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THE EFFECTS OF GOVERNMENT POLICY ON
THE BRITISH MOTOR INDUSTRY, 1945-1975

by

Peter J. S. Dunnett
B.Sc. (Econ), Bradford University

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
in the department
of
Economics and Commerce

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SIMON FRASER UNIVERSITY
April 1977

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Scope and Method of Study: This thesis examines the relationship between government policy and the performance of the British motor industry between 1945 and 1975. Between 1945 and 1975, the motor industry was a leading sector in the British economy and a major exporter. Relative to other countries with a large motor industry the British motor industry experienced a notable decline. The industry also experienced considerable government intervention, despite being in the private sector. The thesis evaluates the role of government in the relative decline of the industry.

Theoretical and empirical analysis are used to examine the consequences of a wide range of policies.

The first two chapters of the thesis provide a theoretical model and an overview of the major characteristics of the industry. Four chapters then analyse, in chronological sequence, the effects of government policy on the structure, conduct and performance of the industry.

Findings and Conclusions: The thesis finds that government policy between 1945 and 1975 was an instrumental factor in the relative decline of the industry. Overall, much policy was harmful to the industry and, in the long run, did little to contribute to the achievement of stated economic objectives.
To the memory of Sue Dunnett, 1946-1976
ACKNOWLEDGEMENTS

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This study analyses the effect of British government policy as it influenced the motor industry in order to achieve stated goals. Although in the private sector, the policies chosen by the government had a profound influence on the structure, conduct and performance of the motor industry, between 1945 and 1975. This thesis discusses and analyses those policies as they affected the industry, and the economy as a whole, and draws conclusions about their adequacy.

An introductory chapter states the aims of the thesis in more detail. A second chapter sets out the model to be used in this thesis and provides background information about the motor industry. The core of the thesis consists of the following four chapters. These examine, in chronological order, the effect of various government policies on the industry. A final chapter provides a summary and draws conclusions.

To facilitate reading, a number of tables and graphical summaries chart what Marx called "the line march". An appendix provides a summary in chart form of major government policies and their effects on the motor industry.
INTRODUCTION

Since 1945 the governments of the western world have accepted a general responsibility for the performance of their economies. In economic matters the goals which they seek to achieve are very similar: full employment; economic growth; equity in the distribution of income; productive and allocative efficiency; a satisfactory balance of payments. For them all, policy is a matter of attempting to achieve all goals, and where this is impossible of choosing by how much each goal should be sacrificed in order to gain an optimum combination.

Britain, between 1945 and 1975, was no exception to this general picture. And, like most countries the government stated the economic goals of the country explicitly on at least one occasion. In the Radcliffe Report of 1959, a convenient half-way point through the period, the economic goals of the country were stated as follows:

1. Full employment
2. Economic growth
3. Price stability
4. Adequate balance of payment surplus
5. Adequate foreign reserves
6. A desirable composition of output
7. A desirable distribution of income
8. Individual freedom of choice in economic matters.
Whilst different British governments changed the relative importance of each of these goals and set different priorities, the goals themselves remained unaltered between 1945 and 1975.

To achieve these goals governments used economic policy. Policy tools or instruments were used to achieve stated targets or goals. Instruments might be of a general nature, such as a change in personal income tax which affected the majority of the population, or a specific nature, such as a protective tariff on a particular sort of good.

In this thesis it is proposed to examine British government policy in pursuit of these economic goals, as it affected the country's motor industry. Since World War II the British motor industry has been a highly important sector in the economy and, although in the private sector, has been very considerably affected by government policy. The purpose of the thesis is to analyse the appropriateness of government policy, as it influenced the structure, conduct and performance of the motor industry, in achieving stated economic goals.
2. Justification for such a piece of research rests on three premises. The first is that the motor industry was a vital sector of the economy in that period. The second is that government policy severely altered the structure, conduct and performance of the industry. The third is that alternative viable policy decisions were available which might have been superior or inferior to those actually used and whose ramifications can be outlined:

A G. Armstrong² has used input-output analysis to estimate the importance of the motor industry to the British economy. Directly, he estimated, the motor industry accounted for (i) about five per cent of industrial production between 1954 and 1966, (ii) about nine per cent of growth in industrial production in the same period and (iii) about fifteen per cent of the uneven character of growth in industrial production. Indirectly, the importance of the motor industry was about the same, its requirements from other industries amounting to 3.9 per cent of industrial production in 1954 and 5.5 per cent in 1966. Overall, this implies that the motor industry was responsible for about eleven per cent of industrial production between 1954 and 1966. Furthermore, because of faster than average growth in the motor industry, as compared to industrial productions as a whole,
twenty-seven per cent of growth in industrial production between 1954 and 1966 was attributable to the motor industry's growth.

In regard to the second premiss, by structure is meant

"Those characteristics of the organization of a market which seem to influence strategically the nature of competition and pricing within the market".

In Britain since 1945, government policy has affected the relations of sellers in the motor industry to one another; it did affect the relations of motor car buyers to one another; it did affect the relations between buyers and sellers; it did affect conditions of entry to the market.

Bain says of market conduct that,

"market conduct refers to the patterns of behaviour that enterprises follow in adapting or adjusting to the market in which they sell".

Again, government policy had a profound effect on the motor industry on such matters as, prices policy, product policy, sales-promotion methods, coordination between competing sellers and mechanisms for interaction and cross adaption.
As regards performance in the motor industry, once more, government policy was influential.

"Market performance refers to the composite of end results which firms in any market arrive at by pursuing whatever lines of conduct they espouse — end results in the dimensions of price, output, production and selling cost, product design, and so forth". Many of the end results of the British motor industry in this thirty year period can be traced back to government policies. Policy decisions affected technical efficiency in production; profit margins; industry size; designs; quality and output.

In this thesis it will be shown how government policy permeated through to affect almost all aspects of the motor industry. Here, support for that point of view is drawn from a man who, by 1976, was the British Home Secretary. Speaking in 1956 as a member of the Labour opposition Jenkins said, 
"... in every conceivable way the future of the motor industry is bound up not only in its ability to solve its own problems but with the framework within which the government are to allow it to apply to these problems. The attitude which government spokesmen constantly adopt .... that the industry must be left to solve its own problems, to work out its salvation,
does not make sense, because the industry is operating within a constantly changing framework and will continue to do so in the future, and the authority that determines that framework is the government.6

The third premise refers to the availability and ramifications of alternative policies. Obviously, there was a great number of alternative mixes of policy tools which would lead to different combinations of goal achievements. Furthermore, any choice made at one point in time would create a different set of opportunities in the future. As regards this thesis, it will be shown that frequently the government used the motor industry to achieve one policy goal, on a short term basis, and thereby created an inferior choice set for itself for the long term.

