for a dip in 1961 and recovery in 1962, Britain's share of world markets has fallen at a constant rate since 1955 as the other major producers have expanded after their delayed post-war recovery. This trend is likely to continue with the emergence of Japan as a further major competitor. To a certain extent, this trend could be considered to be inevitable: as new competitors enter the world market, so the share held by any one company, or country, is likely to fall, This is true for all manufactured products and the solution for a company is to specialise more narrowly or to try to raise the quality of its products.

The Situation from 1964 to 1967.

The most important evidence of the weakness of Britain's export performance is the decline of exports since 1964. The actual volume of exports has declined in every year since 1964, whereas before 1964 exports had never fallen for more than one year in succession. Although world trade expanded slowly during the 1964-67 period, Britain is the only country to have experienced an actual fall in exports between those years, except for a slight fall in West German exports in 1967.

It is possible that there may be two forces affecting Britain's export performance in this period:-

a) the long run trend factors
b) special factors that have precipitated the major decline since 1964.

The question that must be asked is whether the 1964-67 decline is merely an acceleration of the long run forces that have existed all along or whether there have been special forces that explain the poor performance of 1964-67. Since the 1964-67 period was also a period of depressed home sales, this does offer some prima facie evidence for the "Industry's Case".

Factors likely to influence Export Performance.

Long run success in export markets depends upon a multitude of factors. They can be conveniently linked under three headings:-

1. Production efficiency which determines the cost and, in the long run, the price of the final product: this depends upon the scale of production, capital intensity, the rate of technological advance in production methods, the cost of inputs, especially labour and "bought-out" components, and the degree of labour unrest.

2. Design style and technical qualities of the cars: to a certain extent this is a 'chance' factor, that is, it is the result of the genius or flair of the actual designers and engineers that a firm employs at a particular time. But also important is the firm's policy towards research and development, model changes and its market research in designing a model to fit the market opportunities available.

3. Marketing efficiency which includes the choice of the 'right' markets, dealer and policy, spares provision, after-sales service and selling techniques: this depends upon managerial expertise but also upon the long term expenditure on dealer and spares networks in foreign markets.

Success or failure in exporting depends upon a combination of a number of factors, and it would be difficult to offer a simple, single explanation of Britain's poor export performance. Certainly it would be quite wrong to suggest that Britain's decline is entirely the result of the reduction in the level of home demand by the Government's deflationary measures, as the "Industry's case" suggests.

~~And~~ Before examining the "Industry's Case" in detail, three other possible factors likely to contribute to Britain's poor export performance will be examined:-

1. The market distribution of British car exports
2. The stage of growth of the motor industries of competitor countries and the rate of growth of their economies as a whole.
3. Internal factors such as the percentage of production exported, the scale of production of leading firms and the model policy of leading firms.

Section 6.

The Pattern of British Export Markets For Motor Cars.

TABLE 14.

Growth of car imports 1958 - 1965.

Source: S.M.M.T.

	Imports 1958	Imports 1965	% increase
Sterling Area	337,047	476,737	41.4%
North America	521,238	659,081	26.4%
E.E.C.	272,154	909,831	234.3%
E.F.T.A.	328,351	746,501	127,3%

Distribution of exports between various markets 1958 & 1965.

		1958	1965
U.K.	Sterling Area	39.6%	37%
	North America	41.1%	16.2%
	E.E.C.	5.3%	18.5%
	E.F.T.A.	8.5%	21.5%
West Germany	Sterling Area	13.3%	8.3%
	North America	24.8%	31.2%
	E.E.C.	15.1%	24.5%
	E.F.T.A.	32.8%	28.7%
France	Sterling Area	7.6%	6.6%
	North America	34.2%	8.5%
	E.E.C.	17.2%	50.8%
	E.F.T.A.	12.9%	17.9%
Italy	Sterling Area	8.6%	10.5%
	North America	20.2%	3.5%
	E.E.C.	49.7%	55.8%
	E. F.T.A.	12.4%	17.2%

Section 6.

The Pattern of British Export Markets for Motor Cars.

It was noted in Section 5 that in the immediate post-war period, Britain concentrated on the traditional Commonwealth, Sterling Area, motor car markets. In 1955 65% of car exports still went to the Sterling Area and only 9.2% to the E.E.C. countries. The result was that British firms were slow to exploit opportunities in other markets and also did not consider designing cars ~~that~~ which would be attractive in the faster growing European markets. Professor S. J. Wells observes:

"The failure of the U.K. to hold its share in world markets is partly due to a concentration of exports in the early post-war years on Commonwealth rather than European markets". This concerned the pre-1955 period, yet Table 14 shows that in 1958 Britain still exported 40% to Sterling Area countries.

Table 14 shows that Britain has concentrated on the Sterling Area and North American markets (these two taking over 80% in 1958 and over 53% in 1965) and these are the two markets that have grown the least between 1958 and 1965. West Germany, on the other hand, had a more even spread between the various markets with only 24.8% going to North America and 48% going to European markets in 1958. And in 1965, 53% went to European markets. Italy has always exported predominantly to Europe: 62% in 1958 and 73% in 1965. France is different: 30% went to Europe in 1958 but 68% by 1965.

Thus Britain's continental competitors have gained from the expansion of demand within Europe to a far greater extent than Britain. But it is not sufficient to explain this simply in terms of our concentration on Sterling Area markets prior to 1955. For despite the concentration, Britain's share of Sterling Area markets fell from 57.1% in 1958 to 48.8% in 1963, the main gain in market share being made by Japan (figures are given in table 15 below).

There is a further factor: Britain experienced a sales boom in North America in 1959 and in the E.E.C. countries in 1963, yet was not able to sustain these peaks. In 1959, British sales to the U.S.A. soared. The North American market took 49.6% of Britain's car exports while sales to the Sterling Area fell in absolute numbers. British firms showed that they were capable of taking advantage of unique opportunities offered by the sales boom at the time. But, unfortunately,

the boom was not to last, as is discussed later in this section, and since 1960 sales to North America have always been less than half ~~that~~ the 1959 peak, and whereas Britain had 38.0% of the North American market in 1958, its share was only 12.2% by 1967.

Similarly, 1963 was a year of peak sales in Europe when demand rose rapidly in many countries, notably in Italy. The E.E.E.C. countries took 23.1% of Britain's exports in that year. But again the peak was not sustained. Sales to the E.E.C. have declined since 1963, and by 1967 were only 60% of the 1963 level. Possible reasons for this are considered later.

It seems, therefore, that long term success is not just a matter of establishing sales in a thriving market but of sustaining a permanent sales effort. It is necessary to find some factors to account for this weakness on the part of the British motor industry.

TABLE 15.

Exports to Sterling Area Countries.

Source: S.M.M.T.

	1958		1960		1965	
	Total Cars	Market Share%	Total Cars	Market Share%	Total Cars	Market Share%
TOTAL	337,047		466,362		476,737	
BY:-						
U.K.	192,496	57.1	212,015	45.5	232,545	48.8
West Germany	87,397	25.9	129,489	27.8	119,305	25.0
France	24,638	7.3	76,530	16.4	41,384	8.7
Italy	14,151	4.2	27,869	6.0	32,170	6.7
Japan	-	-	2,303	.5	34,451	7.2
Sweden	-	-	2,202	.5	9,189	2.0
U.S.A.	18,365	5.4	15,954	3.4	7,693	1.6

The Sterling Area Markets.

Britain's sales to Sterling Area countries fell by 20% between 1955, when they were 252,163 cars, and 1966, when they were 202,295 cars. And, as noted above, Britain's share of Sterling Area markets has fallen too.

The fundamental reason for the relative decline in importance of Sterling Area markets is that the rate of increase in aggregate demand has been less in these areas than in the advanced, industrial areas of the world. Most of the countries,notably Australia and New Zealand, are primary producing countries that have suffered from long run adverse movements in the terms of trade and short run fluctuations in the world prices of their products. They have also suffered from international multiplier effects from the U.K. For example, in 1957/8 the restrictive measures in the U.K. had the effect of reducing imports from the Sterling Area. High interest rates in London forced them to impose high rates themselves. And they were obliged to impose restrictive measures to safeguard their own balance of payments position. In 1958 New Zealand imposed severe restrictions and the number of cars imported from the U.K. fell from 32,912 in 1957 to 23,202 in 1958.

The second reason for the decline of Sterling Area sales has been the growth of domestic production. This has been most marked in Australia and South Africa. This trend has been initiated by many overseas governments in an attempt to diversify the economy which is too dependent on primary products, to create more varied employment opportunities, to reduce import costs, and to help to stabilise fluctuations in their balance of payments position. The governments have imposed direct controls such as quotas and tariffs, to persuade foreign manufacturers to establish production facilities in their countries, and they also offer grants dependent upon the percentage of local content included in the final car. The cars are imported c.k.d. and assembled in the local market. Sometimes there are obvious advantages in exporting c.k.d. since it saves transport costs and the local labour may be relatively cheap. However, the local government usually insists on a proportion of local content (at first, perhaps just batteries and tyres, though in 1968 the Australian government was insisting upon 85% local content to avoid the 45% tariff and to qualify for a government grant).

Under these circumstances, the decision to invest in these markets is defensive, that is, to overcome the controls imposed on fully assembled vehicles. And for this reason, it is natural to expect sales of cars to some of the Sterling Area markets to have fallen.

The question is, however, whether the volume of direct investment has compensated for the decline in direct exports. Professor S. J. Wells writes: (58).

"The evidence, such as it is, does not suggest that the U.K. fully compensated for the decline in physical exports by adequately expanding the volume of direct investment in the Australian motor industry. Indeed, it points in the other direction; not only did the U.K.'s share of imported motor cars decline, but the U.K.'s stake in local manufacturing appears to have declined relatively to that of the United States".

In 1958 Britain exported 56,231 units to Australia (2,780 cars fully assembled, the rest c.k.d.) and Australia assembled 109,200 cars: thus British basic units accounted for 48% of cars produced in Australia. In 1966 Britain exported 41,175 units (2,406 fully assembled) and Australia assembled 293,400 cars: thus British basic units accounted for only 13% of cars produced in Australia.

The main producing firm in Australia is General Motors Holden which has been in Australia since 1926 and manufactures all-Australian cars, such as the 3-litre Holden HR and HB Torana (the same design as the Vauxhall Viva), General Motors Holden claims to produce over 50% of Australia's cars. Other firms are Ford of Australia which produces the Australian Falcon, and Chrysler which produces the Australian Valiant, now marketed in the U.K. by Rootes in the place of the old Humber range.

A third factor contributing to the decline in the importance of Sterling Area markets for Britain has been the growth of Japanese competition, especially in Asian countries where Japan does not suffer from the problem of distance from markets as it does in Europe. And as noted above, Britain's declining share of Sterling Area markets, from 57% in 1958 to 48.8% in 1965, is matched by the growth in the share gained by Japan, from nil in 1958 to 7.2% in 1965. In Australia in particular, Japanese sales have been rising. In 1965 Japan exported 22,337 cars to Australia. In 1967 it was 35,074 which exceeds the British total of 27,298 for that year. And in 1968

TABLE 16

Leading Five British Car Markets by Value 1967.

		No. of cars	£m.	Value per car
1.	U.S.A.	70,766	44.2	£625
2.	South Africa	41,299	13.4	£324
3.	Belgium	40,166	12.5	£311
4.	Canada	24,923	12.2	£489
5.	Denmark	28,882	10.2	£388

TABLE 17.

Exports to North America.

	1958		1965		1967	
	Total Cars	Market Share%	Total Cars	Market Shares%	Total Cars	Market Share%.
TOTAL	521,238		659,081		780,989	
BY:-						
U.K.	197,966	38.0	101,817	15.4	95,689	12.2
West Germany	159,796	30.7	447,106	67.8	498,374	63.8
France	109,433	21.0	41,404	6.3	40,747	5.2
Italy	32,685	6.3	10,672	1.6	19,603	2.5
Japan	1,480	.03	27,460	4.2	71,625	9.2
Sweden	19,878	3.8	30,622	4.6	54,951	7.0

British Leyland made the extraordinary announcement that they would be assembling Japanese Datsun-Nissan models in Australia because British Leyland had spare capacity.

The North American Market.

Table 16 illustrates the importance of the North American market to British car exporters. The U.S.A. is the largest single market, absorbing a substantially greater volume of cars than the second most important market, but also earning more per unit exported than in the other markets. Canada is the fourth most important market and similarly earns more per unit than South Africa, Belgium and Denmark. Thus the North American market not only takes a large volume of British cars but also takes the more expensive varities.

The sheer size of the North American market makes it the most attractive in the world (for example in 1966 in the U.S.A. there were 78 million cars registered and new registrations were over 8½ millions). Because of the relatively small size of British sales it would seem simple to double British sales without having any noticeable effect on other producers. Also U.S. tariffs are low, about a third of British tariffs. Nevertheless, the North American market is one of the most competitive and volatile markets of all, and Britain's fortunes there have waxed and waned.

The importance of the North American market reached its peak in 1959. In 1955 Britain had exported 40,793 cars and in 1959 this figure rose to 282,293. West Germany had a similar increase: 52,189 in 1955 and 241,197 in 1959. In comparison, Britain did slightly better than West Germany over this period and whereas in 1956 the West German share of the import market of the U.S.A. was 57%, by 1959 it had fallen to 31.6%. However, with such dramatic increases in total sales, market shares are scarcely meaningful.

This boom in foreign car sales in North America was the result of a sudden increase in the demand for small cars for two-car families and for congested-city use, and represented a temporary consumer revolt against the much larger cars of Detroit. By 1959 there were more two-car families in the U.SA. than there were no-car families. In the race to meet this demand, British Ford and Vauxhall benefited by having the dealer network of their parent companies.

However, in 1960 the boom failed. The three main American producers began making their own compacts - Ford the Falcon, Chrysler the Valiant and General Motors the Chevy. Although, by European standards, these were big cars (with 6 cylinders) they were much cheaper than other American cars and demand for imported cars suffered. By June 1961 the 'compacts' controlled 37% of the American market and imported cars only 7%. In particular, Ford and Vauxhall were virtually excluded from parts of the U.S.A. as their parent companies pushed their own 'compacts'.

Since 1960 British sales in North America have fallen: in 1967 sales were less than a third of the sales in 1959. But this poor performance is not just the result of the overall decline of the market for imported cars: the British share of the import market fell from 38.5% in 1960 to 15.4% in 1965. The shares of Italy and France fell too. But West Germany continued to prosper in North America. West Germany held a 30.7% market share in 1958, and 67.8% in 1965. In 1959 West German sales were 241,197 and by 1966, they were 533,826, more than double. Thus West Germany clearly succeeded where Britain failed in maintaining the boom condition of sales.

The success of West Germany in North America has been that of Volkswagen. In 1967 V.W. alone sold 446,060 of the 498,374 cars that West Germany exported to North America, compared with 54,007 by the British Leyland group. Motor correspondents explain this phenomenon in terms of the reputation for reliability (especially with the air cooled engine that does not boil over in hot weather, nor freeze in cold weather), good service and easily available spare parts, plus the initial low cost and low rate of depreciation which provide an unbeatable combination for two-car families and as first cars for the economy buyer. On the other hand, British cars have the reputation of being exotic and adventurous but unreliable with bad and expensive service and a lack of spare parts. British cars are treated more as an expensive hobby than as a cheap, dependable form of transport.

This view of British cars stems fundamentally from the fact that the majority of British exports to North America are performance, sports cars. For example, Jaguar exported 5,720 E-Type in 1967 (85% of their total production) and M.G. exported 22,036 cars and Austin-Healey 15,562. Austin saloons, on the other hand, totalled

only 1,623 cars. These sports cars have an unique specialist market appeal, but demand is limited and volatile. There are high insurance premiums for these cars and they are claimed to be less safe than standard American cars. For example, a report by the Massachusetts Registry of Motor Vehicles showed that during 1966, British cars in the State were involved in more fatal accidents of all kinds than any others because of the high power-weight ratio and the lack of protective features(59).

The main problem in increasing the sale of British cars is to sell in volume standard family saloons, in competition with other imported cars. So far, Britain has not succeeded in doing this and there are several devlopments that may make it increasingly difficult.