3. In early 1967 The Times of London said, "... Too many factors depend on [the motor industry] ... for any government to ignore its general health or neglect to provide the conditions in which it can thrive".7 The relationship of the structure, conduct and performance of the motor industry to the eight economic goals stated above is important, but quite straightforward. A vital and efficient motor industry is a provider of jobs and creator of incomes so
contributing to full employment. It is an industry where opportunities for large increases in productivity have traditionally been found. It also produces a product with a high income elasticity of demand. A prosperous motor industry is likely to be a substantial contributor to economic growth. An industry which provides opportunities for productivity increases can permit the payment of higher wages without increasing costs, so contributing to price stability and rising living standards. As an export industry the production of motor vehicles can help the balance of payments and the accumulation of foreign reserves. An industry which has the required rate of investment to operate at full capacity and a structure which enables it to exploit all economies of scale, but which does not obtain excess-profits, will contribute to productive and allocative efficiency to produce a desirable composition of output. As a high wage industry it may contribute to a desirable distribution of income, and, if it enjoys workable competition, it will provide choice to the consumer. The ability of the motor industry to make these contributions to the achievements of economic goals depends upon the structure, conduct and performance of the industry. By introducing policies which alter these three, the government will move towards or away from its economic objectives.
The government used the motor industry to achieve its stated economic goals in three ways. Firstly, policies were aimed directly and specifically at the motor industry in order to achieve a given target. For example, in 1960 the government refused industrial development certificates to the industry in order to make the industry relocate in areas of high unemployment. Here was a policy specifically applied to the motor industry, causing a fundamental geographical relocation, in order to provide greater equity in the distribution of income. Secondly, policies were aimed at a broader sector of the economy which had direct influence on the motor industry. For example, the government frequently used hire purchase restrictions as a means of controlling aggregate demand. At times this caused excess-capacity to develop in the motor industry raising unit costs and affecting industry performance. Thirdly, policies were made which only indirectly affected the motor industry. After the war, following the Beveridge Report, the British government committed itself to high priority for the social services. As a result expenditures on transport, in general, were neglected. One facet of this neglect was very low expenditures on the roads. Consequently, British cars were designed for an antiquated road system and were unsuitable for modern highways. Thus motor industry performance was affected so that it made a smaller contribution to the balance of payments and economic growth.
4. The question the thesis seeks to examine is the adequacy of British government policy as it affected the motor industry, given the economic goals set out above. The method by which this will be done is chronological. Government policy, as it influenced the motor industry between 1945 and 1975, indirectly or directly, will be analysed in order to determine its effects on industry structure, conduct and performance. The thirty year period will be broken up into more convenient and manageable shorter time spans. Each period will be examined in detail to ascertain the overall impact of government policy on the industry and to examine specific areas of important relevance.

Using the above methodology it is intended

1. to create a history of why the policy decisions actually made were made,
2. to examine the intended and actual effects of the policies chosen,
3. to highlight areas where there were opportunities for alternative policies.

The final decision about the adequacy of government policy must be a normative one, but the thesis will isolate areas where government policies markedly altered structure, conduct and performance, will suggest what alternatives were
available and will draw its own conclusions about adequacy in the context of stated economic objectives.

The stated aim of the thesis is to test the adequacy of government policies. Alternatively, it can be put in the following form. Between 1945 and 1975 the British motor industry suffered a dramatic relative decline in efficiency, competitiveness and world importance. Government policy strongly influenced structure, conduct and performance in the motor industry. These facts raise two questions. Firstly, was government policy between 1945 and 1975 to any extent a cause of this decline, as opposed to having a neutral or restraining influence on the decline? If the answer to the first question is in the affirmative it still raises a second question. Was this relative decline in the one industry a worthwhile sacrifice in that it made it possible for the government to attain more closely its overall economic objectives?
CHAPTER 2
AN OVERVIEW OF THE MOTOR INDUSTRY AFTER WORLD WAR II

Analysis in this thesis uses the familiar model of industrial organization set out in figure 1. In this model, final performance depends upon the basic conditions of supply and demand, industry structure and industry conduct.

The model implies that the main line of causality runs from government policy through basic conditions, structure and conduct, to performance. In addition, performance can have feedback on basic conditions, structure and conduct, and on government policy. As an example of feedback on basic conditions from performance, an export drive to help the balance of payments but which had inadequate spare parts and service to back up the exports could antagonise overseas consumers against British cars and so affect overseas demand. Similarly, a successful export drive could encourage the government to apply further pressure to the industry to export yet more. However, as will be shown in the thesis, the main effects of government policy on the motor industry between 1945 and 1975 were transmitted through basic conditions, structure and conduct to performance.

In the thesis, the effects of government policy on the motor industry are analysed. In this analysis it will be seen that the ability of the motor industry to affect government policy was limited. A discussion of this impotence on behalf of the industry is made in the concluding chapter.
This chapter examines the basic conditions, structure, conduct and performance of the British motor industry immediately following World War II. Having established the starting point of the thesis in this chapter, following chapters then analyse the effect of a barrage of government policies on these relationships in the motor industry between 1945 and 1975. Final performance is assessed in terms of the goals set out in chapter 1.

**Basic conditions:** These refer to the essential features of demand and supply. Well before World War II the main characteristics of the motor industry had been established. The nature of the product and the basic technology covering product design and methods of production had been clearly defined and no radical technical innovations were to be expected in the following years. The car had proven itself to be a desirable means of private transport with considerable product durability dependent upon usage and, to some extent, fashion induced obsolescence. During the pre-war years a failure to earn profits had weeded out a large number of would-be producers. Nevertheless, in 1945, many still survived. Trade unions had been accepted into some factories before the war whilst war-time legislation had forced the remainder
Basic Conditions

Market Structure

Conduct

Performance

The Model

\[ \text{Supply: Raw Materials; technology; product durability; business attitudes; firm attitudes.} \]
\[ \text{Demand: Price elasticity; rate of growth; substitutes; marketing type; purchase method; cyclical and seasonal fluctuations.} \]
\[ \text{Number of buyers and sellers; product differentiation; barriers to entry; cost structure; vertical integration; conglomerates.} \]
\[ \text{Pricing behaviour; product strategy; research and innovation; advertising; legal tactics.} \]
\[ \text{Production and allocative efficiency; progress; full employment; equity; external balance.} \]

to recognise unions. Unionisation had occurred along the traditional craft lines. Consequently, in every factory, in 1945, the work force was represented by a number of unions. In terms of the final value of the product, imported materials content was low.¹

On the demand side the British motor industry faced two distinct markets, the home market and the overseas market. Between the wars engine taxation policies and protective duties had given the home producers a virtual monopoly of the home market, but had encouraged the production of designs largely ill-suited to overseas markets. Consequently overseas markets had been relatively neglected.²

In 1945, in the home market, the car was still seen largely as a middle and upper income group luxury. Some people questioned whether Britain would ever achieve the levels of car ownership of the United States, given Britain's density of population and comprehensive rail and bus network. On the other hand, many of the middle and upper income classes who could afford a car owned one. Since it was unlikely that those income groups had a monopoly on tastes for private transportation, it was reasonable to believe, in 1945, that future economic growth would generate increasing car demand among lower income groups.

The likely effects of economic growth in 1945 on car demand are shown in figure 2. Personal real incomes are assumed to be lognormally distributed³ and are plotted in figure 2 with fre-
With distribution the proportion shown by Abx buy cars.

\[\text{Ax} (t+1), \text{Ax} (t+2), \text{Ax} (t+3)\]
quency on the y-axis and real income on the x-axis. The line A-B represents a threshold real income which, on average, is necessary to own a car. Assuming no critical change in income distribution, economic growth will cause the frequency distribution to move to the right. Initially, the movement from distribution (t) to distribution (t+1) generates relatively few car buyers, but the later movement to distributions (t+2) and (t+3) creates many car buyers. Between 1945 and 1975, it will be argued, Britain moved from position (t+1) to position (t+3).

In figure 2 the threshold real income required for car ownership, AB, remains constant. Any rise in real costs will shift AB to the right. A rise in real costs results from such things as increased credit costs, car licence fees and car taxes. The existence of a large number of substitutes for new cars, second-hand cars, motorcycles, and public transport, meant that people could easily postpone new car purchases. Added to a seasonal demand for cars, these factors meant that car demand was likely to be unstable in the home market.

Before 1945 the overseas market had been relatively neglected. In 1938 eight per cent of production had been exported. Despite the existence of imperial preference, which imposed lower tariffs on British cars in the Commonwealth, American cars had out-sold British cars there. In other overseas markets there had been competition from the Americans and other European manufacturers.

Comparing the home market with the overseas market finds the
home market protected and characterised by considerable brand loyalty among consumers, whilst the overseas market was highly competitive. As a result, in the post war years, price discrimination between the two markets was possible.

In summary, the basic conditions of demand and supply in the British motor industry in the late forties were as follows. Two distinct markets made discrimination possible. In the future, demand was likely to be unstable but, if economic growth occurred, to show an upward trend on the home market. On the supply side, profit motivated firms, recently unionised, used an accepted technology to produce a durable commodity with low import content.

**STRUCTURE:** A car is made up of about twenty thousand parts. In the post war years most of these parts were purchased by the motor manufacturers from component suppliers so that a more appropriate name for the so-called motor manufacturers might be designers and assemblers. In order to define the limits of the industry for this study, our discussion of industry structure begins with an examination of vertical integration.

**Vertical Integration**

Around the world different motor companies in different countries have demonstrated widely different degrees of vertical integration. In Britain, the existence of a large number of machine shops in the Midlands at the turn of the century meant an embryo components industry existed. Over the years, as the motor industry grew so did the components industry, so that, in
comparison to American and European producers, the British motor industry has been generally characterised by a lack of vertical integration.\(^5\)

To the extent that vertical integration had occurred by the end of World War II, firm size was less important than other factors, notably expediency. For example, the small Armstrong Siddely company, a subsidiary of the aeroplane manufacturer, Hawker Siddely, used to produce a high proportion of its own components. And, whilst Vauxhall produced its own bodies and electrical parts in the forties, Ford brought in these parts but, unlike Vauxhall, had its own foundry. The lack of vertical integration in the industry meant that the largest supply companies such as Pressed Steel (bodies), Joseph Lucas (electrics) and Dunlop (wheels, tyres and rubber products) were comparable to the large manufacturers in terms of capital and labour employed.

The lack of vertical integration provided three advantages to the motor manufacturers. Firstly, it freed capital, which would have been used to produce parts, for other purposes. Secondly, often as virtual monopsonists, the motor manufacturers were able to put pressure on a supplier to get parts at prices equal to, or less than, the costs it would have incurred to produce the parts themselves. Predatory tactics were not unknown.\(^6\) Thirdly, a lack of integration gave the manufacturers greater flexibility. When trade boomed it was possible to bring in other suppliers on a temporary basis who could be dropped when trade slowed.
The fact that motor manufacturers are as much assemblers as anything else makes it difficult to define the exact limits of the industry. Whereas some producers of parts and components produce only for the motor industry, a great many of the others provide, or could provide, parts to the rest of the engineering industry. Bearings, nuts and bolts, electrical parts, plastic parts, trim, materials, rubber parts and so on are by no means used exclusively in the motor industry. And, whilst some of these suppliers are tied in to the industry, many others are not and could survive without any motor business. Consequently, in this discussion of the structure of the industry, the emphasis will be on the final assemblers, the motor car manufacturers.

Number of firms and models

In 1945, in Britain, there were still dozens of specialist car manufacturers such as A-C, Allard, Alvis, Armstrong Siddely and Aston Martin. However, six manufacturers controlled nearly ninety per cent of the market. These were the so-called 'big six' of Austin, Morris (Nuffield), Rootes Standard, Ford and Vauxhall (G.M.). Also with a significant share of the market were Rover, Jaguar, Jowett and Singer. These are shown in table 1.

Following World War II the British motor industry contained a large number of producers compared to the United States or the European countries. To a large extent the number of surviving producers, and the proliferation of models which had occurred before the war, can be traced to the R.A.C. horsepower taxation
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<td>1.7</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Singer</td>
<td>10.9</td>
<td>11.0</td>
<td>10.6</td>
<td>17.1</td>
</tr>
<tr>
<td>Vauxhall</td>
<td>2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ford</td>
<td>11.2</td>
<td>9.0</td>
<td>10.7</td>
<td>8.9</td>
</tr>
<tr>
<td>Standard } Rootes-Chrysler } Chrysler</td>
<td>13.2</td>
<td>11.0</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>Rover</td>
<td>2.7</td>
<td>1.7</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Singer</td>
<td>10.9</td>
<td>11.0</td>
<td>10.6</td>
<td>17.1</td>
</tr>
<tr>
<td>Vauxhall</td>
<td>2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ford</td>
<td>11.2</td>
<td>9.0</td>
<td>10.7</td>
<td>8.9</td>
</tr>
</tbody>
</table>

system. This had encouraged the larger manufacturers to make many models, thereby forsaking economies of scale. As a result, smaller specialist producers had a greater opportunity to compete.