Firstly, the American-owned British manufacturers, while they have the advantage of an established dealer network, suffer in so far as their American parent firms may not wish British sales in America to rise unduly. For example, in October 1968 General Motors announced its intention to produce its own small car of under 14 feet to sell for $1,800 (£750) which is nearly $500 less than its own compact, the Chevy II which sells for $2,284 (£950) and only $100 more than the cheapest V.W. 'Beetle'. While V.W. may not be seriously hit, sales of Vauxhall cars almost certainly will.

A further disadvantage to the American owned British producers is that they must compete for the favours of their parent companies with the other European subsidiaries. And Opel since 1966 has been much more successful in selling in the U.S.A. than Vauxhall.

Secondly, the independent British firms have always faced the problem of building up an adequate dealer network. American anti-trust laws prevent exclusive dealerships, and the small flow of foreign cars, compared with the sales of American cars, has encouraged dealers to acquire dealerships in a number of imported marques. Very often dealers have been selling Japanese cars alongside British cars, with unfavourable results for British sales. The formation of British Leyland Motors with an amalgamated distribution network should help this problem.

Thirdly, Japanese cars are now appearing in America in increasing numbers, especially on the West Coast where proximity to the Pacific supply route gives them an advantage. In 1967 Toyota, the leading Japanese firm, exported 32,996 cars to the U.S.A. compared with 54,007 by B.L.M. And whereas total Japanese sales were 22,127 cars in 1965, by 1967 they had trebled to 66,417.

For these reasons, the future expansion of sales in North America is uncertain. A re-organised British Leyland Motors, with its reputation for performance and quality cars, should be more successful than in the past. In 1968 they introduced the Austin America, a specially designed 1100 with automatic gear box ~~that~~ which will sell for about $1800, little more than the V.W.'Beetle' and may attract demand by its appeal of greater luxury and refinement. The future of the American-owned British producers depends largely on the attitude of American producers to small cars. It is even questionable that Britain should try to sell cheap cars in large volume. Mr. Giovanni Agnelli, the president of Fiat was reported (60) as saying that he would not want to see Fiat sales in the U.S.A. exceed 20% of their total exports because the market was so capricious. It is also the case that to sell in North America requires the development of special types of design which may not be suitable in the European market. Thus, as the proportion of British exports to North America was 20% in 1966, perhaps the balance is right and Britain should look elsewhere, namely in Europe, to provide the major expansion in her exports.

T A B L E 1 8.

Exports to E.E.C.

	1958		1965		1967	
	Total Cars	Market Share%	Total Cars	Market Share %	Total Cars	Market Share %
TOTAL	272,154		909,831		973,907	
BY:-						
U.K.	25,473	9.4	116,128	12.8	87,304	9.0
West Germany	98,009	36	352,007	38.7	377,544	38.8
France	55,120	20.3	247,676	27.2	252,137	25.9
Italy	80,090	29.4	171,724	18.9	223,722	23
Japan	-		1,263	.13	4,389	.45
Sweden	2,055	.7	10,528	1.15	15,798	1.6
U.S.A.	11,507	4.2	10,505	1.15	5,699	.6

Source: S.M.M.T.

The E.E.C.

It has already been observed that the import market of the E.E.C. has grown faster than any other group. It is also true that Britain's sale of cars has increased: between 1958 and 1965, sales rose by 355.9% and Britain's share of the market rose from 9.4% to 12.8%. It is also the case that E.E.C. sales formed a greater proportion of Britain's exports in 1965 (18.5%) compared with 1958 (5.3%). Nevertheless, Britain's success in the E.C.C. has fluctuated considerably, rising to a peak in 1963 and falling severely since 1965. This creates the impression that British producers have not been able to establish a permanent position in a number of the important countries and that, as tariff charges move against Britain's interests, and as the continental producers become stronger, so Britain's position becomes weaker.

Before 1960, British firms failed to take advantage of the growth of demand for cars in Europe. Sales to E.E.C. countries were 35,708 in 1955 and fell to 34,718 in 1959, whereas comparable figures for the European producers were:-

	1955	1959
France	33,400	121,985
West Germany	81,020	104,471
Italy	20,015	102,317

In certain countries, the British share of the market fell to a negligible proportion. For example, in 1953 West Germany imported 11,000 cars of which 29.7% were British, whereas in 1959 West Germany imported 152,000 cars and the British share was only 3.5%. During this time, France greatly increased its share and by 1959 Italy provided one half West Germany's import requirements.

Thus, when sales were beginning to rise fast in Europe, British firms failed to establish a strong position. The other European firms created a dominant position.

After 1960, British producers launched a major sales drive in Europe, anticipating a successful application for British membership to the E.E.C. This coincided with a rapid growth in demand. British sales more than doubled but so did ~~that~~ those of West Germany and France, as the following table illustrates:-

Sales to E.E.C.

	U.K.	West Germany	France	Italy
1961	62,860	187,326	128,627	128,508
1962	105,825	244,029	225,413	172,130
1963	142,192	382,339	287,554	141,834

During this boom period, tariff discrimination did not curtail British sales. However, this boom had special characteristics. Many European firms reached full capacity working and Italy in particular faced excess demand which explains Italy's poor performance in 1963. The gap was filled by British cars and, when demand is so strong, price differentials become less important.

In 1964 British sales to the E.E.C. fell slightly, as did those of France and West Germany:-

	U.K.	West Germany	France	Italy
1964	115,870	368,001	211,100	148,964
1965	116,128	352,007	247,676	171,724
1966	87,711	397,040	233,662	214,552
1967	87,304	377,544	252,137	223,722

In 1965, British sales made no recovery and sales fell seriously in 1966 and did not recover in 1967 whereas the sales of other producers recovered. Thus by 1966 Britain was seriously losing ground. And in 1967 Britain's share of the E.E.C. market was 9.0%, below the share in 1958 of 9.4%. This failure in Europe at this stage must be considered to be the most serious and significant evidence of the weakening competitiveness of British producers.

One explanation of this weakness since 1963 is the increasing tariff disadvantage that British products have faced. In 1966 and 1967, the tariffs against Britain were: Benelux 24%, W.Germany 17 - 21%, France 30%, Italy 35 - 40%, whereas exports from other E.E.C. Countries faced tariffs of only 10% of the original level. After July 1968, the E.E.C. had a common external tariff of 17.6% whereas internal trade is entirely free.

To a certain extent, British producers have been able to overcome this tariff disadvantage by exporting c.k.d. and assembling in Belgium and the Netherlands, and also B.M.C. have had an arrangement with Innocenti of Italy to assemble saloon cars (B.M.C. is the third largest producer in Italy, after Fiat and Alfa Romeo and in 1967 45,067 B.M.C. cars were assembled compared with 27,749 cars imported by N.S.U., the top importer). In 1966 Britain exported 87,711 cars to the E.E.C. 50,500 of these were fully assembled. 20,500 were c.k.d. assembled in Belgium and 15,500 c.k.d. assembled in the Netherlands. Even so, in such a competitive market, tariff discrimination on the bulk of British exports represents a serious barrier.

A second explanation of Britain's poor performance since 1963 is that European products are becoming increasingly cost competitive because of their greater rate of growth and their ability to take advantage of economies of scale in the larger free market that the E.E.C. provides. For example, France in 1967 exported 46.1% of its total exports to the E.E.C. and Italy 55.3%.

It is in the light of these developments in Europe since 1963 that the "Industry's Case", that British producers have been hampered by a restricted home market, must be judged.

TABLE 19.

Exports to E.F.T.A.

	1958		1965		1967	
	Total Cars	Market Share%	Total Cars	Market Share %	Total Cars	Market Share %
TOTAL	328,351		746,501		646,733	
BY:-						
U.K.	41,030	12.5	135,037	18.1	113,874	17.6
West Germany	212,451	64.7	411,929	55.2	283,466	43.8
France	41,284	12.6	87,374	11.7	106,867	16.5
Italy	19,910	6.1	52,847	7.1	76,334	11.8
Japan	-	-	12,394	1.7	16,824	2.6
Sweden	8,120	2.5	34,108	4.6	43,136	6.7
U.S.A.	5,556	1.7	12,812	1.7	5,440	.8

E.F.T.A.

E.F.T.A. markets have become of increasing importance to Britain. In 1958 E.F.T.A. took 8.5% of Britain's exports: in 1967 22.7%. Britain has increased its share of the E.F.T.A. markets. It was 12.5% in 1958 and 17.6% in 1967.

The E.F.T.A. markets have been and still are dominated by German cars. Nevertheless, this is one area where Britain has improved her position relative to that of West Germany. Between 1958 and 1965 West Germany's market share fell from 64.7% to 55.2%. Whereas between those years, West Germany's sales rose by 93%. Britain's sales rose by 229%. And in 1967, such a bad year for British exports, British sales to E.F.T.A. fell by only 530 cars from the previous year, West German sales fell by 69,392.

Thus, it seems reasonable to suggest that the tariff advantage that Britain enjoys in E.F.T.A. enables its cars to compete much more successfully against West Germany than in the E.E.C. where West Germany has the tariff advantage.

Nevertheless, success in E.F.T.A. does not provide a substitute for falling sales in the E.E.C. Norway and Finland still disciminate against vehicle imports by tax measures, even though tariffs have been removed, Portugal, Switzerland and Austria are small markets with little prospect of major expansion. The best hopes are in Sweden.

Conclusions on the effects of the pattern of British markets on its export performance:

The pattern of Britain's car export market offers a partial explanation of the relatively poor export performance in the following ways:-

1. The advantages that Britain once enjoyed by concentrating on Sterling Area markets no longer exist: the relatively low rate of growth of demand and the trend towards domestic production have hindered the growth of British sales.

2. The boom in North America, 1958-1960, was a special phenomenon and the peculiarities of the market have prevented Britain from creating high volume sales in standard saloon cars there.

3. In the E.E.C. Britain has faced a tariff disadvantage but it also seems that the European producers have become more competitive than British producers: because this has happened particularly since 1965,

it adds some weight to the "Industry's Case".

4. Success in E.F.T.A. has not been a sufficient substitute for failure in the E.E.C.

Section 7.

THE INFLUENCE OF INTERNAL CONDITIONS ON EXPORTS IN THE LONG RUN.

A comparative study of

1. West Germany
2. Italy
3. France
4. Japan.

TABLE 20.

Growth Rates of Production.

For Years 1955 - 1967.

(Measured in numbers of cars).

Source: S.M.M.T.

	Growth of total Production	Growth of Production for Home Market.	% of Production Exported. 1955	1967.
U.K.	72.9%	106.2%	38	32
West Germany	201.2%	133.4%	44	59
France	2[illegible]6.4%	186.9%	24	30
Italy	523.1%	540.4%	30	28
Japan	6687.8%	5585.7%	0	16
Sweden	485.3%	135.7%	9	63

TABLE 21.

	Number of cars in use 1955	1965	Growth Rate*	Number of cars per 1000 population 1955	1965
U.K.	3,609,400	9,131,075	~~153~~ 181%	67	167
West Germany	1,721,491	9,267,433	438.3%	29	157
France	2,630,000	8,777,500	233.7%	54	179
Italy	861,319	5,472,591	535.4%	17	106
Japan	153,325	1,898,865	1138.4%	c.1.5.	c.1.9
Sweden	636,543	1,792,671	181.6%	82	230
U.S.A.	52,135,583	74,500,000	42.9%	268	383

Growth in number of vehicles in use.

Source: S.M.M.T.

* Increase 1955-1965 expressed as percentage of 1955 level.

TABLE 22. Growth of Production for Home Market.

(Derived by subtracting exports from total production).

UNITS: Cars. Source: S.M.M.T.

	UNITED KINGDOM		WEST GERMANY		FRANCE		ITALY		JAPAN		SWEDEN		U.S.A.	
1955	508,996	100	404,825	100	428,606	100	161,581	100	20,266	100	30,100	100	7,708,572	100
1956	372,197	73.1	489,617	120.9	511,247	119.3	201,502	124.7	32,010	157.9	30,178	100.2	5,641,214	73.2
1957	436,522	85.7	524,306	129.5	519,725	121.3	207,822	128.6	46,714	230.5	33,555	111.5	5,971,375	77.5
1958	567,517	111.5	658,522	162.7	648,858	151.4	208,244	128.9	48,286	238.3	43,803	145.5	4,136,061	53.6
1959	620,972	122	765,563	189.1	613,227	143.1	253,778	157.1	73,714	363.7	51,799	172.1	5,486,859	71.2
1960	782,839	153.8	975,746	241.0	683,323	159.4	397,972	246.3	158,081	780.0	59,251	196.8	6,497,670	84.3
1961	633,223	124.4	1,025,815	253.4	694,448	162.0	458,802	283.9	238.0	1174.3	64,257	213.5	5,438,254	70.5
1962	704,502	138.4	1,133,516	280.0	870,431	203.1	572,431	354.3	252,773	1247.3	75,358	250.4	6,806,271	88.3
1963	992,100	194.9	1,196,823	295.6	998,214	232.9	813,414	503.4	376,385	1857.2	82,480	274.0	7,493,235	97.2
1964	1,188,257	233.4	1,293,254	319.5	948,363	221.3	716,834	443.6	512,695	2529.8	88,832	295.1	7,570,335	98.2
1965	1,094,478	215.0	1,299,491	321.0	936,194	218.4	796,398	492.9	595,473	2938.3	97,569	324.1	9,199,523	119.3
1966	1,047,635	205.8	1,354,503	334.6	1,284,882	299.8	910,786	563.7	724,566	3575.3	68,807	228.6	8,420,746	109.2
1967	1,049,417	206.2	944,897	233.4	1,229,522	286.9	1,034,810	640.4	1,152,264	5685.7	70,956	235.7	7,156,182	92.8

Section 7.

The Influence of Internal Conditions on Exports in the long run.

Table 20 shows that the growth rate of production of motor cars in the U.K. has been lower than that of all the other major producers (the U.S.A. is excluded because production since 1955, a year of over-production, has fluctuated so much that no clearly definable growth pattern exists). Also in the U.K., production for the home market has grown less than in the other countries. Superficially, there appears to be some link between the two sets of growth rates. Certainly, in Japan which exported only 16% of production in 1967 - and less than that in previous years - growth has been determined by internal sales. It is the "Industry's Case" that the greater rate of growth of internal demand in the continental countries has greatly assisted their export effort. And in France and West Germany the percentage exported has risen between 1955 and 1967 and fallen only slightly in Italy. The fall has been much greater in the U.K. Sweden is the exception because it exports such a high proportion of its production and produces a comparatively small proportion for the home market: for example, between 1960 and 1967 the proportion of new registrations that consisted of imported cars was an average of 66.5%.

Table 22 gives the full figures for the rates of growth of internal demand for the seven major producing countries. As already noted, this rate is less in the U.K. than in any of the other countries, except the U.S.A. The main explanation of this is illustrated in table 21 which gives the number of vehicles in use for each of these countries. In each of the continental countries the number of vehicles in use in 1955 was substantially less than in the U.K. and the number of vehicles per 1000 population was also less, particularly in West Germany and Italy. By 1965, on the other hand, the number of vehicles in use in West Germany exceeded those in U.K., was slightly less in France, and still lower in Italy and the number of cars per 1000 population was greater in France than the U.K. and the differential had been narrowed for West Germany and Italy.

Thus the greater rates of growth in demand in the continental countries can be explained by the two factors: firstly, that they started at a much lower level of ownership in 1955 and secondly, that their economies have grown and their standard of living has increased at a greater rate. In Japan this difference exists on a very much greater scale as will be discussed later. And in the U.S.A. the number of vehicles in use has increased by only 42.9% because the number ~~they had~~ in 1955 in

relation to the population was already very high by European standards.

Table 22 also shows that whereas home sales have fluctuated considerably in the U.K., the growth of home sales has been steadier in those continental countries. In West Germany there was no fall in internal sales until 1967. In France home sales fell slightly in 1959 and again in 1964 and 1965, but recovered strongly in 1966. In contrast, the U.K. has had the double years of falling sales, 1956 and 1957, 1961 and 1962, and three years of fall, 1965, 1966 and 1967, showing that the recovery rate in the U.K. is much slower. Italy has experienced a constant rise except for 1964 which followed the exceptional growth of demand in 1963 (a rise of 50% of 1962 sales) and consequent balance of payments difficulties and internal restraint.