Manufacturers are naturally reluctant to provide data about their costs so that an empirical study of the relationship between costs and output can be made. Nevertheless, several experts since 1939 have made estimates about the nature of the long run cost curve for motor vehicle production. These studies have emphasised production economies of scale, although some evidence on firm economies has also been gathered.

a) Product economies. Table 2 summarises the results of studies to measure production economies of scale. In all studies researchers examined the optimum outputs of various stages of motor vehicle production; engine manufacture, body pressings and assembly. The minimum efficient scale of output per year for car production depends upon economies of scale being exploited at all stages of production. Some reconciliation of the results in Table 2 is possible. The low estimates of the British Advisory Council, of Paul Hoffman, President of the Studebaker Motor Company before the Temporary National Economic Committee, and of George Romney, President of American Motors, quoted by Edwards, were all made by company spokesmen representing companies which were not exploiting all available economies of scale, by their own recognition. Consequently, all these estimates were informed guesses, possibly optimistic ones. Boyle's low estimate comes from an argument in
## TABLE II

PRODUCTION ECONOMIES OF SCALE IN THE MOTOR INDUSTRY

<table>
<thead>
<tr>
<th>MES</th>
<th>YEAR</th>
<th>COUNTRY</th>
<th>TECHNICAL STAGE</th>
<th>DETERMINING MSES</th>
<th>SOURCE</th>
<th>COST PENALTY(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100,000</td>
<td>1939</td>
<td>USA</td>
<td>Pressings</td>
<td></td>
<td>T.N.E.C.(a)</td>
<td></td>
</tr>
<tr>
<td>100,000</td>
<td>1950</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>B.M.A.C.(b)</td>
<td></td>
</tr>
<tr>
<td>250,000</td>
<td>1950</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>A.P.E.(c)</td>
<td></td>
</tr>
<tr>
<td>150,000</td>
<td>1954</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>Economies(d)</td>
<td></td>
</tr>
<tr>
<td>1,000,000</td>
<td>1954</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>Maxcy &amp; Silbertson(e)</td>
<td></td>
</tr>
<tr>
<td>1,200,000</td>
<td>1955</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>Wansbrough(f)</td>
<td>20%</td>
</tr>
<tr>
<td>600,000</td>
<td>1956</td>
<td>USA</td>
<td>Pressings &amp; Machining</td>
<td></td>
<td>Bain(g)</td>
<td></td>
</tr>
<tr>
<td>1,500,000</td>
<td>1962</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>Menge(h)</td>
<td></td>
</tr>
<tr>
<td>400,000</td>
<td>1965</td>
<td>USA</td>
<td>Pressings</td>
<td></td>
<td>Edwards(i)</td>
<td>5%</td>
</tr>
<tr>
<td>800,000</td>
<td>1969</td>
<td>USA</td>
<td>Pressings</td>
<td></td>
<td>White(j)</td>
<td></td>
</tr>
<tr>
<td>1,000,000</td>
<td>1969</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>Pratten &amp; Deane(k)</td>
<td>13%</td>
</tr>
<tr>
<td>2,000,000</td>
<td>1971</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>Rhys(l)</td>
<td></td>
</tr>
<tr>
<td>1,750,000</td>
<td>1975</td>
<td>UK</td>
<td>Pressings</td>
<td></td>
<td>CPRS(m)</td>
<td></td>
</tr>
<tr>
<td>250,000</td>
<td>1976</td>
<td>USA</td>
<td>Assembly</td>
<td></td>
<td>Boyle(n)</td>
<td></td>
</tr>
</tbody>
</table>

(1) At 50% MES.

Source:


b) British Manufacturers Advisory Council, quoted in the Economist, December 1, 1951, p. 1348.

c) American Production Engineers.


Table II (contd)


which he proposes splitting up the large American automobile companies in order to generate competition. Boyle acknowledges technical economies of scale in forgings and pressings beyond his figures, but argues that, in the United States, separate companies could supply forgings and pressings. Comments by researchers provide some explanation for the variation in the estimates of economies of scale in pressings. The life expectancy of a die for pressing depends upon the nature of the pressing involved. The more the metal sheet has to be stretched, the shorter the lifetime of the die. By the seventies a die could be expected to last for up to seven million presses. On the assumption of a four year model life, economies of scale in excess of one million are implied, depending upon designs. By extending model life spans and using common pressings between models some reduction in economies of scale can be made.

This brief assessment of studies of the long run cost curve for car output concludes that in the late forties, product economies of scale exceeded one hundred and fifty thousand units per year. In the fifties, automatic transfer machines and unitary body construction had raised this figure considerably, probably to above half a million units. In the sixties, this figure increased towards a million and in the seventies exceeded one million. In Table 3 a comparison is made between these estimates of the minimum efficient scale of production and the output of Britain's largest manufacturer, for selected years. In no year did any
### TABLE III

**RELATIONSHIP BETWEEN MINIMUM EFFICIENT SCALE OF PRODUCTION AND LARGEST BRITISH MOTOR FIRM'S SIZE FOR SELECTED YEARS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Largest Firm's Home Mkt. Share(a)</th>
<th>Total Production</th>
<th>Estimate of Largest firm's(b) Production</th>
<th>MES(c)</th>
<th>Col 5</th>
<th>Col 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>21%</td>
<td>287,000</td>
<td>50,000</td>
<td>150,000</td>
<td>.4</td>
<td></td>
</tr>
<tr>
<td>1954</td>
<td>38%</td>
<td>769,000</td>
<td>292,000</td>
<td>600,000</td>
<td>.5</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>36%</td>
<td>1,352,000</td>
<td>486,000</td>
<td>750,000</td>
<td>.6</td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td>45%</td>
<td>1,552,000</td>
<td>700,000</td>
<td>1,000,000</td>
<td>.7</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>48%</td>
<td>1,543,000</td>
<td>740,000</td>
<td>1,250,000</td>
<td>.6</td>
<td></td>
</tr>
</tbody>
</table>

(a) For years: 1947, Nuffield; 1954, BMC; 1960, BMC; 1967, BMH; 1974, EL.

(b) Actual production figures not available.

(c) Minimum Efficient Scale of Production.

Source:

SMMT, *The Motor Industry of Great Britain*, various years. Table II
British company achieve sufficient production to exploit all potential economies of scale in production.

b) Firm economies of scale. In addition to the considerable evidence on product economies of scale there is some evidence suggesting firm economies at higher levels of production. These are presented in Table 4. Adequate sales coverage, advertising, finance, risk minimisation, fashion and research and development all offer the opportunity for lowering unit costs once all product economies have been exhausted.

In the light of this discussion and the results of Tables 2 and 4, the long run average cost curve for British producers; over the relevant range, between 1945 and 1975, sloped downwards. This is shown in figure 3.

Barriers to entry

In the post war years considerable barriers to entry existed in the British motor industry. Whilst a few specialist companies did enter the industry, for example Bristol in 1948, no specialist company grew to become a mass producer between 1945 and 1975. Firstly, economies of scale provided very significant barriers to entry. Secondly, the mass producers had created barriers to entry through product differentiation. Over the years, advertising and consumers' experiences with the different products had created considerable amounts of brand loyalty. In addition, with an expensive consumer durable such as a car consumers are unwilling to try an unknown quantity. Consequently, potential entrants
TABLE IV

FIRM ECONOMIES OF SCALE IN THE BRITISH MOTOR INDUSTRY

<table>
<thead>
<tr>
<th>Year</th>
<th>Area</th>
<th>Approx. Scale (annual volumes)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>Sales(1)</td>
<td>1,800,000</td>
<td>Pashigan (a)</td>
</tr>
<tr>
<td>1976</td>
<td>Sales(2)</td>
<td>5,000,000</td>
<td>Dunnett</td>
</tr>
<tr>
<td>1956</td>
<td>Advertising(3)</td>
<td>500,000</td>
<td>Bain (b)</td>
</tr>
<tr>
<td>1957</td>
<td>Advertising(4)</td>
<td>Significant</td>
<td>Weiss (c)</td>
</tr>
<tr>
<td>1976</td>
<td>Finance(5)</td>
<td>Significant</td>
<td>Cubbin (d)</td>
</tr>
<tr>
<td>1970</td>
<td>Risks(6)</td>
<td>800,000</td>
<td>White (e)</td>
</tr>
<tr>
<td>1971</td>
<td>Fashion(7)</td>
<td>Significant</td>
<td>Cubbin (f)</td>
</tr>
<tr>
<td>1976</td>
<td>Research &amp; Develop.(8)</td>
<td>Significant</td>
<td>Cubbin (g)</td>
</tr>
</tbody>
</table>

1) Pashigan estimated that an adequate sale and service network for the United States required annual sales volumes up to 1,800,000 units annually.

2) An approximate estimate made by applying Pashigan's figures to the world car park.

3) Bain found significant economies of scale in advertising but doubted whether they exceeded United States production economies of 600,000 units annually.

4) Weiss calculated that Ford and GM spent $27 per car sold between 1954 and 1957; Chrysler $48; American Motors $58; Studebaker $64.

5) Cubbin found that large UK companies had easier access to capital markets at lower prices.

6) White noted that to remove undue risk a firm needed to offer at least two models at the same time. If production economies were virtually exhausted at 400,000 units annually, a firm must produce 800,000 units annually to safeguard itself against market failure such as the Edsel or Austin 1800.

7) Scherer notes that cars are fashion items: The faster dies are written off the greater the fashion advantage to the producer. In the U.S. GM has shorter model runs than the other manufacturers.

8) In 1976 newspapers reported that Ford spent $500m to develop the Ford Fiesta. With a four year model run, annual volumes of the Fiesta will have to exceed one million if research and
development expenses per car are to be below $100. At half that volume, unit costs per car will rise by about four per cent solely because of increased research costs per car.

Sources:


g) Daily Telegraph, 30/7/76.
were exposed to the risk of not being accepted by a cautious public. Thirdly, established manufacturers enjoyed some absolute cost advantages in retailing. Most of the best retail locations and retailers were tied to an individual manufacturer. New entrants would have had to use inferior locations or bid away current retailers from established manufacturers. With reference to the purchase of components there is no evidence that established manufacturers enjoyed any cost advantages.10

As regards foreign competition, the hefty McKenna duties created a formidable barrier to entry to the British market on a large scale. Therefore, capital requirements, tariffs, and the advantages of established firms served as effective barriers to entry.

Conduct

Following chapters will analyse conduct responses to exogenous events, notably government policy, during the period 1945-75. The major characteristics of firm conduct in 1945 can be briefly summarised.

As regards pricing behaviour the existence of two distinct markets enabled price discrimination. The captive home market had long been regarded as the major market and the main source of profits. In normal conditions, prices were set such that at standard planning volumes home market prices covered full costs. The more competitive and uncertain overseas market was regarded in a secondary light as a market which might absorb excess capa-
city, when necessary, and in which prices were set at levels which made some contribution to fixed costs.

In the home market, competition between firms took on non-price forms. Price cuts and price wars had been virtually unknown before World War II and were rarely encountered in the post war era. Rather, manufacturers competed through such means as model designs, quality, reliability, service networks, advertising and the extent of standardised equipment. In order to cover the whole market manufacturers attempted to produce a complete model range despite the negative effects of this on costs. Most retailers of the 'big six' were tied to a single manufacturer and had to maintain list prices. Hence restrictive trade practices legislation and resale price maintenance served to restrain competition between retailers.

The need for wartime cooperation and association through the Society of Motor Manufacturers and Traders meant that strong formal and informal networks of communication existed between the motor manufacturers. After the war the government encouraged the extension of inter-firm cooperation through public and private bodies. This is discussed in the following chapters in more detail.

Performance

Given the structure of the industry, in 1945, and the nature of the long run average cost curve for individual firms, larger firms, if they exploited potential economies of scale, were in
a strong position not only to make the more efficient use of scarce resources, but also to generate above industry average profits. To the extent that no firm exploited all available economies of scale the motor industry misallocated resources.

In 1945, the largest companies were also, if efficient, in the strongest position to generate investment funds for growth and expansion. Britain, unlike France, Germany and Japan, does not have investment banks. Investment funds have to come from ploughed back profits and outside lenders. Typically, these lend to profitable companies.\(^{13}\) Hence, in Britain, profits were a necessary prerequisite to growth and expansion.

As regards employment, it was suggested in chapter one that in the post war era the motor industry was a powerful generator of employment.\(^{14}\) However, the discussion of demand above suggests that demand was affected by seasonal and cyclical factors so making the industry an unreliable labour market.

Until 1945, the motor industry had not made a significant contribution to the balance of payments. The chapters that follow show the balance of payments as a major factor in the post war years in determining government policy towards the motor industry. They also show how the motor industry responded to these policies to become a major foreign currency earner.