It is reasonable to suggest, therefore, that the other major producers have benefited since 1955 from a strong growth potential in their home markets whereas U.K. producers have suffered not only from a lower rate of growth but also a more erratic one. This evidence supports the "Industry's Case". However, as was suggested, the main reasons for these differences is that in 1955 the other countries started at a lower level of car ownership and it would be quite wrong to suggest that, if government restraints had not been imposed on the British economy during those years, the rate of growth of internal demand in U.K. would have been comparable to that of the continental countries. Nevertheless, it is the total lack of growth since 1964 that provides the most important example with which to judge the "Industry's Case".

Apart from growth, other internal factors are likely to influence the performance of the motor industries of different countries, in particular difference in the structure of the industries and the model policies of the firms. The remainder of this section is devoted to some observations on and comparisons between the motor industries of West Germany, Italy, France, Japan and the U.K.

WEST GERMANY.

It was noted above that between 1955 and 1967, the motor car industry of West Germany experienced rapid and constant growth. This was symptomatic of the economy as a whole which had the ingredients for successful growth:-

1. A slower rate of inflation than in other advanced manufacturing economies: for example, between 1958 and 1968 consumer prices

(1) rose by 35% in the U.K., over 45% in France, but only 25% in West Germany.

2. A greater rate of fixed capital investment: for example, in 1958 gross fixed asset formation in the U.K. accounted for 15% and in 1966 for less than 18% of G.N.P.; in West Germany the figures were 22% in 1958 and nearly 26% in 1966.

3. A psychology of growth among entrepreneurs, based upon export success.

4. A strong balance of payments, a strong currency and ample exchange reserves.

These factors have led to an increase in productivity in excess of that in the U.K. and also have permitted financial policies that have never been severe: no major credit squeeze, only mild hire purchase restrictions and no discriminatory purchase tax. Professor S. J. Wells writes:- (61)/

"It is clear that no substantial part of the success of the German export effort can be explained in terms of specific Government fiscal aid". Nevertheless, it is equally clear that discriminatory monetary or fiscal measures have not hampered the growth or the export performance of the motor industry either.

A major factor that has contributed to the success of the West German motor industry has been that it is exported orientated. It exports a higher proportion of total production than any other country: since 1963 it has always exceeded 50% and in 1967 it was 59%. This is evidence of the superior competitive efficiency of the German producers but it may also be the result of a fairly liberal trading policy. In 1956 and 1957 German tariffs were reduced below those of any major manufacturing country and have remained so ever since. The proportion of new registrations that consists of imported cars is much higher in West Germany than in the U.K. For example:-

Percentage in new registrations, of cars imported -

	U.K.	West Germany
1962	3.6%	13.5%
1965	4.9%	18.1%
1967	8.3%	23.9%

This has had two main effects. Firstly, it has created a greater degree of competition in the home market which has stimulated a drive to greater efficiency and cost effectiveness. Secondly, it has reduced the difference between the profit margin on the home market

and the profit margin on exports so that firms are encouraged to export irrespective of conditions in the home market rather than to depend on the home market as the major source of profits.

TABLE 23.

Total Production of Cars,1966.

Units: Cars. Sources: Various.

Volkswagen	1,392,491	B.M.C.	604,348
		Jaguar	22,958
		Leyland	121,212
		Rover	39,676
		(British Leyland Motors)	788,194
Ford of Germany	291,201	Ford of Britain	466,177
Opel	649,376	Vauxhall	172,777
Mercedes	191,625	Rootes	171,904
Auto-Union (now part of VW.).	67,248		

The Structure of the West German Motor Industry.

Table 23 gives details of the comparative sizes of firms in West Germany and the U.K. The major difference between the two is that West Germany has one very large firm, Volkswagen, and, indeed, the major part of the export success of West Germany is attributable to V.W. Even British Leyland Motors are only just over half the size of V.W./

Opel is the second largest German producer: Ford of Britain is two thirds its size. On the other hand, Ford of Britain is larger than Ford of Germany. Mercedes is relatively small but is successful because it concentrates on large, luxury cars and also produces over 50% of West German commercial vehicles. Mercedes also has an arrangement with V.W. for joint research and also joint assembling facilities in some overseas markets. By comparison, Rootes and Vauxhall may suffer from the limited volume of output, particularly as both attempt to offer a full range of cars. (The position of Rootes and the problem of size is discussed in section 10). West Germany also has smaller producers such as N.S.U., B.M.W., Porsche and Goggomobil:

these all specialise in particular types of vehicles, for example, N.S.U. produce the revolutionary rotary Wankel engine. In Britain, apart from ~~Renault~~ Reliant, and the racing car specialists such as Lotus, the small producers have disappeared.

Factors that contribute to the success of Volkswagen.

Volkswagen for many years has enjoyed the reputation of being Europe's most successful motor car manufacturer. It is useful to consider the factors ~~that~~ which have contributed to that success.

Firstly, as table 23 illustrates, V.W. produce on a very large scale - over twice the level of B.M.C. and nearly twice the level of B.L.M. And V.W. are concentrated in 6 main factories, the largest at Wolfsburg. B.L.M., on the other hand, have 60 factories scattered all over Great Britain, though car assembly is concentrated in Coventry, Birmingham and Oxford.

Secondly, before 1961 V.W. produced only one basic model of car, the "Beetle", whereas the members of the B.L.M. group produce 17 major models. The 'Beetle' was originally designed by Ferdinand Porsche in 1932 and was chosen in 1945 by V.W. to be a cheap, economy car ~~that~~ which they could produce without too much research, development or capital investment (V.W. lost over two thirds of their plant during the war). Despite its old-fashioned design and lack of modern comforts, it has established tremendous popularity and a unique reputation for reliability, economy and excellent engineering.

V.W. must have gained all the economies of scale possible for one model from the 'Beetle': By 1966 over 12 million cars had been produced. The single factory at Wolfsburg produced on average 5,500 a day in 1968 (Ford of Britain produced 1000 Escorts a day in their two factories, Dagenham and Halewood). Many improvements in designing detail and engineering have been made, yet these changes have been slow and at no stage has a complete re-tooling been necessary.

V.W. have always realised that they cannot rely indefinitely upon the fortunes of one model, particularly one that was originally designed between the wars. ~~And~~ Recently V.W. have been losing their share of the home market: in 1967 it was only 30%. ~~And~~ The West German Finance Minister, Herr Strauss, was reported in the press as publicly accusing V.W. of failing to produce cars that meet the modern requirements. In 1961 V.W. introduced a '1500' car and other variations have followed since, such as the Variant 1600. These, however, are relatively expensive and have not sold in large numbers.

In 1967 V.W. bought a controlling interest in Auto-Union from Mercedes in an effort to diversify its model range. In 1968 Porsche and V,W. jointly produced a sports car. And in February 1969 V.W. announced plans for co-operation with N.S.U. to use the Wankel engine and mentioned the possibility of a merger. Even so, the future of V.W. is still dependent on the one model. As Opel and Ford of Germany have American capital and technological co-operation, they have a policy of frequent model changes which may provide an increasing threat to the ascendancy of V.W.

A third factor contributory to V.W.'s success has been its concentration on export markets. In 1966 70% of total production was exported and this accounted for 60% of all West German exports. The majority of these sales has been in the U.S.A.: it is estimated that over one third of total production goes to U.S.A. As was mentioned in section 6, in 1959 there was a boom in small cars for two-cars families in the U.S.A. and the V.W. 'Beetle' has been most successful in this role; V.W. sales have increased ever since, despite the introduction of the 'compacts' and the fall in the sales of other European cars. Nevertheless, V.W. may be over-dependent on the North American market where it could find Japanese competition a stumbling block in say ten years' time.

A fourth factor is the excellent labour relations at V.W. G. Turner writes (62):

"Volkswagen has never had a strike or even a pause for consultation". And Turner, Clarke and Roberts write: (63)

"In fact, of course, strikes are rate events in the Federal Republic, and unofficial strikes are almost unknown; and to these rules the motor industry is no exception".

The explanations given for this are: profit sharing schemes, workers' representation on the board, minimal trade union activity, attractive fringe benefits such as insurance, holiday camp and housing, also the significant point that there is no fear of redundancy.

I T A L Y

Italy has succeeded in combining economic growth, an average increase in the G.N.P. of 7% between 1953 and 1961, with stable prices. The proportion of wages to the National ~~Unions~~ Income and of consumption to National Expenditure actually fell between those two dates and high profits have sustained industrial expansion and facilitated price cuts in exports. Even so, the monetary authorities have not

rigourously curtailed consumer demand and the only occasion ~~that~~ when the economy became overheated was in 1962-1963 when labour was granted masssive wage increases (37% in those two years) and prices rose by 17.4%. The result was an increase in 1963 of imports of 24%, and car imports rose by 45% and, naturally enough, the balance of payments went into deficit. Stern deflationary measures followed, with credit restraint and increased indirect taxes. At the same time measures were taken to encourage exports, such as export credit guarantees, and refund of the I.G.E. (turnover tax) on exported goods. These measures were successful and exports in general rose by 56% between 1964 and 1966.

The Italian motor car industry increased production by 455% between 1955 and 1966 to meet the very rapid increase in home demand during this period. The majority of Italian cars are in the cheaper price range (small capacity engines have been desirable because of a heavy tax on engine capacity) and many new car sales are sold to first-time car owners. For example, M. Giovanni Agnelli of Fiat was quoted (64) as saying:

"A recent market study gave us the following conclusions: while today 45% of our cars are sold as first sales and 55% as replacements, the percentage of replacement cars in our Italian sales will be 75% in seven years".

Thus the Italian motor industry has benefited very considerably from the rapid growth in first-car owners. Despite this, exports have risen too, and Italy's share of world markets has risen from 4.7% in 1955 to 11.1% in 1967.

Table 24. PRODUCTION OF CARS IN ITALY 1967.

Fiat	1,233,892	
Alfa Romeo	76,831	
Innocenti	46,026	(most under Licence from B.M.C.)
Lancia	43,172	(bought by Fiat November 1968)
Auto Bianchi	37,778	(controlled by Fiat)
Ferrari	706	
Maserati	624	

Sources: various.

The Structure of the Italian Motor Industry.

Table 24 shows that the Italian motor industry is concentrated almost entirely in one firm, Fiat, with only one other manufacturer of size comparable to British producers, Alfa Romeo. Alfa Romeo is state owned and specialises in the larger sized vehicle within a more expensive, more exclusive market. Thus, even more than was the case of West Germany, the success of the Italian motor industry depends on the fortunes of one firm.

Fiat.

Fiat was founded in 1899 and has always been Italy's dominant motor manufacturer: in 1967 it produced 85% of the cars manufactured in Italy. Fiat has experienced an amazing growth rate:

in 1958	322,000	cars were produced
1963	900,000	" " "
1967	1,234,000	" " "

that is an annual average increase of production of 28%. There are a number of factors ~~that~~ which have contributed to Fiat's success and ~~that~~ which make Fiat a strong competitor to British cars in export markets.

1. Fiat controls over 75% of the domestic Italian market ~~that~~ which by 1967 was almost as large as the U.S. domestic market (1,034,810 cars in Italy; 1,049,417 in the U.K.). Thus Fiat sells about 750,000 cars at home; B.M.C. sells only 400,000 at home.
2. Fiat is a fully vertically integrated firm (unlike V.W. which has a 60% bought-out content). Fiat has its own steel mills ~~that~~ which produce about 2 million tons a year. It does all its press work and makes its own capital equipment such as dies and transfer machines. It controls most of its supplies, either by direct ownership, or indirectly in its position as a monopsonist. And because of its size, it can gain from the economies of scale in all these separate operations.
3. Fiat is the largest private enterprise organisation in Italy with a wide range of diversified interests including aircraft, railways, road-building, nuclear power and citizen welfare: three quarters of its sales come from vehicles. This size and diversification gives Fiat financial stability as well as enabling it to benefit from certain economies of scale denied to other motor manufacturers. For example, it employs a 4000 man research organisation and in 1967 spent over £25m. on research and development.

4. It is reputed to have some of the most modern factories in Europe, with fully automated transfer machines. They also supplement the flow-line production system with "banking" stations which store certain vital parts so that the assembly line can be kept moving in the event of a stoppage at one vital point.

5. Fiat exports a relatively low proportion of its production. For example, in 1967 it produced 1,340,884 vehicles, including commercial vehicles, and exported 398,259, giving a percentage of 30%. B.M.C., on the other hand, between 1956 and 1967 exported 40% of production.

6. Fiat exports mainly to the E.E.C.: in 1966 the E.E.C. took 58% of its exports. In doing this, it has taken full advantage of tariff advantages and, as mentioned in section 6, it has not been dependent upon North American sales, ~~that~~ which it considers to be too unstable.

7. Fiat produces a complete range of vehicles which has helped to prevent foreign competitors from gaining a foot-hold in the Italian market. Yet, despite this, it has always had a policy of long production runs for individual models. For example, the Fiat 600/850 and 1100 have been in production, with gradual changes, for over 31 years, longer in fact than the V.W. 'Beetle'.

8. Despite the existence of Communist Trade Unions, Fiat has a good record of labour relations, mainly because of the wide range of benefits that it provides, including nurseries, holiday camps, subsidised housing and sports facilities. G. Turner writes (65)

"It has had very few major strikes, and this fact is not an accidental one, for the company pursues industrial peace fiercely with all the weapons of the benevolent monolith".

FRANCE

The French motor industry has been the least successful of the three main European producers but it has, nevertheless, been more successful than the British motor industry. In 1966 the level of production of cars in France exceeded the level in the U.K. And in 1967 French car exports were greater than the British. French exports grew by 311% between 1955 and 1967, compared with a growth of 29.3% in the U.K., though, of course, France started at a much lower level. France has increased her share of the world market from 10.2% in

1955 to 15.9% in 1967.

Unlike the cases of West Germany and Italy it is difficult to find obvious clear-cut reasons for France's better export record compared with the U.K. The only obvious difference is that since 1961 France has benefited from its concentration of sales in the E.E.C. where it enjoys the tariff advantage: the E.E.C. since 1963 has taken between 46% and 50% of France's exports.

Table 25. Production of cars in France

	1964	1967
Renault	452,008	706,622
Citroen	374,755	419,245
Peugeot	254,948	374,028
Simca (Chrysler)	276,606	275,881

The Structure of the French Motor Industry:-

The size of the French firms is illustrated in Table 25. The structure of the French industry appears to offer no special advantage of economies of scale compared with that of Britain. In 1964 Renault's car production was less than that of B.M.C. and in 1967 it had expanded to be nearer to that of B.L.M. Citroen, Peugeot and Simca are each smaller than Ford of Britain, though larger than Vauxhall or Rootes. Renault has a co-operation agreement with Peugeot though there have been no benefits as yet. In 1968 a factory ~~at~~ in the Pas de Calais was under construction to build common engines. In September 1968 Fiat announced plans to buy a controlling share in Citroen: at the end of 1967, Citroen had debts of £50m. However, this plan was blocked by General de Gaulle who objected to the extension of foreign control over the French economy. At the time of writing the future of Citroen is uncertain.

Renault, one of the largest firms in France, is state-owned, though apart from government assistance in re-building after the Second World War it seems that this has not given it a privileged position: indeed it may lead to bureaucratic rigidity and an unwillingness of management to take risks. Very rarely since 1950 has the State increased its capital and it has to rely on internal financing for expansion. It has earned a steady but low rate of profit ~~that~~ which is shared by the State and by the workers in the form of bonuses. Renault does not dominate the home market as does Fiat, nor does it have the scale of production of V.W. Despite its collaborative agreement with Peugeot there has been no attempt so far at integration.

The only production advantage that Renault has compared to British firms is that, until recently, it has concentrated on a limited range of models. Up to 1963 the Dauphine and 4CV were the most important models: one estimate is that between 1945 and 1960 these two models represented over 90% of car production. However, these have not been as successful as those of Fiat or V.W. For example, in 1961 Renault suffered a major slump in sales, and production fell by 25% from the 1960 level because of the loss of appeal of the cars and the greater appeal of Citroen models in France. Sales in North America and in Britain also fell. However, Renault's fortunes revived with the introduction of the 'R' range, the R8, R4 and later the R16 which are still in production. And Joe Roeber, the Industrial Editor of the Times, writing on December 17th 1968 about the success of Renault since 1964 stated:

"The success is due to the excellent design of the Renault range of cars. It sounds simple but to identify markets, translate their needs into designs at the right prices and then distribute and service the end product is far from that. Bigger companies than Renault have failed to supply what the market wanted".