This chapter has provided a brief overview of the motor industry in order to establish the major features of structure, conduct and performance following World War II. The thesis now turns
to examine government policy between 1945 and 1975 on these relationships.
 exported policy, 1945-50

Before World War II the motor industry had not made a significant contribution to exports. In the latter years of the war, when the government created a policy for a post war export drive, the major emphasis was put on the traditional export industries, such as textiles, and, consequently, the motor industry was largely neglected.

In 1945, it became apparent that the motor industry could make a valuable contribution to the export drive and an export policy for the industry was hastily created. At the 1946 Society of Motor Manufacturers and Traders [SMMT] dinner, the President of the Board of Trade announced a goal for the motor industry of exporting fifty per cent of production. In 1938, eight per cent had been exported and those present at the dinner responded to this new government policy by calling it 'Tripe'. To implement the policy and watch over the industry the government set up a manufacturer dominated National Advisory Council under the Minister of Supply.

In the following years the government called for further increases in exports. It was able to impose these demands on the motor industry through its control of scarce resources, particularly steel supplies, and its threats to cut off supplies if manufacturers did not attempt to meet the export quotas. Initial success in meeting the export targets for 1946 persuaded the
government to raise the export quotas for 1947 to one hundred and fifteen per cent of the 1946 figure. This proved to be a difficult goal. Firstly, extremely harsh weather early in 1947 created shortages of fuel and steel necessitating the shut down of some of the factories. Secondly, in the autumn of 1947 Geneva tariff agreements reduced imperial preference. Thirdly, in July, sterling was made freely convertible with disastrous effects on exports, since foreign buyers could now obtain previously scarce U.S. dollars to purchase American cars.

In August 1947 convertibility was suspended owing to the pressure on sterling and the government had to make yet further efforts to stimulate exports. Initially it was decided to raise export quotas for the motor industry to seventy five per cent of production. This was soon modified so that all output was reserved for export except that required to meet "essential" home demand. Again, steel allocations were the incentive to comply. Exports for 1948 were initially targeted at three hundred and nineteen per cent of 1938 exports. However, by March, Harold Wilson, President of the Board of Trade, revised projected exports downwards, as exports proved difficult in the face of American and some revived European competition, to two hundred and seventy-two per cent and then two hundred and sixty per cent of the 1938 figures. A major problem was that by 1948 the pound was overvalued and some international competition had revived.

By early 1949 it was proving impossible to meet the quotas
and less than two-thirds of production was being exported. In April, the Minister of Supply relaxed the quota saying, "In order to give the manufacturers greater flexibility, they will no longer be required to keep rigidly within quarterly allocations for the home market as long as their exports over a reasonable period attain the required level." Marshall Aid in mid-1949 helped to stimulate the world economy with beneficial effects on export demand for cars. Nevertheless, it was still necessary for the British government, as an incentive, to increase steel allocations to the manufacturers who were most successful in the export drive.

Devaluation in September 1949 once again made the export target of seventy-five per cent of production feasible. By June 1950, exports accounted for over four-fifths of production for the year and the motor industry's export drive appeared as strong as at any time in the post war era. However, before the new opportunity was fully exploited, the rearmament goal gained priority over the balance of payment goal.

The apparently unaggressive export policy of the post war years, during which the government relaxed export quotas whenever difficulties in meeting them arose, had a considerable effect on industry structure, conduct, and performance.

Basic conditions: Compared to the motor industries of France, Germany and Italy, Britain came out of the war relatively unscathed. By the beginning of 1946, the motor companies had completed the major part of reconversion and the ability to produce was less
limited by capacity than by uncertain supplies of coal and steel from the government.

Throughout the years of the export drive inadequate raw materials were the major constraint on output. For example, at the time of devaluation in 1949, capacity was eight hundred thousand vehicles per year, as a result of reconversion from the war and some expansion, whereas steel allocations limited production to about half a million vehicles in 1949.

Whilst raw materials were in short supply, there was world-wide excess demand for cars immediately following the war. A worldwide shortage of dollars made it impossible for many buyers to acquire American cars and the state of the European industry meant that British cars had a virtual monopoly over buyers who held sterling. It was this situation which the British government decided to exploit with the export quotas.

The extent of overseas demand was difficult to estimate in 1946, partly because the condition of the world stock of cars was unknown. However, it was believed that there was "an almost illimitable demand for these vehicles."\(^\text{10}\) Europe, the far East, India, Russia and the Commonwealth were potential markets; one estimate suggested that the Russians would require twenty million vehicles over the following five years.\(^\text{11}\) The real question was about how long demand for the British cars could hold up,\(^\text{12}\) given that these cars were pre-war models designed for Britain's undemanding road system.
In the following years British cars sold well where American cars were unavailable and where, to a limited extent, the existing demand was for small cars. In lieu of these conditions, American cars would have been preferred to British cars based on a price-quality comparison. As indicated in table 1, a 30 H.P., six cylinder, five seater car from the United States sold in Australia for about the same price as a small British 10 H.P., four cylinder, four seater car.\textsuperscript{13}

The real preference for American cars was demonstrated when sterling was made convertible. Demand for British cars decreased immediately. One million pounds worth of export orders for Nuffield alone were cancelled.\textsuperscript{14} When export quotas were raised following the suspension of convertibility, the SMMT commented:

Many countries will presumably not be able to buy as many American cars as previously. In contrast, sterling should be freely available following the recent suspension of free convertibility of current sterling. Such conditions should confer an advantage next year (1948) on British over U.S.A. car exporters and perhaps in some cases neutralize the price differential.\textsuperscript{15}

By 1948 Britain had become the world's major exporter replacing the United States, where exports had been curtailed by a steel shortage. Britain's major markets continued to be Australia, New Zealand and South Africa, but in 1948 the United States also became a major market. The steel shortage there caused considerable
### TABLE V

#### Retail Car Prices in Australia

<table>
<thead>
<tr>
<th>British</th>
<th>Horse Power</th>
<th>No. of Cyls.</th>
<th>Price (£A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>8</td>
<td>4</td>
<td>550</td>
</tr>
<tr>
<td>Riley</td>
<td>12</td>
<td>4</td>
<td>1,269</td>
</tr>
<tr>
<td>Vauxhall &quot;Wyvern&quot;</td>
<td>12</td>
<td>4</td>
<td>540#</td>
</tr>
<tr>
<td>Vauxhall &quot;Senior&quot;</td>
<td>14</td>
<td>6</td>
<td>609#</td>
</tr>
<tr>
<td>Standard</td>
<td>14</td>
<td>4</td>
<td>720</td>
</tr>
<tr>
<td>Wolseley</td>
<td>18</td>
<td>6</td>
<td>1,073</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>United States or Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Ford</td>
</tr>
<tr>
<td>Chevrolet &quot;Skymaster&quot;</td>
</tr>
<tr>
<td>Chevrolet &quot;Fleetmaster&quot;</td>
</tr>
<tr>
<td>Buick</td>
</tr>
<tr>
<td>Plymouth</td>
</tr>
<tr>
<td>Pontiac</td>
</tr>
</tbody>
</table>

#Imported in knock-down form.