Finally, labour relations, though providing a better record than in the U.K., are not as good as in Fiat or V.W. In particular the wild-cat strikes in May-June 1968 ~~that~~ which developed into national unrest with students' participation, resulted in a serious loss of production, and the subsequent wage increases that were offered have produced fears of inflation and rising labour costs. It is doubtful ~~that~~ whether Renault will provide as serious a challenge as Fiat or V.W. in the immediate future.

J A P A N

Japan presents a remarkable story of rapid economic growth: between 1950 and 1960, the average annual growth rate of gross domestic product per head was 6.4% (2.4% in the U.K.) and between 1960 and 1966 it was 8.7% (2.3% in the U.K.). The growth rate of the motor car industry has been so great as to defy normal comparisons. Only 20,000 cars were produced in 1955 and 1,375,000 in 1967 (and that figure does not include 3-wheelers). ~~And~~ In 1967 the production of cars and commercial vehicles exceeded that of the U.K.

The Japanese motor industry was very slow to develop after the Second World War. In the late 1940s, the production of cars was negligible ~~and~~ it was totally banned between 1945 and 1948. In 1949 some Japanese firms sought technical links with British producers, for example, Nissan with Austin, Isuzu with Rootes, and in the early 1950s most of the cars produced were foreign cars assembled in Japan. The demand for cars was very low. The transport system was developed around the railways and even in 1966 there were 165 people per passenger car in Japan, compared with 9 people per passenger car in the U.K.

At first, the motor industry produced commercial vehicles with diesel engines exclusively. The demand for passenger cars came mainly from business organisations and the larger, luxury imported car served their purpose well. Up to 1958 the production of ordinary saloon cars was below 50,000 units.

In 1959, the Japanese motor firms started producing midget cars (350-450 c.c.), often with the air-cooled motor-cycle engines ~~that~~ which were establishing international repute on racing circuits. This started a sudden and very rapid growth in home demand for cars for private use. In 1960, 2,119,545 vehicles were registered for private use and of these 75,841 were conventionally-sized saloons, 364,463 were very small 4-wheeled cars, and 1,679,241 were 3-wheelers. The rising standard of living caused demand to mushroom since 1958 and greater use was made of road transport both for passengers and freight. Modern transfer machines were imported to modernise production methods and firms expanded and gained the advantages of the economies of scale. And because firms were investing at such a late date, compared to European firms, it meant that they were able to take advantage of the latest technological production developments immediately. Even by 1966, production was concentrated on commercial vehicles (1,408,743 compared with 877,656 cars) but as the standard of living continued to rise so the demand for cars grew and the demand for family saloons experienced the same rise as the growth in demand for 3-wheelers five years earlier. By 1967 more cars were produced for the home market than in either the U.K. or West Germany.

The Japanese market is highly protected, which has prevented foreign producers from benefiting from this growth in demand. There is a 40% customs duty and an import fund allocation system. In October 1965 there was an official movement towards trade liberalisation

but imports have not risen, probably because tariffs are still high and because the Japanese manufacturers have become fully competitive internationally. In 1960, 3.3% of new registrations were imported cars, in 1964 it was 2.9% and by 1967 it had fallen to 1.6%.

Initially, the export of Japanese cars was not considered a serious threat by the European producers. The Japanese suffered a number of disadvantages:-

1. Japan is a long way from the major markets, particularly those in Europe, and this increases costs as well as providing a major difficulty in setting up and maintaining a comprehensive spares service.
2. Japanese cars were originally accused of being scaled-down, inferior versions of European models and Japan has concentrated on small cars where the competition is the most severe.
3. The Japanese have had the usual problems of building up a dealer-network in markets where garages of worth have agencies for other cars already. In Britain, for example, garages were warned that British dealerships would be withdrawn if they sold Japanese cars.

Nevertheless Japanese exports have grown very rapidly though they still export only 16% of production. In 1963 Japan held only 1.1% of world markets. By 1967 this had increased to 6.5%. They were most successful in Asian markets and on the West coast of North America where distance is not a disadvantage. It is not so much the actual level of sales that has presented a challenge so far but the steady and consistent way by which they have been expanding. And some Japanese firms have been willing to sell overseas well below the domestic market price to gain a foothold.

Table 26. Production of Cars (4 Wheels).

	1965	1967
Daihatsu Kogyo	11,333	60,473
Fuji	37,304	94,398
Hino	26,239	4,692
Honda	8,779	87,169
Isuzu	30,515	38,716
Mitsubishi	45,905	105,950
Nissan	216,833	352,045
Suzuki	1,828	26,454
Toyo Kogyo	81,289	129,051
Toyota	236,151	476,807

Table 26 shows that the structure of the Japanese industry is still divided among a large number of firms, though those figures do not reflect size in relation to commercial vehicles or 3-wheeler production. Until recently, the firms have not gained fully from the economies of scale in ordinary saloon car production. But by 1967, Toyota, the largest producer, manufactured more cars than Ford of Britain; and Nissan, the second largest, produced twice as many as Rootes or Vauxhall. And both these firms produce more commercial vehicles than either B.M.C. or Ford of Britain. And in 1968 three firms: Fuji, Isuzu and Mitsubishi decided to amalgamate so that Japan now has three firms larger than Ford of Britain. (Mitsubishi also has electronics and aircraft divisions which make it the largest business organisation in Japan).

Conclusion to Section 7.

Section 7 has shown that there are many examples where internal conditions have favoured the development and increased the competitive ability of foreign producers; while internal conditions, for one reason or another, have not helped British producers. Of these long run factors the most important are:-

1. The natural growth rate of car ownership in all the countries considered has been greater than in the U.K., because in 1955 the U.K. was already at a high level and because overall economic growth has been greater in these other countries than in the U.K.
2. In both West Germany and Italy there is one large firm that has enjoyed the advantage of greater economies of scale than those of British producers.
3. European firms have tended to concentrate on a smaller range of models with fewer model changes: yet these models have sold very successfully overseas. In Britain there have been far more models and model changes have been more frequent, yet not as frequent or successful as the model changes in the U.S.A.
4. The proportion of production exported is lower in all countries than in the U.K. (except West Germany).
5. The European countries have benefited from the extension of their home markets in the E.E.C. Japan, on the other hand, has excluded imports by restrictions.

These factors are sufficient to account for the long run decline of Britain's export performance. However, we concluded in Section 5 that the main evidence of poor export performance was the decline of sales overseas since 1964. It could be that these long run factors began to have a greater impact in increasing the international competitiveness of the foreign producers since 1964 than before. But it could also be that British competitiveness declined absolutely as well as relatively since 1964 because of other reasons, notably the actual decline of home sales in Britain, as distinct from the lower rate of growth of home sales. It is in the light of this that the "Industry's Case" is examined in Section 8.

A note on the effect of strikes on the export performance of the British motor car industry.

One popular explanation of the relatively poor export performance of the British motor car industry is its high degree of "strike proneness". If strike incidence is measured in terms of the ratio of 'lost' working man-days to the total of employees, the strike incidence of British car manufacturers has risen from about twice the national average in the early post-war years to about six times the national average during the 1960s. On the other hand the foreign motor manufacturers, except in France, have been remarkably strike free during this period.

Graham Turner (66) makes a typical journalistic claim that "It (i.e. labour relations) is, moreover, the ~~strike~~ stick with which they (the motor manufacturers) are beaten when they go hunting for overseas orders". He gives the example of the strike in 1961 at the Rootes subsidiary, British Light Steel Pressings, which Rootes claim was the main cause of the failure of its American sales drive in 1961 and 1962.

Turner, Clarke and Roberts (67) on the other hand, take the view that the effect of strikes has been exaggerated. They show that the peak of man-days lost through strikes occurs during periods of slack demand. When demand and production are high, strikes though frequent are usually settled quickly and the effect is minimal. Both management and workers are anxious to make concessions to return to work. However, when demand and production are low, the disputes are longer and involve a greater number of workers. The workers are more willing to strike since, among other things, they hope that this will spread the limited work over a longer period and reduce the possibility of being laid off. Also the management are less willing to settle disputes quickly by making concessions. Under these circumstances, any production that is lost through strikes is quickly made up, and, overall, sales do not necessarily suffer.

It is felt, intuitively, that the truth should lie somewhere between these two extreme points of view. Various attempts were made to gather quantitative evidence of the effect of strikes for this thesis. However, material provided by the motor manufacturers themselves cannot be taken as definitive evidence since it is not possible to know exactly what the level of exports would have been had the strikes not taken place. The best example is that provided by B.M.C. In the year 1960-1961, B.M.C. claim that they lost 34,461 vehicles ~~that~~ which would have been exported (because of strikes). In that year, their

exports fell by 86,917 vehicles, that is by 30.3%, from the level in the previous year. Had the strikes not taken place ~~then~~, presumably their exports would have fallen by 52,456 vehicles, that is by 18.2% In the same year, Vauxhall and Ford were less affected by strikes and their exports fell by 17,9% and 19.0% respectively. Thus, unless there is a further explanation of the 30.3% fall in B.M.C.'s exports ~~that~~ which they are not willing to admit, it does seem reasonable to accept that strikes did have a considerable effect in causing exports to fall.

There may also be long term adverse effects from the high degree of strike proneness. Delays in delivery may lose potential customers permanently. Long term development in the form of new production techniques may be delayed because of lack of co-operation of the trades unions. Also, the American parent companies may decide to invest additional capital in their European subsidiaries rather than in their British subsidiaries. However no quantitative evidence of these effects was found.

Section 8.

"The Industry's Case"

Three arguments are examined.

A counter-argument is considered.

Section 8.

The "Industry's Case".

Introduction.

The "Industry's Case" does not consist of one comprehensive argument that has been officially documented. It is, instead, a collection of views that have been expressed from time to time by leading members of the motor car industry in Great Britain, the essence of which is that restriction of the home market seriously impairs the industry's ability to compete in export markets and, in the long run, leads to a fall in motor car exports. For example, the following statements were received in personal correspondence:

Mr. G. H. Turnbull, General Manager of Standard Triumph International Ltd. 1967.

".....the economic squeeze reduces the profitability of a Company because the home market always gives us a better return than the average export market. Reduction in profits means less money to plough back into the business to make us more competitive in an already highly competitive export field. A buoyant home front has now become recognized in the Trade as being essential to the economy of all vehicle manufacturers, thus enabling them to export at keener prices with more confidence in the future".

Sir George Harriman, Chairman of British Motor Holdings, 1967

"The export record of the industry since the war is one of which we are proud, and for which the Government should be thankful. It has been made possible only because it has been based upon a successful home market. It is a fallacy to expect the industry to continue its exports if it is denied a profitable home market from which to generate the funds for capital investment, which in turn make future exports possible".

Sir Patrick Hennessy, President of the Society of Motor Manufacturers and Traders 1967.

"The restrictions on our home market, by preventing the spread of production costs over maximum output, have already prompted price increases here, and are threatening competitive price levels abroad. In addition, diminishing profits are tending to curtail essential development".

Mr. William Batty, Managing Director, Ford of Britain, 1968

"We have always maintained that the best way the Government can assist the motor industry to export - and the National Economic Development Council now seems to agree with us - is to provide reasonable conditions for domestic growth. With a healthy home base the industry is provided with the essential stability and profitability it requires to permit aggressive selling abroad and to justify continuous investment in new products and facilities".

While the preparation of this thesis was nearing completion, the Economic Development Committee for Motor Manufacturing produced a document entitled: "The Effect of Government Economic Policy on the Motor Industry" which represents the nearest attempt to document the "Industry's Case". Use has been made of this in the first preparation of the thesis. However, it is felt that it should not be accepted as presenting definitive solutions to the problem of deflation and exports. It appears to be biased towards the industry's point of view rather than the national point of view: for example, at no stage does it refer to the need to deflate to control inflation or curb imports. It fails to answer all the problems that it raises. And it completely ignores the long run trend factors which have caused export market shares to decline, that is the factors discussed earlier in this thesis. It comes to the unqualified conclusion that (68):

"A strong and stable home market will provide the foundation upon which the industry can develop its best potential and strengthen its competitive position both at home and abroad".

The method of approach used for this thesis was to collect and arrange all the arguments provided by the motor manufacturers. An attempt was then made to assess their validity. For this, the three largest British firms were approached,namely British Motor Corporation, (which became British Motor Holdings while the research was taking place, and later became part of British Leyland Motors) Ford of Britain and Vauxhall. All these kindly co-operated as far as their company policy would allow and were very helpful with information. Statistical information was not sought from Standard-Triumph, a subsidiary of Leyland, because it was felt that it would be difficult to differentiate the fluctuations in motor car business from the fortunes of the commercial vehicle trade which forms the most important element of Leyland's work. Later, the formation of British Leyland Motors made comparisons even more difficult.

Rootes presented special problems. Their relative decline in the British market, the Chrysler take-over and the subsequent dramatic changes in the company made Rootes a special case. Rootes has therefore been excluded from this general study and a special section (section 10) is devoted entirely to it.

When it came to assessing the validity of the industry's arguments, a number of problems made it impossible to reach definite, precise conclusions. Firstly, a comprehensive examination requires statistical information which the motor manufacturers either do not have, or are unwilling to release because of company policy. In particular, it would be desirable to have precise details of profit margins in export markets and in home markets, and an analysis of how the profitability of the home market is necessary to recover fixed costs on exported products. Such information could not be made available and it has thus been necessary to deal in broad generalisations.

Secondly, the arguments presented by the motor industry are, to a large extent, motivated by two conflicting objectives. On the one hand, the industry's representatives are very eager to blame the Government's deflationary policies for their lack of export success and they wish to build up a pressure group to change a situation where, as they see it, the Government uses the motor car trade as one of the first targets in any deflationary move. On the other hand, the motor representatives wish to create a good public image of a dynamic and forceful company. These two conflicting attitudes are illustrated in a speech made by Sir George Harriman, chairman of B.M.C.(69).

"Tight fiscal measures", Sir George stated, "could be accepted for limited periods to stabilise the economy, but when they lead to an erosion of profits and the pruning of forward investment plans, there is a real danger that the leeway will be difficult to recover".

And then, in the same speech:

"Sir George said that B.M.C. had been progressively gearing themselves to meet not just tomorrow's market conditions, but those of the 1970s. They had been resolute in maintaining all development programmes in spite of the changing situation, and these programmes were now beginning to reap benefits".

Thirdly, it has been difficult to gauge the degree of seriousness of the motor industry's position. For example, during 1968, representatives of a number of motor companies quoted the figure (which seems to have been commonly agreed among them) of 1,100,000 units as being the minimum level of home sales that was necessary to support the export drive. As table 22 shows, since 1964 home sales have never been more than 52,000 below this figure, that is within 4.7% of the

of the target, which suggests that a relatively small increase in home sales would satisfy their requirements.

Fourthly, in trying to assess the validity of the arguments of the Industry, it is necessary to attempt an assessment of the actual effects of deflation. But such a question is not capable of a categorical answer since one could not know what the level of exports would have been if deflation had not taken place and if, perhaps, the rate of inflation had been greater than it actually was. It was suggested in Section 7 that there are a number of long term factors which have caused the British export performance to decline relatively to that of major competitors. It is fair to state that, as a general rule, internal conditions have been more favourable to the export performance of Britain's major competitors than they have to Britain, as was suggested in Section 7. Nevertheless, it is difficult to evaluate and qualify how far specific bouts of deflation in the British economy have actually hampered British firms. It is almost impossible to find clear-cut evidence of the effects of deflation that could not also be attributable to the long-term forces. As a result, conclusions are inevitably vague and general. The arguments are examined below.

Argument No.1.

The first argument in the "Industry's Case" is that the home market is much more profitable than the export market. Shipping costs on average about £50 a car, whereas delivery in the home market is paid by the customer (except for the Ford company which quotes a common price throughout the country). Spare parts services in foreign markets are more expensive to maintain than at home. Credit and insurance are needed for cars in transit. And the cost of production rises when it is necessary to modify basic models for individual market requirements. There are tariffs in most foreign markets so that the locally manufactured cars can be sold at a lower price than imported cars. And in the E.E.C. markets, the E.E.C. producers have had a tariff advantage: from 1968 onwards they have no tariff at all. It seems quite reasonable, therefore, to accept this argument. However, it is debatable whether one should go to the extreme of accepting unquestioningly the statement in the E.D.C. Report (70):

"In the prevailing circumstances of international competition much export business can only be secured at prices which yield little or no profit".

Unfortunately, the motor manufacturers are not willing to release figures of profit margins in different markets to prove their point and one is left with the feeling that the differences may not be as great or as important as they would like one to believe.

The Confidential Report of the Treasury Motor Industry Joint Working Party (44) states that prices are on average substantially below home prices for the highest export models: approximately 24% below in the E.E.C. markets, 22% below in E.F.T.A. and 16% below in other markets. But unfortunately they say that they are not able to release the evidence that they have.

The Economist's "Motor Business" (71) give the selling prices for the B.M.C.1100, Ford Cortina 1200 Super and V.W.1200 reproduced as Table 27.

Table 27. Prices in Different Markets (1964).
(and % of price on home market).

Sold in:	B.M.C.1100	Ford Cortina	V.W.1200.
France	£788 (126%)	£577 (94%)	£509 (113%)
Italy	£798 (128%)	£634 (103%)	£553 (123%)
U.S.A.(East coast)	£674 (108%)	£642 (105%)	£570 (126%)
West Germany	£587 (94%)	NOT SOLD	£451 (100%)
Switzerland	£613 (98%)	£595 (97%)	£555 (123%)
U.K.	£623 (100%)	£613 (100%)	£626 (139%)

These figures, at their face value, do not substantiate the Report's claim. However, the Report is presumably referring to the receipt price and not the selling price which would include the tariff and other taxes paid by the purchaser. Nevertheless, even taking into account the tariff and transport cost, the claim of the Report seems somewhat exaggerated.

Table 28.

VAUXHALL: CARS & COMMERCIAL VEHICLES

Source: Vauxhall Motors

	Value of home sales per unit sold. £	Value of export sales per unit exported. £
1955	635	435
1956	667	493
1957	635	455
1958	644	479
1959	597	478
1960	598	511
1961	686	591
1962	633	537
1963	635	547
1964	580	512
1965	603	571
1966	631	674
1967	636	694

Vauxhall kindly provided figures of the value of all home sales, the value of all export sales and the numbers of units (cars and commercial vehicles) sold at home and sold abroad. The figures for value will, of course, include all products, vehicles as well as spare parts, so that comparisons are difficult: nevertheless some guide can result by comparing the value per unit of home sales with the value per unit of export sales. Table 29 shows that the value per unit of export sales is below the value per unit of home sales for most years; which would be consistent with the "Industry's Case". However, as a proportion of exported vehicles are c.k.d., the value of which per unit would be less, one would expect a difference in any case. The extraordinary result of the figures in Table 28 is that since 1964 the difference has been narrowing and in 1966 and 1967 the situation was actually reversed and exports yielded a higher value per unit than home sales. Yet these are the very years to which the E.D.C. Report refers.

Even if we accept, without clear-cut evidence, the claim that exports are relatively less profitable (because this seems intuitively to be reasonable) there remains the problem of interpreting the significance of this claim. The Industry claims that a high level of home sales is necessary to provide a reasonably profitable level of production, and a high level of export sales is no substitute. The problem, however, is that the profits of a firm are determined by so many factors, in particular the efficiency of production which may vary. Presumably the Industry's claim is that a fall in home sales is the major cause of a fall in overall profit levels. If this is so, one would expect to find examples where:-

a). Profits fell when home sales were falling even though export sales were constant or rising.

b). Profits rose when home sales were rising even though export sales were constant or falling.

Table 29 gives a summary of the figures provided by B.M.C. Four periods are significant.

1. <u>1958/59</u>.

This year was less profitable than the previous year. Profits as a percentage of sales fell to 6.4%, from 8.06% in the previous year, and profits as a percentage of capital employed fell from 26% to 20.1%. Home sales fell by only 1.6% whereas export sales fell by 6.6% and the percentage exported fell from 42% to 40.9%.

Table 29. British Motor Corporation

Units: Cars and commercial vehicles
Source: Company Reports.

	Total Production	Home Sales	Export Sales	% of production exported.	Net Profit as % of value of sales.	Net Profit as % of capital employed.
1956/7	352,855	173,851	179,004	50.7	4.13	12.2
1957/8	504,712	291,871	212,841	42.2	8.06	26
1958/9	486,048	287,266	198,782	40.9	6.4	20.1
1959/60	669,122	382,713	286,409	42.8	7.8	28.75
1960/61	601,399	401,907	199,492	33.2	3.27	11
1961/2	600,279	376,753	223,526	37.2	1.3	4.2
1962/3	748,470	478,437	270,033	36.1	4	14
1963/4	858,775	538,593	320,182	37.3	4.77	17.9
1964/5	886,077	559,943	326,134	36.8	4.7	18.3
1965/6	845,617	531,426	314,191	37.1	3.9	12.3
1966/7	693,964	372,169	321,795	46.4	LOSS	LOSS

It seems reasonable to suggest that, as home sales were almost constant, the fall in profits can be attributed, in part, to the fall in exports. The home market was in fact rising for the industry as a whole - the total production of cars and commercial vehicles rose by 18.5% in 1958 compared with 1957 - so it seems unlikely that the profitability of the home market was falling. Indeed this was a period of mild inflation at home.

The conclusion here is that exports do make a contribution to profits.

2. 1960/61.

This year provides an example similar to the previous one. There was a substantial fall in exports of 30.3% from the previous year. Home sales, on the other hand, actually rose by 5%, though this was despite a credit squeeze and a fall in the total production of the Industry.

Profits as a percentage of sales fell from 7.78% in 1959/60 to 3.27% in 1960/1 and profits as a percentage of capital employed from 28.75% to only 11%.

A restricted home market in a cost inflationary situation may have reduced profitability on home sales to some extent, but the major factor appears to be the fall in exports.

However, while this analysis does suggest that some exports are highly profitable and that a fall in exports causes a loss in profits, this does not, of course, mean that a rise in exports is necessarily profitable. But it does suggest that some exports are profitable.

3. 1961/2.

This example tends to support the industry's case. Home sales were down by 6.3% whereas exports rose by 12%. Profits as a percentage of sales fell from 3.27% to 1.3% and profits as a percentage of capital employed fell from 11% to 4.2%. In this year, B.M.C. were obliged to draw on their reserves to maintain their dividend level.

4. 1966/67.

This year provides an example similar to the previous one. Home sales fell by 30% whereas exports rose by only 2.4% and the proportion exported rose from 37.1% to 46.37%. The Company made a loss of £3.2m. and this loss was, in part, incurred by the considerable fall in home sales that could not be recouped by expanding exports in a profitable way. B.M.C. state that the loss would have been greater had

it not been possible for them to put up their lower prices in January 1967, after the freeze imposed by the Prices and Incomes Board.

A similar type of analysis was applied to figures provided by Ford and Vauxhall but no examples were found that clearly support or invalidate the industry's claim. Either home sales and export sales moved in the same direction, or the changes were so small as to make any ~~conclusions~~ inferences meaningless.

Conclusions.

It seems reasonable to accept the Industry's claim that the major source of profits in the home market. Nevertheless, no clear-cut evidence can be found to support ~~their~~ its extreme claims and it does seem that the ~~position~~ assertion may be exaggerated. For not all exports are unprofitable and a fall in exports can have an effect in reducing overall profits. It could be claimed that a high level of exports is of equal importance to a high level of home sales in maintaining a company's profit levels.

Nevertheless, a rise in exports may also cause a loss of profitability if the extra exports have to be pushed in the face of very narrow profit margins when the home market is not providing a sufficient volume of sales to give an adequate return on capital. If foreign producers are not faced with this situation, they may be more willing to adopt forceful and flexible sales policies in the export markets. Thus the low level of profitability on sales since 1964 seems to be an understandable excuse for not increasing car exports.

Even so, it could be claimed that the answer is not to inflate the home market (which may have disadvantageous effects on the country's overall economic position) but rather to find some other ways of making exporting more profitable. After all it was suggested in Section 7 that Volkswagen are very successful in exporting 70% of their production and table 28 shows that they can sell in foreign markets well in excess of their home price and still sell below the price of the equivalent British models.

Devaluation, which is discussed in detail in Section 9, should make exporting more profitable. But the long run answer is to re-organise the production efficiency of the British firms. The mergers that led to the creation of British Leyland Motors and the rationalisation of models and production facilities should help to make British vehicles both more competitive and more profitable in export markets.

Argument No.2.

The second argument is that the profit level in the motor industry varies more than the profit level of other industries and since 1964 has been at a dangerously low level. This is fundamentally the result of fluctuations in home sales. As a result the industry has not been able to earn a reasonable rate of return on capital and this has disadvantageous effects on the long run growth and development of the motor industry.

Comparisons of profit levels in the motor industry and in manufacturing in general are made in (72) the E.D.C. Report, reproduced in this thesis as Table 30. below.

TABLE 30.

Net profit before tax as a percentage of Capital Employed.

	7 major motor manufacturers	Manufacturing in general.
1960	24.4	14.3
1961	12.6	12.2
1962	7.6	10.8
1963	13.8	11.4
1964	15	13.2
1965	12.8	12.4
1966	7.9	10.6
AVERAGE	13.4	12.1

Source: E.D.C. Report.

It is clear from Table 30 that profits as a percentage of capital employed vary considerably from year to year, certainly more than for manufacturing in general. But such a situation is only to be expected. The figures for "Manufacturing in general" are, after all, aggregate figures for all manufacturing industries and one would expect aggregate figures to be more stable than figures for an individual industry. Moreover, it was pointed out in Section2 that the demand for motor cars is naturally volatile. For example it was mentioned that the mean deviation for the growth of production in the British motor industry was 8.4. compared with 2.4 for industrial production in the U.K. as a whole. Thus Table 30 merely illustrates what one would expect as being obvious: indeed one might expect the difference to be even greater.

On the other hand, the average level of profits as a percentage of capital employed is higher than in manufacturing as a whole. The motor firms are compensated for the fluctuations by having a higher average. In the long run one would not expect the fluctuations of profits to have a serious effect on development and expansion.

However, table 30 may underrate the serious position since 1964 and in table 31 profit percentages are given for B.M.C., Ford and Vauxhall. Table 31 shows that the profit percentages have varied far more for the individual firms than the E.D.C. Report suggests. But the most significant point is that since 1964 the profit percentages have been falling and by 1968 these firms have had four years of falling and very low profit levels, not compensated by years of boom with high profit levels. Such a consistently poor performance has not occurred for any of these firms before. And while fluctuating profit levels may be acceptable as one of the features of the motor car industry, four years of poor profits is a serious development. (73). The E.D.C. Report emphasises this point:

"In 1966, profits in the motor industry declined sharply, and in 1967 the vehicle manufacturers operated at only a very small overall pre-tax profit and actually at a loss after tax. Even when allowance is made for the industry's substantial depreciation provisions, cash flow has now declined to a level at which the industry cannot either satisfy its capital expenditure requirements from retained earnings, if a reasonable distribution to shareholders is to be maintained, or expect to raise new capital or loans on the strength of its earnings position".

TABLE 31.

	B.M.C. Net profit before tax as % of capital employed	B.M.C. Net profit before tax as % of value of sales	Ford Net profit before tax as % of capital employed	Ford Net profit before tax as % of value of sales	Vauxhall Net profit before tax as % of capital employed	Vauxhall Net profit before tax as % of value of sales
1955	-	-			39.8	14.4
1956	12.2	4.1			14.6	9.9
1957	26	8.1			NEGATIVE	
1958	20.1	6.4	27.2	12.8	1.7	1.2
1959	28.75	7.8	29.5	14.5	21.2	10.4
1960	11	3.3	26.3	12.5	21.1	10.3
1961	4.2	1.3	16.8	8.6	9.0	5.8
1962	14	4.0	12.8	6.5	11.9	8.2
1963	17.9	4.8	21.8	10.1	10.6	7.4
1964	18.3	4.7	13.7	6.5	16.5	9.5
1965	12.3	3.9	5.0	2.3	14.0	9.1
1966	- 2.0	- .7	4.2	1.8	2.6	2.1
1967			1.6	0.6	3.7	3.0

Source: Company Reports.

The Effect of Fluctuating Profits on Investment.

It is the Industry's argument that fluctuating profit levels hampers long run investment programmes. Low profits reduce the reserves that are available for internal financing. British car firms have to compete for external finance on the open market and so, if motor car prospects are poor, it is difficult to raise funds. Also the American car firms in Britain do not receive funds for expansion if the parent companies can get a better return elsewhere. For example, the E.D.C. Report (73) argues:

"Since the motor industry operates on an international level, it must compete at this level too for investment funds. In this context, the experience of the three large motor companies in the U.S.A. is particularly important. These normally earn a return well in excess of 10% after tax on their capital employed".

TABLE 32.

Capital Employed By:

£m.	7 Motor Manufacturers	Manufacturing Industry
1960	409.0	11,118
1961	454.2	11,962
1962	475.6	12,705
1963	529.9	13,237
1964	577.8	14,289
1965	629.9	15,393
1966	637.1	16,220
1967	633.6	-

Source: E.D.C.

Table 32 shows that Capital employed in the motor industry between 1960 and 1965 rose by 56% in money terms, compared with a rise of 38% for manufacturing industry as a whole. However since 1965 the level of capital employed in the motor industry has remained virtually stagnant. But it is debatable ~~that~~ whether these figures can be accepted as evidence that long run investment has been curtailed because of government policy.

Table 33 gives the figures of capital employed for B.M.C., Vauxhall and Ford. The figures are calculated as Fixed Assets, plus Current Assets, minus Current Liabilities, which is not what an economist would mean by 'Investment'. Even so, these figures show that Vauxhall has experienced a fairly constant rise throughout the period 1955-1967, with no fall since 1964, so the argument certainly does not apply there. In 1965 Vauxhall announced in their Annual Company Report: "over £30m. spent on new buildings, plant and tooling, the highest figure spent by the company in one year".

Before 1964, the figures for B.M.C. suggest that expansion has occurred in one year, followed by a year of consolidation and a further year of expansion. But these fluctuations are not related to changes in Government policy. For example, capital employed rose by nearly £13m. in 1957, a period when restrictions were in force, followed by a negligible rise in 1958 when no restrictions were in force. It seems more likely that invest-.....

Table 33.

CAPITAL EMPLOYED BY B.M.C., VAUXHALL AND FORD -

Source: Company Reports.

	CAPITAL EMPLOYED by £m.			Ford's Expenditure on land, buildings and plant. £m.
	B.M.C.	Vauxhall	Ford	
1955		27.2		
1956	67.9	48.5		
1957	80.8	65.9		
1958	81.0	65.8	97.2	18.3
1959	93.7	63.6	114.8	12.8
1960	92.4	66.6	128.2	18.3
1961	96.7	76.6	131.9	34.3
1962	107.3	87.2	139.5	28.8
1963	118.2	102.6	160.7	33.3
1964	124.3	108.5	175.5	47.5
1965	165.8	123.9	176.5	39.4
1966	160.5	142.5	174.3	41.9
1967		155.6	166.7	37.3

ment is determined by long run trends such as the introduction of new models and plans to take advantage of technical developments, rather than short term changes in Government policies. Since 1965, however, B.M.C. has experienced a fall in 'capital employed' in spite of the merger and formation of British Motor Holdings in 1966.

Ford have also experienced a fall in the level of capital employed since 1964. But Ford were able to give figures for capital expenditure in land, buildings, machinery and plant for each year and these are included in Table 33. These show that this expenditure has not fallen since 1963 in money terms, though it may have fallen in real terms. And Ford completely refute the "Industry's Case" when they write in their Company Report 1967

"The year 1967 saw the completion of a product, engineering and factory development programme more ambitious and far-reaching than anything else in the Company's history".