**SOURCE:** Economist, March 27, 1947
excess-demand in the United States. For example, Ford (U.S.) alone had orders for 1.7 million cars but could produce only 1.0 million. British exports filled part of the U.S. gap. At the same time, in Europe the revival of the French and German motor industries in 1948 and 1949, respectively, had created some overseas competition.

Over the period from 1945 to 1950 excess-demand for British cars had occurred because of a lack of production for export by other countries. A lack of substitutes had given Britain an advantage, but British designs were inappropriate for many overseas road and weather conditions.

Structure: The government's export policy had a profound effect on the structure of the industry. Firstly, following World War II existing British production plants were too small to fully exploit available economies of scale. Secondly, inadequate steel supplies meant that even these less than optimal plants operated with excess capacity. Thirdly, excess demand and steel shortages made it difficult for the largest or most efficient firms to exploit their potential superiority and increase market shares. Excess demand at home and abroad meant that all producers could sell their output somewhere. And, whilst steel was supposed to be distributed to the firms only if they met export quotas, in fact, some smaller firms received their steel quotas even when they failed to meet their export quotas. The steel quotas system, in striving to be fair
effectively froze industry structure. It frustrated the forces of the profit motive from operating to achieve a needed rationalisation of the industry in order that potential economies of scale might be exploited. In effect, it supported the weak and outdated firms at the expense of the more efficient.

Ironically, the government seemed unaware of the stranglehold their export policy had placed on industry structure. Not only had they forced the motor manufacturers to export, but, since 1947 they had also stressed the export of the capital goods which rationalisation would have required in order to help the balance of payments. The government's unawareness of the consequences of its policy for rationalisation and standardisation in the industry were demonstrated on several occasions. In 1946 the President of the Board of Trade stressed the need for a cheap large standardised British car, but did not explain how and why the producers should make it. In 1947 the Minister of Supply expressed deep concern about the continued diversity in the number of models offered by the motor industry and even suggested that if the motor industry could not, the government might have to rationalise the number of model offerings. No remedy was proposed nor any action taken. To the government it seemed that

"Is it not obvious that the manufacturers are intending to go back to 1939 as quickly as they can, instead of ahead to 1950, as they ought to do? The manufacturers are deter-
mined to make hay while the sun shines. They know there is enormous worldwide demand at the moment, and they think that by taking the short view, by churning out quickly models for which they have the plant, tools and equipment, they can make a big profit and take no heed of the future.22

Conduct: Export quotas were set on a year by year basis. The motor manufacturers believed the export drive to be a short-run affair and that the home market would soon become their major market, once again. Industry conduct reflected this short-run stop-gap attitude to world export markets.

With respect to pricing, the manufacturers set home prices at levels which would not antagonise the government or future customers, and which would not lead to dumping charges by overseas governments.23 This created excess demand, long waiting lists and blackmarkets at home.24 In overseas markets there was price discrimination. For example, when the Europeans returned to volume production in the late forties, prices were lowered in Europe. In the United States, cars were sold at prices which barely covered marginal costs so as to be price competitive. The manufacturers carried out logical price discrimination. Failure to understand this caused an outcry in the House of Commons over the relatively high prices of cars in the home market.25

The manufacturers had limited choice about what sort of models they sold overseas. Mostly, they sold what they could where they could. Often, outdated British designs proved inconvenient, in-
appropriate and unreliable, and gained a poor reputation. In 1949, the Canadian correspondent to the Economist, summed up much overseas reaction to British cars. He said, "The product of the British motor industry, with its narrow tracks, small luggage space, and reputed inability to stand up to bad roads has been criticised to the point of monotony."\(^{26}\) The only area where they were competitive was as 'second string models',\(^{27}\) for predominantly urban driving.\(^{28}\) This poor reputation was aggravated by the lack of parts and service networks which backed up British cars. Parts did not count in the export quotas of the manufacturers. The lack of service networks was implicitly explained at the 1947 Austin general meeting. The chairman noted, "...valuable export markets may remain open to them (Austin) for a few months."\(^{29}\) Obviously, stop gap sales to fill such markets did not justify the development of a full service network. As a result of such a company export policy, minor breakdowns overseas could become major problems for overseas owners, and alienate them from further British purchases. Furthermore, as a result of pre-war taxation policies, all British manufacturers offered a wide model range. Since they all competed in world markets, the sales penetration of any given model in any given market was likely to be low. Thus, there was scant justification for dealers around the world, to carry adequate parts for any model. Finally, it would appear that many dealers were signed up very hurriedly and without much investigation,\(^{30}\) in the post war years. Con-
sequently, poor quality dealers became a familiar characteristic of the British sales effort overseas.

In 1948 the first new models from Britain in over a decade appeared. This was a long time lag since the last introduction of new models. Furthermore, in the post war years the motor industry had difficulty obtaining new capital machinery for the new models. Together, these factors meant that the new models were likely to have more than average teething problems. The export drive made it necessary to sell the new cars overseas with the inadequate dealer networks described above. At home information about design flaws would have been fed back to the manufacturers for remedial action fairly quickly. From overseas markets such feedback trickled in slowly, and in the meantime the reputation of British products declined further. Additionally, since the manufacturers expected a large home market in the future, the new models had to be appropriate for British conditions. This constrained the suitability of these models for overseas use.

Consequently, the export drive necessitated the sale of too many ill suited and inadequately researched models, through inadequate dealers, with inadequate parts and service facilities by too many manufacturers. Inevitably the reputation of British cars declined and the long run demand for the British products decreased.

Performance: The export drive between 1945 and 1950 mainly affected technical efficiency and the balance of payments. It had negative effects on technical efficiency and positive effects
on the balance of payments.

The export drive, through the system of steel allocation, paralysed industry structure preventing expansion of the most efficient firms, and the consequent decline of the weakest. Instead, companies were enabled to continue in production well below capacity, and with plants which failed to exploit all available economies of scale. The comparison of British and American car prices in Australia suggests that British production techniques were inefficient and wasted resources.

Undoubtedly the export drive made a contribution to the balance of payments in the short run. Except for difficulties before devaluation the motor industry nearly met its annual export quotas. However, the contribution of the export drive depended upon the additional exports it generated. These, it will be argued, were not very great. Since the home market could not have absorbed total industry output in any case, the manufacturers would have had to export in order to fully utilise capacity and grow.