Finally, if we return to the figures in Table 32, although "Capital Employed" has remained constant since 1965, Net Fixed Assets have increased over this period. They were:

£415.4m. in 1964
£447.7m. in 1965
£482.1m. in 1966
£511.8m. in 1967

The reason why "Capital Employed" has not increased is that Net Current Assets have fallen, which could simply mean that stocks are being used more efficiently, and Net Current Liabilities have increased, which means that firms have been able to increase their short term borrowing.

A factor ~~that~~ which neither the E.D.C. Report, nor the motor manufacturers refer ~~to~~ is that the motor industry has qualified for the 45% Investment Grant from the Government for the factories in Development Areas. All the firms have such factories, for example, Rootes at Linwood, Ford at Halewood and Vauxhall at Ellesmere Port. Thus their investment policies should have benefited considerably from this generous aspect of Government policy.

It is difficult, therefore, to find conclusive evidence that the long run development plans of the motor firms have been severely cut back as the result of Government policies. They may be less than the firms would have preferred if the British economy has been able to expand rapidly since 1964. But it may be that, since 1964 the motor firms have been able to use their capital resources more efficiently, particularly as a result of mergers. This is discussed later in this section. If this is so, then in the long run, benefits will eventually occur.

The Effect of Fluctuating Profits on Model Policy:-

The Industry argues that, without a developing home market, they cannot introduce the frequent model changes that are necessary to maintain their market shares overseas. The reason for this is that a buoyant home market is necessary to launch a new model in order to provide the firm with a sufficiently high volume of profitable sales to make the expense of design, development and re-tooling worthwhile. For example, the Confidential report of the Treasury/ Motor Industry Joint Working Party states (44):

"On average, more than half of the motor firms' capital expenditure is incurred in the development and introduction of new models. Given the importance of current profitability for each enterprise as a determinant of the willingness and ability to invest, when the level of profits declines substantially, the introduction of new models may be delayed". (My emphasis).

However, it is difficult to find examples of models that have been delayed. Since models have a development time of about three years it seems unlikely that short run government policies would result in a serious delay of projects. And since 1964, the period during which profitability has been so low, many new models have been introduced. For example, in 1966 Vauxhall introduced the new HB Viva models and the new Viscount. In 1967 the new Victor range was introduced with the all-new o.h.c. engines. Estate car versions of the Viva followed. In 1966 Ford introduced the new Cortina, the Corsair 2000, the Mark IV Zephyr-Zodiac range, and the Transit range of light vans. In 1968 the Escort was introduced. There can be no doubt that these two companies' model policy has not been altered by Government policy.

The situation with B.M.C. may be a little different. They have introduced no new family saloon since the 1800 in 1964. The Austin 3-litre was developed in 1967 and became available for sale in 1968. But B.M.C. have not made any attempt to replace their front-wheel drive models nor have they changed their aging range of Farina styled cars, the A40 and A60. The Morris Minor is also still in production. Since 1966, motoring correspondents have been writing about a possible new 1500 c.c. B.M.C. car and there have been many rumours about it.* These correspondents have given many technical reasons for the delay, in particular the problem of designing a new front-wheel drive car that looks different from the existing 1100 and 1800. Also since 1966 B.M.C. has been involved in two mergers, firstly with Jaguar to form B.M.H. and secondly with Leyland. So another reason for the delay may be the need to completely re-think the model structure of the combined group of companies.

* P.S. The "Maxi" was produced in April 1969.

No motoring correspondent has ever suggested that the delay has been the result of a depressed home market. And as B.M.C. have been losing their share of the home market, it seems unlikely that they would delay the introduction of a new model unless they were uncertain that it would be accepted by the public as a technical improvement on the new models of Ford and Vauxhall.

Despite the lack of a new model range, B.M.C. have introduced many developments in their cars. For example, they have pioneered automatic transmission in very small and medium-sized cars. And they have introduced the 1300. on the 1100 body base. And in 1967 they spent £16m. on a new engine factory at Coften Hackett near Longbridge which, it is claimed, "will be the most highly automated factory in the world, producing a 'revolutionary' range of engines". It seems more likely that B.M.C.'s relative decline in the home market is the result of a lack of bringing forward new ideas; which is a chance factor, rather than the result of a depressed home market. Discriminatory government policies are a convenient excuse, but not a good reason.

The Effect of Falling Profits on Expenditure on Export Promotion.

One argument put by some representatives of the motor industry is that when profits and sales are low, economies have to be made in expenditure on marketing and distribution networks in export markets and that plans to penetrate new markets are curtailed. For example, advertising expenditure is cut, negotiations for new dealers are delayed and less is spent on overseas assembly plant. Unfortunately, no figures could be made available for comparisons to be made and two reports in the 'Times' give the opposite impression.

The 'Times', 22nd December 1967 reported a statement from Ford: "In America, Ford of Britiain have 658 dealers. By March we shall have added another 195. We spent £1m. on production and advertising there this year, and next year we shall double that amount".

And on December 31st 1968, The 'Times' reported:

"British Leyland is to embark immediately on a massive expansion of its major Common Market assembly plant at Seneffe, Belgium. Capacity will be increased five-fold - from 22,000 cars a year to over 100,000".

Argument 3.

The motor industry is capital intensive with a high level of expenditure on expensive equipment, transfer machines, giant presses and moving assembly lines. And recent technological advances, which have led to the production and use of automated equipment, has further raised the cost of tooling-up a factory for a particular model of motor car. Because of this, the motor industry claims that overhead costs exercise a strong influence over the total costs of production. It is the "Industry's Case" that a large home market is necessary so that these high overheads can be spread over a large volume of production. Deflation that reduces home sales raises the costs of production and so renders the industry less competitive abroad.

For example, Sir Patrick Hennessy wrote in 1967:

"The restrictions on our home market, by preventing the spread of production costs over maximum output, have already prompted price increases here and are threatening competitive price levels abroad".

And the E.D.C. Report states: (74)

"The heavy investment programmes of recent years, which have been a feature of the motor industry abroad as well as in the U.K., have led to a shift in the distribution of costs towards fixed costs as against variable costs..... In such circumstances, unit costs have become more responsive than ever to throughput and the penalties of underutilization of capacity have become more severe".

Maxey & Silberston, on the other hand, writing in 1959, express the contrary view and lay the emphasis on the importance of variable costs. For example, they write (75)

"Mass production ensures that, despite the huge outlays in capital equipment, fixed expense per unit is a small proportion of total cost. In short, the fixed cost of mass producing nothing is tremendous; the fixed cost of producing one unit at the level of volume at which all the expensive equipment is designed to operate is relatively light".

And

"..... changes in the prices of materials and labour will exert an immediate and descisive effect on costs".

Certainly, Maxey and Silberston's calculations were made before 1959 and the situation may have changed since then. Unfortunately the motor firms were not able to provide cost figures that could be used either to prove or disprove their claims.

The result is that only small fragments of evidence can be used with which to judge the case. While it seems reasonable to accept, a priori, the Industry's main point that unit costs rise when capacity-utilization falls, this is only one factor that causes costs to rise; while other factors, such as rising costs of materials, components and wages, may be equally, if not more important. Thus, while deflation raises costs by creating under-used capital resources, rapid economic growth accompanied by inflation would raise variable costs. The E.D.C. Report must be criticised on this point since it stresses the increasing burden of overheads but makes no reference at all to the rise in costs from inflation.

Only one reference to inflation was found in the arguments of the motor manufacturers. In February 1969 (79) the Society of Motor Manufacturers and Traders complained to the Prices and Incomes Board about proposed increases in the price of steel by the British Steel Corporation. They claimed that these would increase the industry's costs by over £4m., would raise the cost of an average saloon car by £10 and would reduce car exports by between 5% and 7%.

The Influence of Fluctuating Demand.

The E.D.C. Report emphasises that the cost per unit of production of motor cars is affected by the variations in the level of production that result from fluctuating demand. It is necessary for firms to have sufficient capacity to meet periods of peak demand and this results in periods of under-utilization during slack demand. If capacity is not available to meet the peak demand at normal capacity working, a manufacturer must use overtime and shift working which increases unit labour costs. And during periods of depressed sales, it is impracticable to maintain full capacity working since it is expensive to store large numbers of cars and this may also result in their deterioration.

But in raising this point, the E.D.C. report is merely describing a problem that is common to many capital-intensive industries and, in so far that the demand for motor cars is volatile, this is an inevitable problem that the industry must face. As was suggested in Section 2, Government policies may at times accentuate the fluctuations but these alone cannot be held responsible for this problem.

The Change in the Cost Structure of Motor Firms.

The E.D.C. Report claims that, in recent years, the cost structure of motor firms has changed so as to increase the importance of overhead costs. Maxey and Silberston (76) provide some interesting material which can be compared with that of the E.D.C. Report. When asked about the calculations of Maxey and Silberston, the motor manufacturers suggested that they were out-of-date. However, comparison with the figures in the E.D.C. Report only partially support this view.

Maxey and Silberston give an analysis of the typical total costs of a standard car in 1954 for two different types of firms.

	Firm A.	Firm B.
Materials	60.5%	79.6%
Variable costs (including labour)	21%	11.6%
Total variable costs	81.5%	91.2%
Fixed costs	18.5%	8.8%

The difference between the cost structures of the two firms is the result of differences in the structure of the firms. Firm A is more integrated than firm B, which buys a far greater proportion of its materials from other firms. For example, firm A may produce its own car bodies and firm B may buy these from another firm. (Maxey and Silberston estimate that the body of a car represents 38.4% of the unit factory cost of a mass produced car so that the integration of body making plant within a car assembling firm would dramatically affect the cost structure).

The E.D.C. Report gives the following estimate of costs for a typical high output model.

	1958	1967
Fixed Overheads	9.9%	15.9%
Materials	62%	62%
Other variable costs	28.1%	22.1%

The Report concludes from this that overheads have become an increasing burden. But the Report does not take into account changes in the structure of the industry since 1958. One possible explanation of the change in figures is that firms have become more

fully integrated vertically. Ford and Vauxhall now make all their own bodies. Rootes has bought the Scottish factory of Pressed Steel. Pressed Steel have merged with Fisher and Ludlow in the B.M.H. group and later British Leyland Motors. All this means is that the burden of the fixed costs has not increased in total but has merely been shifted from the formerly independent suppliers to the integrated motor firms. Maxey and Silberston state:

"Ordinarily car manufacturers do not expect their suppliers to raise prices when volume is reduced". Thus suppliers did not necessarily pass their increased costs on to the motor manufacturers which gave a non-integrated firm some protection from falling production that the fully integrated firm did not enjoy.

Nevertheless, it seems reasonable to accept, a priori, that this is only a partial explanation and that the development of more fully automated production methods has increased the burden of fixed costs, offset by a decline in the importance of variable labour costs. It is still necessary to show the extent of the effects of a fall in production on costs.

The Effects of Falling Production on Costs.

The figures of cost structure in 1967 provided in the E.D.C. Report correspond approximately with those of Firm A of Maxey and Silberston - indeed the latter lay slightly more emphasis on the importance of fixed costs. It is possible, therefore, to make use of Maxey and Silberston's calculations

Maxey and Silberston base their calculations on the notion of a Standard Level of capital utilization which, they suggest, is about 80% of full capacity working. And they define full capacity working as the maximum volume of output that would be possible with shift and overtime working. Standard capacity working would be the most desirable average in periods of normal estimated demand. From the figures that Maxey and Silberston had available, they estimate that:

"Ignoring for the moment development expense and special tools, ...variations in volume of the order of 20% from Standard will increase or decrease unit cost about 2%."

The E.D.C. Report gives the following figures of capital utilization of seven major manufacturing companies for the years 1963-1967.

Production of Cars and light vans derived from cars for seven motor manufacturers.

Source: E.D.C. Report

Thousands	1963	1964	1965	1966	1967
Production	1,712	1,975	1,827	1,682	1,630
Estimated capacity	2,061	2,257	2,350	2,470	2,545
Capacity utilization	83%	88%	78%	68%	64%

If the E.D.C.'s defination of "capacity" is the same as that of Maxey and Silberston and if output in 1964 was just above "Standard capacity working" and in 1965 just below, then production in 1967 was exactly 20% below Standard capacity. Thus using Maxey and Silbertson's calculations, the fall in production in 1967 resulted in a 2% increase in costs.

An average family saloon car whose price is, say, £800 on the British market would cost ex-works about £500 (£180 is paid in purchase tax, and about £100 represents the distribution and dealer's mark-up). Thus, for such a car, between 1965 and 1967 the under-utilization of capacity would have resulted in an increase in costs of about £10.

These calculations do not take into account the costs of development and specific re-tooling for a new model. Again, no actual figures are available and so it is necessary to make a guess. In 1962 Ford spent £12m. on the development of the new Cortina of which £9m. was for tools and equipment and £3m. for design and testing. Between 1962 and 1966 when the model received a complete change, about 1 million units were produced. This means that development and re-tooling cost about £12 per car. If we assume that the level of production of the Cortina was at Standard capacity, which is reasonable as this model was a successful one, then we can calculate that had sales been cut by 20% during that period then the cost per car would have been £15, that is an increase of £3 per car.

Thus the above calculations suggest that the effect of falling production in 1967 and the resultant under utilization of plant could have increased the cost of production of an average medium

sized car by about £13. Of course, some models were hit more by falling sales than others, and some firms were more successful than others in maintaining the level of output. Nevertheless, the amount involved is only marginal and its main effect would be to reduce the profit margin, particularly on exports, rather than to make it necessary for firms to increase overseas prices.

The Problems of Changes in Variable Costs.

As mentioned earlier, the motor manufacturers make no mention in their arguments of the effects of inflation on their costs, in particular their variable costs. Yet Maxcy and Silberston consider changes in variable costs to be more important than fixed costs. Without having detailed figures of the actual increases in costs incurred by the motor manufacturers, it is difficult to make an assessment. However, the following rough calculation may give some indication for the years 1963-1966. During those four years, labour earnings per hour in the metal manufacturing industries of Britain rose by 21% (77). Productivity in the motor industry during the same four years rose by 18%. (78). It seems reasonable to suggest, therefore, that unit labour costs rose very little. If labour costs rose by 3% and, assuming that labour costs represent about 20% of total costs, then labour costs led to an increase in total costs of .6%. On the other hand, wholesale prices of manufactured goods rose by 11% between 1963-1966. If the supplies of materials and components rose by as much as this, and if 60% of the costs of production consist of 'bought-out' materials, then this would increase the total costsof production by 6.5%. Thus, as a rough estimate, inflation caused the cost of production of motor firms between 1963 and 1966 to rise by just over 7%. This is probably a conservative estimate since costs in the motor industry have probably risen more than in other more stable industries, for example, it is likely that wage increases in the motor industry have been greater than for other manufacturing industries. This rough calculation does suggest that the cost of production rose by nearly 2% a year which was as great as the increased cost that was caused by underutilization of capacity. And an important difference is that increased variable costs have a permanent effect on costs whereas, in the other case, as soon as full capacity working is resumed, unit costs fall again.

Conclusion.

It seems reasonable to accept the Industry's argument that under-utilization of capital increases unit costs because of the burden of overhead costs. However, calculations suggest that in 1967, the worst year for under-utilization, the increase in unit costs was probably about 2%.

The Industry generally ignores the effect of inflation on variable costs which has also caused unit costs to rise. If the Government's policy had been to ease restrictions on the home market and this had increased the rate of inflation, this would have had equally, if not more, damaging effects on unit costs.

A counter-argument: the effects of mergers.

The "Industry's Case" suggests that the years of depressed home sales since 1964 have had a damaging effect on the future development of the British motor industry. However, these four years have seen dramatic changes in the structure of the British motor industry that are likely to have a far more advantageous effect on long run development outweighing the various arguments of the "Industry's Case". Yet neither the motor manufacturers nor the E.D.C. Report have made reference to this point when referring to Government policies.

In 1964 Chrysler of America bought Rootes and completely re-organised it (this is discussed at length in Section 10). In 1965 B.M.C. took over Pressed Steel and merged it with Fisher and Ludlow to create what is claimed to be the largest body building group in Europe, capable of producing over 1 million bodies a year, from only five major factories. In 1966 Jaguar joined B.M.C. and British Motor Holdings was formed. And finally in 1968, Leyland, with Standard Triumph and Rover, combined with B.M.H. to form British Leyland Motors, the largest motor manufacturing company in Britain with a capacity that makes it the sixth largest in the world and third largest in Europe.

It could not be claimed, of course, that these mergers have been the direct result of a depressed home market but it is likely that the difficulties that the motor firms have experienced since 1964 have accelerated the process. ~~Talking~~ Writing of the formation of British Leyland Motors, the 'Autocar' on January 25th 1968 said in its editorial: "It is likely that the national financial difficulties and Government pressure have together speeded up this merger". Had the motor firms been experiencing a boom of sales, with peak production figures, it is unlikely that the management would have had the time or energy, or seen the need, to implement radical changes in the structure of the industry.

It was suggested in Section 7 that some of the main factors that explain Britain's relatively poor export performance were that British firms were smaller than Volkeswagen and Fiat and so were denied some economies of scale, and that British firms produced too many models whereas the continental firms had had success with a few basic models with a long production life. The formation

of British Leyland Motors will give the capacity for the full advantages of the economies of scale and the financial strength and physical resources to concentrate on a simplified motor car range that can be subjected to frequent model changes, on the American pattern, to compete more effectively both with the European giant firms and with the American subsidiaries.

Giovanni Agnelli of Fiat (80) suggests that 2m. units is the minimum level of production at which a European motor producer is viable and can compete on equal terms with the American firms in Europe. The formation of British Leyland Motors is a major step towards this.

The benefits of the economies of scale are not so much the benefits that can be derived from larger factory units. The advantages of the economies of scale are those which apply to a large group of factory units. For example, B.L.M. has a complete range of vehicles, all sizes and types of cars, and all possible varities of commercial vehicles including buses, tractors and earth movers. This range is more comprehensive than that of Fiat. This will give the benefits of diversification and combined research that has many applications. For example, Rover's gas turbine engine is now available for use in all the group's heavy vehicles. Rationalisation of motor car models will be possible. At present B.M.C. has 17 body shells (comparedto Ford's 4 and Vauxhall's 3). Sir Donald Stokes (now Baron Stokes of Leyland) announced (81)

"We shall apply streamlining and simplification of range to our forward planning". Already in 1968 four models have been abandoned. This rationisation of model structure will provide certain production economies of scale, for example from standardisation of components and common power units. Also it will make spares networks cheaper to operate and, perhaps, more efficient since fewer parts will be needed.

The combined resources of the group provide important economies of scale in research and development which will offset the advantage that the American subsidiaries at present enjoy in being able to use the facilities of their parent companies.

Economies of scale will also accrue in joint purchasing, the centralisation of specialised and certain administrative staff and in marketing. For example, on January 12th,1969, Mr. Bert Walling, purchasing director of the Austin-Morris division and purchasing overlord of British Leyland, announced that British Leyland buys about £500 million a year of goods and services from outside suppliers. He now estimates that £37 million can be saved by standardisation and greater use of component producers within the group. Also the group has greater

bargaining power in negotiating contracts with suppliers.

There will be a rationalisation of dealer networks both at home and overseas. Part of B.M.C.'s weakness in the past has been too many dealers with a turnover insufficient to enable them to exploit modern marketing methods. For example, in Britain two-thirds of B.M.C. dealers sell less than 20 cars a year and account for only 17% of total sales. Overseas the problem has been similar: sales have been too low to build up large, efficient dealerships. There will now be co-operation and rationalisation of sales, service and spares networks, particularly in Europe and North America and the joint use of assembly plant in Belgium, South Africa and Australia.

The Government has strongly supported the formation of British Leyland with diplomatic pressure and also a £25m. loan from the Industrial Reorganisation Corporation on favourable terms (i.e. repayment in 7 years, 5½% rate of interest and interest payments can be deferred in the first two years).

There can be no doubt that this merger is the most significant development in the motor industry in this decade. It will place the British motor industry in a strong competitive position once more. The depressed home market may have accelerated the merger and may also have rendered management more receptive to change. Certainly, Government support facilitated the merger. Thus, far from being a disastrous period in the long term development of the British motor industry, the years 1964 to 1968 may be seen in retrospect as the most portentous.

Section 9.

A Note on Devaluation.

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On November 18th 1967 the pound Sterling was devalued from a basic rate of $2.80 to $2.40, that is by 14.3% and from an effective market rate of about $2.78 to about $2.41, that is by 13.5%. At the time of writing, in February 1969, it is still not clear what effect devaluation has had on the exports of the British motor industry and so it is possible only to make a few notes from the confused picture that has emerged.

In theory, devaluation enables a British producer to cut the foreign price of his product without suffering a loss of revenue per unit sold in Sterling terms. Depending on the price elasticity of demand in the foreign markets, sales should increase. In so far as British exported products had been uncompetitive by a small price margin, devaluation enabled British producers to redress the balance.

Alternatively, a British producer can hold the foreign price steady and benefit from a greater profit margin in Sterling terms. Part of this increased profit margin may be shared with the dealer network to encourage greater efficiency. To the producer, an increased profit margin should close the gap between the profitability of the export markets and the profitability of the home market, creating a greater incentive to export. Since severe deflationary measures on the home market followed devaluation, it was hoped that the "Internal Pressure Hypothesis" would apply, resources and production would be concentrated on exports, at the expense of home sales.

However, the first doubt is whether a devaluation of 14% was sufficient either to render British motor cars more price-competitive or to make the export of a greater proportion of production profitable. Certainly British companies did not benefit from the full 14% margin. Firstly, costs of imported materials are likely to have risen. Secondly, the Export Rebate and the S.E.T. refund were abolished. Thirdly, the high bank rate of 8% and other internal restrictions added to the costs of production. The 'Times' on November 21st 1967 estimated that these increases would add £25 to the cost of producing an average family car, an increase of about 4%. Estimates subsequently provided to me by the motor manufacturers suggest the devaluation gave an increased price/profit margin of about 7% on exports.

The E.D.C. Report stated: (82)

"Devaluation will obviously help to make exporting more attractive, although the resulting advantages will be offset to some degree by the

additional costs likely to arise from the same cause and from other measures introduced at the same time as devaluation. The net benefit to the industry will certainly be insufficient to bridge the previous gap between the relative profitability of home and export sales".

There was a marked contrast in the reaction to devaluation by the British-owned companies and the American owned companies. British Motor Holdings and Standard Triumph announced price cuts, many in excess of the 7% margin. Triumph were the first to announce price cuts: 10% in E.F.T.A. countries, 8% in U.S.A., and 5% in E.E.C. This brought the Triumph models, considered before to be more expensive luxury models, within the same price bracket as the standard models of foreign producers; for example, the Triumph Herald was to be the same price as the VW 1300 in Switzerland. In February 1968 Mr. Jack Reardon, Export Manager, estimated a 25% increase in sales from the average 8% fall in export prices. This implies a price demand elasticity of about 3 which suggests that the extent of devaluation was about right.

B.M.H. were much slower to announce price cuts. In Europe, Mr. Filmer Paradice announced that he was under strong pressure to increase dealer margins but resisted this by promising a higher turn-over to dealers. On December 6th 1967, B.M.H. announced price cuts: an average of 5.9% in European markets, 10% in France, 9% in West Germany, 12% in the Netherlands, 3½% in the U.S.A. This brought many B.M.C. models down to the same price as standard foreign makes. For example, the B.M.C. "Mini" sold for the same price as the Citroen Ami 6, Fiat 850 and Daf in the E.E.C. markets, or lower.

The American-owned companies, particularly Ford and Vauxhall, on the other hand, seemed relatively indifferent to the opportunities offered by devaluation. Ford and Vauxhall stated that price was not the all-important consideration and that, unlike B.M.H. and Triumph, they both had advanced models with the combination of design and performance to sell well in foreign markets. For example, in January 1968, Mr. David Hegland, Managing Director of Vauxhall, said:

"Price is obviously of great importance in the fiercely competitive market overseas. But perhaps more important still are specification and appearance, quality and after-sales service".

In 1968 Ford had their new Cortina 1600, the new Escort and in January 1969 introduced the new Capri. Vauxhall had the Victor and Viva. All these models were price-competitive before devaluation and both companies had made optimistic forecasts of increased exports. Devaluation came as an additional bonus to their export plans, rather

than a major stimulant in itself. Prices were reduced, though only marginally and both Ford and Vauxhall were unwilling to publicise the price cuts. It is possible that they feared that price cutting would result in a retaliatory price war, especially in Europe, and this would damage the prospects of their counterparts in Europe, Ford of Germany and Opel. Because these two companies estimated considerable increases in export sales before devaluation, it is difficult to estimate the overall effect that devaluation in itself has had. Moreover, the doubt is raised ~~that~~ whether lack of price-competitiveness or the willingness to export has, in the past, been the restraining factor on their level of exports. In their view, it seems that export sales depend primarily on model policy and dealer policy and, as has been suggested in this thesis, these are only marginally affected by internal government measures.

(continued overleaf)

The question of supply since devaluation.

In 1968, following devaluation, the question of the demand for British motor cars in foreign markets has not posed serious difficulties. Price cuts on some models and the introduction of new models by Ford and Vauxhall seem to have generated an increased level of demand. The problem, however, has been to increase supply to meet the demand.

A confused picture of the progress of exports unfolded during 1968. In the first three months of the year, it was announced that production for export by British firms had risen by 28%, compared with the same period on the previous year. However, figures for the actual shipments showed that cars exported between January and March were 149,196 units, compared with 153,420 in the same period in 1967, a fall of 2.8%. Various reasons were given for this. For example, there was a reported shortage of shipping space, particularly to North America. On May 10th 1968, the 'Times' reported a fall in car shipments since January as the result of the pressure on shipping space that had built up since the dock strike of September 1967. In the same month, Jaguar announced that since January shipments to the U.S.A. had fallen by 11%, despite long order books.

Sales to North America were also hit by the new safety regulations which have been discussed in Section 3 of this thesis. These required extensive changes to models by January 1st 1968. For many models, these changes could not be made in time. Rootes, in particular, were unable to comply with the regulations in time and sold fewer cars in the U.S.A. in 1968 than in 1967. The Austin-Morris division of British Leyland, despite their 15% margin of capacity, were unable to meet the orders for the Austin America which had been especially designed for the U.S.A. markets.

However, during the immediate post-devaluation months, the British companies showed themselves insufficiently flexible, despite their supposed surplus capacity, to produce and deliver all of the increased quantity of exports required. For example, Mr. Albert Lawrence, Sales Director of B.M.C. Europe, was quoted in the 'Times' March 13th 1968, as saying: "The demand for B.M.C. cars since devaluation has been tremendous. With the delays we have lost in the region of 5% of orders".

By the second quarter of 1968, many of the supply problems must have been overcome. Between January and June, 348,246 units were exported, compared with 306,298 in the same period of 1967, an increase of 13.7%.

In the third quarter of 1968, production was disrupted by a series of strikes, particularly in the component suppliers, notably the strike at the Girling brake factories in Cwmbran and Bromborough, and the strike at the Birmingham plants of Lucas. The Department of Employment and Productivity announced in October 1968 that 678,000 working days had been lost in strikes in the motor industry in the first eight months of the year, compared with 285,000 over the same period in 1967.

In November 7th 1968 Sir Donald Stokes said (83) -

"We would no doubt have gained greater benefits from devaluation if we had been able to organise ourselves sooner, and if we had been able to satisfy our demands in other respects. We have been prevented from doing so both by lack of capacity and labour unrest".

To blame labour unrest seems to be understandable. But it is surprising that Sir Donald Stokes should blame lack of capacity when it has been the motor industry's argument since 1964 that the restricted home market has prevented the full use of capacity. Since devaluation, the home market has been subject to further deflationary measures. Hire purchase restrictions were increased in November 1967, in January 1968 and again in November 1968. Purchase Tax on cars was raised from 27½% to 33.1/3% in the budget of March 1968.

The Government's object was to reduce home demand to free the capacity necessary to meet the rise in export demand. It was noted in Section 2 that in November and December 1967, following devaluation, there was a sudden burst of home demand for new cars, which arose from expectations of price rises. This continued into the early months of 1968. In 1968, new registrations were about 1,100,000, slightly less than the 1967 figure of 1,143,000 and below the peak figure of 1,216,000 in 1964.

It is estimated that total production in 1968 was 1,815,800 cars, within 1% of the 1964 peak figure. It is likely, therefore, that production was near to the full capacity level. The fact that Sir Donald Stokes should blame lack of capacity for the failure to fulfil all export orders after devaluation suggests that, had the home market been more buoyant, the motor industry would have had even more difficulty in fulfilling its requirements, and the export drive might have suffered.

Another indication of the shortages of capacity was the increase in imported cars in 1968. The "Autocar" reported in October 1968 that many motorists were having difficulty in obtaining early delivery of a number of British models. Imported cars, on the other hand, were often available for immediate delivery. In September 1968,

the Board of Trade announced that in the first eight months of the year, imports were 60% more than in the same period in 1967. In October 1968, Fiat announced that their sales to Britain were 40% up, Renault 20%, Volvo 60% and Mercedes 12%.

Thus, in the circumstances of 1968, when the British motor industry was struggling to fulfil the increased demand in the export markets, and was to a certain extent starving the home market of new cars, it seems paradoxical that the members of the motor industry, including the Economic Development Committee, should argue for a more buoyant home market. In this case, it seems that the "Internal Pressure Hypothesis" does apply.

The level of exports in 1968.

At the time of writing, only provisional figures of the level of motor exports in 1968 are available. The Ministry of Technology estimate that 676,511 motor cars were exported, compared with 502,596 in 1967, that is a rise of 34.6%. In value terms, motor exports rose by £280m., that is by 32.5%, compared with 1967. As mentioned above, total production rose by 17% and came within 1% of the peak level of 1964. The percentage exported was 37%, the highest percentage since 1963. Since production for exports rose by 42%, it is likely that this favourable trend should continue.

As mentioned earlier, both Ford and Vauxhall had forecast a rise in exports for 1968 before devaluation took place. Also, as was mentioned in Section 8, the change in the structure of the British motor industry should have made it more competitive overseas. Thus the rise in exports may not be attributable to devaluation alone. Even so, there can be little doubt that devaluation provided an important stimulus to the export performance. The fact that home demand was restrained also helped to create a shift of resources into exports, as the percentage of 37% of production exported indicates.

Section 10.

The Rootes Motor Group.

(An Appendix).

Section 10.

The Rootes Motor Group.

The recent history of the Rootes Group illustrates these interesting points:-

1. Since 1962, it has been an ailing firm with substantial losses from 1965. to 1968. The reasons for its decline relative to its competitors will be examined under the following points:-

a) lack of modern management techniques
b) lack of a sound model policy and the misfortune of the diappointing sales of a leading model
c) lack of the economies of scale
d) lack of adequate financial resources
e) the fact that these factors co-incided with the severe government deflationary measures since 1965.

2. Rootes is now owned and controlled by Chrysler of America and the reasons for this 'take-over' will be examined.

3. The results of this 'take-over' will be assessed in the light of the future of Rootes in particular, and the British motor industry in general.

Unfortunately, Rootes are not willing to release statistical material, except that included in the 1968 Directors' Report, ~~and this~~ which gives nothing about the level of production. The figures used in this survey are gleaned from the various reports of leading journalists and must, in some cases, be informed estimates.

The Decline of Rootes.

The decline of Rootes cannot be attributed to one major factor but rather to a combination of factors ~~that~~ which happened to co-incide with the squeeze of the home market induced by government policies. Each of the separate factors, however, warrants examination.

Management

Before 1964, the Rootes Group was the only major motor firm to have retained the same family management and ownership structure since the early days of the British motor industry. The Group began in 1928 when the two Rootes brothers, William and Reginald, who had inherited the largest vehicle distribution business in Britain from their father, bought the then out-dated plants of the Hillman and Humber companies in Coventry. In 1935, during a period of fierce price competition, they were sufficiently prosperous to acquire Clement Talbot of London, Sunbeam of Wolverhampton, and British Light Steel Pressings later in 1937. Singer too was added to the Group in 1955 when its output had fallen to 50 cars a week and the company was in serious financial difficulties.

The family tradition was strong and dominated the firm. In 1964, Lord William Rootes was chairman, Geoffrey Rootes was managing director, Brian Rootes was the director responsible for exports, sales and service, and Timothy Rootes, the son of Sir Reginald, was the director in charge of the Coventry factories. The Board had always claimed that this domination by the Rootes family did not hinder the development of the firm, but commentators on the motor industry have remarked on the traditional, public school, ex-officer outlook of the management at all levels and the anachronistic management structure (84). Mr. Peter Ware, the Engineering Director in the early 1960s tells of the managerial difficulties he encountered when trying to introduce the Imp, which was the first completely new car to be developed by the company since the 1930s. And it is, perhaps, not insignificant that, since the Chrysler 'take-over' was completed in 1967, no member of the Rootes family is left in an executive position, save Lord Rootes who remains chairman, and that the management structure has been completely re-organised.

It is not suggested that poor management was a major cause of the decline, but it did mean that the company was not always aware of the ~~root~~ basic causes of their losses, or were adequately equipped with the most modern management techniques to find the right policies to solve them.

Size.

A major problem that Rootes faces is that it is relatively small compared to its major competitors B.L.M. and Ford and yet it tries to offer a complete range of vehicles in the same way as its competitors. In 1963, Rootes produced the small Imp, the medium sized family saloons based on the Hillman Minx, the large luxury Humber limousines, Sunbeam sports cars, as well as a range of commercial vehicles under the badges of Commer, Karrier and Dodge. Apart from B.M.C. and Ford, no other British firm attempted so much. Vauxhall, of similar size, produced a simpler range and also had the advantage of being owned and backed by General Motors of America. And the other smaller, independent companies in Britain, such as Jaguar and Rover, before they were merged later into B.L.M. were specialists in quality cars. Rootes were small but not specialists. Without some of the advantages of economies of scale enjoyed by their competitors B.M.C. and Ford, Rootes' costs were higher and their popular ranges of vehicles out-priced. The following table illustrates the difference in size.

TABLE 34.

	1962		1963	
	Cars made	% of total	Cars made	% of total
B.M.C.	470,000	37.5	619,000	39
Ford	370,000	30	500,000	31.2
Vauxhall	144,000	11.5	164,000	10.3
Rootes	143,000	11.5	165,000	10.3
Standard -T.	76,000	6	100,000	6.2
Others	46,000	3.5	50,000	3
	1,249,000		1,600,000	

The importance of the economies of scale in the Motor Industry may have been exaggerated by some writers. Maxcy and Silberston write (85) "..... the significant economies of scale in car assembly appear to be exhausted at about a volume of 100,000 units per year. This relatively low figure stems from the complexity of the product, the importance of direct labour, and the non-specific nature of most of the equipment, the use of which is normally limited solely by the length of its physical life".

And, again, Maxcy and Silberston write: (86)
"As volume increases to 100,000 units per annum, ecohomies of scale are very great in all departments, but particularly so in assembly. Beyond this point important economies continue to come from machining and pressing as volume grows. These savings cease for machining at roughly the half million mark and finally taper off for major pressing at roughly one million. If there are significant economies of scale at still higher levels of output, they are not likely to be technical".
They conclude that:

a) between 50,000 units and 100,000 the reduction in unit costs may be 45%
b) over 100,000 units, 15%
c) over 200,000 units, 10%
d) over 400,000 units, 5%.

Such figures would seem to suggest that Rootes did not suffer unduly from their lack of size. However, the difference in 1963 between 619,000 units produced by B.M.C. and 165,000 units produced by Rootes could, according to the above analysis make a difference of 15% to unit costs and a discrepancy of this magnitude at the margin would be important. However, Rootes could, to a certain extent make up part of this discrepancy by charging higher prices for their products so long as they could convince their potential customers that in buying a Rootes car they were buying better quality or one with more distinctive characteristics. Thus Rootes tried to appeal to the fringe of each popular market, rather than to compete directly with B.M.C. and Ford. Because of this a successful model policy was of paramount importance.

Capacity Working.

A further point emerges from the previous analysis that, often, it is not just size ~~that~~ which is important but also the extent of capacity working. Table 35 suggests that Rootes were, in 1962 and 1963, working at a lower capacity level than ~~its~~ their competitors and this may have been an equally important reason for higher unit costs, as is discussed in Section 8.

Table 35.

Output and Capacity for Cars.

1962.

	Capacity	Output	Output as % of capacity
B.M.C.	575,000	470,000	82%
Ford	475,000	370,000	78%
Vauxhall	200,000	144,000	72%
Rootes	200,000	143,000	71%
Standard Triumph	175,000	76,000	43%
Others	60,000	46,000	76%
	1,685,000	1,249,000	74%

1963.

	Capacity	Forecast Output (in 1962)	Output	Output as % of capacity
B.M.C.	950,000	640,000	619,000	65%
Ford	700,000	500,000	500,000	71%
Vauxhall	300,000	210,000	164,000	55%
Rootes	350,000	225,000	165,000	47%
Standard Triumph	175,000	110,000	100,000	57%
Others	80,000	60,000	50,000	63%
	2,555,000	1,746,000	1,600,000	63%

(N.B. These figures do not correspond with figures used elsewhere in the thesis. The figures for total output are about 400,000 units less for each year than figures already quoted. Although the source of the figures in this table does not specify this, it is probably the case that the production of c.k.d. parts is excluded. Even so, the comparison is a useful one.)

Figures of total capacity are subject to theoretical difficulties. For example, are they the ~~very~~ maximum possible? Do they include overtime working? Or are they an expected average under ideal selling conditions? Probably these figures represent a maximum that firms would not expect to attain and 80% would be a very satisfactory target.

The figures in Table 35 show how the motor firms planned expansion for 1963, which turned out to be a boom year. Rootes had the extraordinary rise in capacity of 75%, associated with the completion of the factory at Linwood. However, its output rose by only 14% which meant that Rootes were working at the most uneconomical level of 50% of capacity.

Model Policy.

Rootes had always depended for its prosperity on the success of its basic model, the Hillman 'Minx', a 1.5 litre car that had not significantly changed since its first introduction in 1931. Rootes' other products, the Humber range and certain commercial vehicles were, in 1964, being produced at a loss, and the Minx was losing its market share. Costs were high and the models ~~out~~ over-priced. Moreover, they were old-fashioned in design, based on traditional mechanical features and body styles ~~that~~ which lacked the distinctive modern appeal of new cars such as the B.M.C.1100 or Ford Cortina. The reason for this failure by Rootes to produce a modern car may have been an inferior design team, but what is more important is that Rootes had insufficient resources to design and produce an entirely new range of cars or commercial vehicles. And attempts to modernise the Minx were limited by a production line that could not be radically changed.

In 1963, Rootes took the bold step of introducing the Imp, the first completely new car produced by Rootes since the 1930s. It was an attempt to break into the small car market (previously the smallest car that Rootes produced was the Hillman Husky, but ~~that~~ this used a Minx engine and transmission). This market had been greatly extended when the B.M.C. Mini made small car motoring ~~so~~ popular and fashionable. The Imp had a revolutionary aluminium rear engine with an overhead cam-shaft which gave a performance to rival the Mini and many larger cars. A completely new factory was built at Linwood in Scotland, with the aid of Government Regional Development grants. The cost was £25m. of which £10m. was borrowed from the Board of Trade. This plant had the capacity to produce 150,000 units a year. Pressed Steel built a complementary body pressing plant on the other side of the road. British Rail contracted to provide daily train links to take components to Linwood, and assembled cars away. Had the sales of the Imp lived up to expectations so that this new plant could have worked at full capacity, the prosperous future of an independent Rootes would have been assured.

Unfortunately for Rootes, the Imp came out four years after the B.M.C. Mini, which had already established a strong market lead, and was being produced at a rate of 1,100 a day. The Imp was more expensive and offered few advantages compared with the Mini, except slightly better performance, and it did not have the popular appeal of front wheel drive. Serious technical problems with the carburettor and cooling system marred its early sales. And, by the time that the Imp was becoming more acceptable to the public, interest had switched to larger family saloons, such as the B.M.C. 1100 and Ford

Cortina. The Vauxhall Viva was also introduced in 1963 and, although it cost £19 more than the Imp, it had the image of being more than a 'mini' car. Thus Rootes were too late in the small car field which, because of fierce competition, was already yielding very low profit margins.

The new investment in the Imp had exhausted the Company's financial resources and after 1964 the rising part of the home market was in medium sized cars, from the 1100 and Cortina to the G.T. and 2000 models. In this range Rootes' model was out-of-date: the Hillman Minx was losing its market appeal.

Production Techniques.

It is easy to find examples of poor production techniques in all motor factories and it would require a detailed study by a person with wide technical experience in a number of factories to make a satisfactory comparative study. For example, what can one deduce from a statement that at Rootes only 35 hours out of a 40 hour shift are worked effectively?

However, in 1967, after a number of changes that followed the Chrysler take-over, Mr. George Cattell, the Director of the Manufacturing Division, admitted that it took nearly 50 man hours to paint, trim and assemble one car, not including time spent on manufacturing and assembling the engine, gear box, transmission and suspension, whereas, he claims, other firms in Britain can do this job in half the time. It seems reasonable to conclude that Rootes lagged behind other firms in production techniques.

The Chrysler Take-over.

From the above analysis, it can be suggested that the fundamental cause of Rootes' problems was lack of size. And, in 1964, when the motor industry of Britain as a whole was doing well, Rootes was facing considerable financial difficulties and agreed to the purchase of 30% of the voting shares and 50% of non-voting shares by Chrysler of America. At this stage, the Rootes family had not lost control and their eventual ~~demise~~ withdrawal occurred during the difficulties that followed, largely as the result of the government squeezes.

At that time, the Chrysler Corporation was finding expansion difficult in America, where they held only 13% of the market, illustrated in Table 36, and as the car markets of the world were growing faster than the United States and Canadian markets, the best means of expanding was the acquisition of shares of foreign markets. Chrysler

had already gained control of Simca of France, which revealed the same characteristics of size and family ownership as Rootes: Rootes was a natural addition to the Empire of Chrysler International. Also Rootes had its wholly-owned dealer network that could be used for the sale of other Chrysler cars (the Chrysler Valiant, for example). Moreover, 50% of Rootes' overseas trade was in the traditional Sterling Area countries in Africa, Asia and Australasia. Simca had opened the door for Chrysler to the E.E.C. and now Rootes opened up the United Kingdom, E.F.T.A., and the Sterling Area. A further advantage was the Sunbeam sports cars which sell well in America.

The British Government gave its consent to the take-over and, to date, it seems that Rootes and the British Motor Industry have gained more than Chrysler. Certainly, Chrysler have had very little back as profits. To some people, however, one disturbing consequence of this take-over is that in 1968 over 50% of the British production of motor cars is controlled by American companies.

Table 36. American firms' share of Production 1963.

	U.S.A.	U.K.	France	Germany	Italy
General Motors	55.6%	12%	-	24%	-
Ford	28.9%	32%	-	16%	-
Chrysler	13.2%	3%	22%	-	-

Chrysler's 3% share in the U.K. market represents a third of Rootes in 1964. In 1968, now that Chrysler controls Rootes, that figure will be 12%. (Rootes' share of production has risen to 12%).

The Effects of the Government Squeeze since 1964.

The Government squeeze, which began in 1964, and, which has lasted in varying degrees since, accelerated the Chrysler take-over and necessitated swift and radical changes in the organisation of Rootes.

In the three years ended July 1967, Rootes made a loss of £14,300,000. In the year ended July 1966, the loss was £3,112,000 followed in July 1967 by £10,755,315 (£4m. of this was attributed to the Linwood plant, £2.9m. overseas, and £2.6m. to commercial vehicles). The production of vehicles in 1966/7 fell below 100,000 units, less than a third of planned capacity in 1964 and well below any practical scale for such a wide range of models. In exports the losses were attributed to uncompetitive price levels and lack of modern selling techniques.

It seems that the Chrysler Corporation did the British motor industry a service by keeping the Rootes company in tact and in preventing its complete collapse. By July 1967, Chrysler owned 73% of equity capital and the Industrial Reorganisation Corporation bought 15%, much of the remainder being held by the Rootes family. The Chrysler take-over provided two essential ingredients, capital funds and management skills.

The changes that have followed have been fundamental and the Government squeeze has made them urgent. For example, Mr. Gilbert Hunt, the new Managing Director, said: "..... These losses are the result of a combination of circumstances not least, of course, the severe impact on the domestic car market of the general economic situation. Naturally, this has added urgency to our plans for modernisation and for the reduction of our manufacturing costs".

Recent Changes

The variety of models has been cut to variations on two basic designs. The large Humber cars are no longer manufactured. In 1966, the Hillman Hunter was introduced and the Minx changed to use the same basic parts. Now the Hunter-Minx range offers medium sized cars of modern design, with prices ranging from £700 to £1000, to appeal to the family and luxury car motorist. The other range, based on the Imp, has been extended to offer luxury models and also high performance models, all based on common parts. Commercial vehicles are likely to undergo a similar reform and rationalisation soon.

Production.

The manufacturing processes have been rationalised to reduce cost:

1. The plants of Thrupp and Maberley in North London, British Light Steel Pressings at Acton, and Dodge Brothers at Kew have been closed.

2. The two plants at Ryton, Hillman and Humber, ~~that~~ which were traditionally separate from each other have been integrated into one flow-line assembly plant.

3. £4m. has been spent on the Dunstable plant to handle all the commercial vehicle assembly.

4. The bulk of the firm's expansion is to take place at Linwood. The Pressed Steel body plant has been purchased and integrated with the assembly plant and Rootes hope to improve quality as well as cut costs. The plant is also to be altered to produce the Hunter-Minx range as well as the Imp range, thus using up formerly idle resources. Altogether £20m. are to be spent there and 1,500 extra workers will be required in 1969.

5. Since July 1967, the labour force has been reduced by 2,500 men.

Rationalisation of Sales.

1. Robins and Day Ltd., a formerly semi-autonomous retail network, has been wholly integrated into the Marketing and Sales Division.

2. Main Dealers will in future hold a Chrysler International Pentastar franchise to deal exclusively in Chrysler products, and a much higher standard for servicing and stores will be required.

3. The retail market is being studied by a special team under the American Director of Marketing and Sales, Mr. Larry Rice, who advocates 'precision planning' which involves the strategic placing of a limited number of large main dealers in the largest markets to offset the efforts of main dealers in other franchises. Also a large number of small retailers (800 dealers sold less than a dozen cars in 1967) will lose their franchise).

Management.

Apart from Lord Rootes who remains chairman, all former directors have been dismissed. They have been replaced by directors of Chrysler International, Simca, a representative of the I.R.C. and a former Senior Civil Servant in the D.E.A. and London Merchant Banker.

Mr. Gilbert Hunt, who was formerly Managing Director of Massey Ferguson, has been appointed chief executive and managing director. He has been called the Rootes 'doctor' with the unenviable task of saving the company from collapse. His main task has been to seek out the loss making areas in the company. One of his first measures was to establish a system of modern financial control, using American staff and techniques, and to provide regular financial statements. One result of this has been the publication of the company's Annual Accounts less than a month after their financial year. Mr. Hunt has also set up a powerful eight man executive committee to analyse the accounts regularly and to ~~ruthlessly~~ eliminate losses.

The whole administrative structure has been streamlined. For example, the five administrative units of cars, trucks, sales, exports and diversified products (mainly air-conditioning) have been reduced to two divisions, manufacturing and sales. For the first time, the company has a clearly defined line of responsibility and means of co-ordination between departments.

The Result of these Changes.

There can be no doubt that the Chrysler take-over has resulted in changes ~~that~~ which are transforming a small and inefficient firm into a more economical producing organisation ~~that is~~ better suited to modern competition, producing a simplified and more up-to-date range of cars, and with the financial backing of Chrysler International capable of using the techniques of the American Industry, such as regular model changes. It will probably develop in the same way as Vauxhall, producing cars that reflect the designs of Detroit and using similar production methods.

Had Chrysler not taken over, the future of Rootes would have been in jeopardy: instead it appears to have been revived. In 1968 the market share of Rootes on the home market rose by 1% to 12.8%, suggesting that the new range of cars is having some success. Also in 1968 they had a net profit of £878,000, the first profit for three years. This, of course, is not sufficient to start paying arrears to Preference Share Holders, but it is an improvement. The injection of capital by Chrysler, the new model range, the management changes made to economise and to increase productivity, have all combined to place Rootes in a much stronger position in 1968 than they faced in 1964, despite deflationary government policies.

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