In terms of progress, since the export drive held up industry rationalisation it retarded progress. In addition, since the export drive stressed the output of "engineering goods", the motor companies found it difficult, at times, to obtain new capital equipment and this also hindered progress.

Rearmament Policy, 1950-53

In 1950 the Korean situation made the government reassess overall priorities. Rearmament was set ahead of the balance of
payments and other economic goals. Resources were reallocated towards defence purposes. As a result, the motor firms received fewer raw materials supplies. In order to help the balance of payments pressures created by rearmament, home deliveries of cars were cut further, to eighty thousand cars and then sixty thousand cars, in 1951 and 1952, respectively. However, by late 1950, increased competitiveness overseas forced the new Conservative government to reassess the system of quarterly quotas for each company. Instead of the quarterly quotas the government obtained a general undertaking which said, "...the industry has undertaken to endeavour to export not less than eighty per cent of their output of passenger cars (estimated at 450,000 per year)." As an incentive to exports the government stated that, "...allocations of steel to the industry (would) in the future be more closely related to export performance." "

Basic conditions: Rearmament reduced raw materials supplies and increased their costs to the motor industry. Shortages not only of steel but of materials such as zinc dies occurred. This spurred some substitution in production to take place.

On the demand side, at home, reduced sales quotas maintained the long waiting list for cars. At the same time, demand for military vehicles increased. Overseas, the increase in costs caused by rearmament necessitated price increases. This was at a time when the European motor industries were increasing output and improving efficiency, being relatively unaffected by rearma-
As a result, overseas demand for British cars decreased as they became relatively more expensive. By 1952, the British motor industry was having great difficulty in meeting its export undertaking.

**Structure:** Rearmament policy continued the paralysis of industry structure caused by the post war export policy. The government continued to allocate steel to all companies in accordance with previous production and export success. In addition, military vehicle demand was spread among the car factories. This met the requirements of the government's equity goal but not of allocative efficiency and growth. The policy of spreading military orders frustrated pressures to change industry structure in order to rationalise production. Effectively, the government defence orders helped continue to support the weak at the expense of the strong.

In addition to retarding structural change, the requirements of rearmament slowed down expansion and technological advance. Expansion was slowed by the unavailability of capital machinery for the motor industry. Technological advance was restrained by the redirection of research and development efforts towards military vehicles.

Furthermore, the way in which the government implemented rearmament policy meant that an opportunity for international standardisation, as well as British standardisation, was missed. Defence orders necessitated some sacrifice of exports by the
British motor industry because of the raw materials constraint. At the same time, both Germany and Italy had excess capacity as a result of the Marshall Aid rebuilding programme. It was therefore suggested that either Germany or Italy should supply either parts or vehicles to satisfy British defence requirements. North Atlantic Treaty Organisation [NATO] requirements had made the different NATO partners agree to the standardisation of planes. Similar cooperation might have been developed in the production of motor vehicles. Ministry of Defence Agents went so far as to examine Fiat vehicles for their requirements. However, they could not persuade the Italians to change their specifications to British ones, nor could they obtain guarantees that British manufacturers would supply parts for Fiat vehicles. Hence, rearmament policy failed to take advantage of opportunities for the rationalisation of national and international industry structure. Instead, the old British motor industry structure with too many manufacturers, too many models and too high costs was encouraged to continue.

Conduct: Defence orders necessitated cuts in home quotas. The manufacturers also reduced exports in order to supply rearmament requirements. Manufacturers continued to discriminate in price between markets. The reorganisation of the motor firms to produce defence vehicles slowed down the development of new models at a time of rapid expansion by the European producers.

Performance: After World War II Britain had made a more
rapid reconversion than the European companies. This had given Britain a headstart in car production. Rearmament was a major factor in the loss of the advantages of that headstart. Between 1950 and 1952 the British motor industry had to cut back on production and costs increased. At the same time, France and Germany made a rapid advance. By 1952, Volkswagens and small Renaults were being produced in greater volumes than any British model. At the beginning of 1950 Britain had been producing over ten thousand cars per week; by the middle of 1952 weekly production was below nine thousand. In comparison, at the beginning of 1950 France and Germany, combined, produced eight thousand cars per week; by the middle of 1952 they produced over thirteen thousand per week. In 1950 Britain had exported one half of exports to the sterling area; by 1952 nearly three-quarters were sent there. In free markets such as Holland and Switzerland British cars had clearly become too expensive. One important explanation for the reduction in international competitiveness of the British motor industry was the lower levels of concentration when compared to Germany, France and Italy. Rearmament policy failed to take the opportunity to remedy the situation.

At the end of 1951 it was believed that excess-demand at home was enormous. By the end of rearmament the manufacturers had over one million orders for home delivery. The manufacturers were keen to tap this apparently huge and profitable market. It seems likely that the long waiting lists for cars at home had a
negative effect on export efforts to help the balance of payments. The excess-demand at home which resulted from rearmament policy encouraged the manufacturers to neglect long term development of export markets. 40

By the end of 1952 the steel storage was over. 41 The Minister of Supply abandoned the export quotas which had been reduced earlier in the face of export difficulties. 42 The industry was ready to exploit the enormous home market. It turned out to be a mirage. Despite thirteen years of severely restricted home sales, real excess-demand was fairly small. 43 In 1952 less than one hundred thousand cars over the original sixty thousand home quota were sold. By October 1952 second hand car prices were falling rapidly. Many offers to deliver cars to people on waiting lists were rejected. By November some cars were available for immediate delivery. 44 Before the end of the year the chairman of Austin appealed for cuts in purchase tax on cars in order to stave off redundancy. 45 The myth about enormous pent-up demand at home for cars had been dispelled. The next section examines how government policy created that myth.

In conclusion, rearmament policy had several effects on the motor industry's contribution to performance. (1) It discouraged needed change in motor industry structure. (2) Steel quotas halted growth in the industry for two years. (3) Research and design were redirected towards military vehicles. (4) Long run export efforts were discouraged as the waiting lists for home
deliveries became very large. This suggested that in the long run exports would be of secondary importance to the industry.

**Distribution Policy**

The government's export policy meant that excess demand for cars in Britain was created. The manufacturers had to set home prices at levels acceptable to the British government, foreign governments and future customers. The problem of distributing the inadequate supplies of cars was left, pretty well, to the industry. The government only specified that "essential demand" at home had priority. "Essential demand" applied mainly to people with occupations which required a car in the social interest, for example, doctors and district nurses.

Responsibility for allocating cars after 1945 fell to the Motor Traders Association (MTA). Anybody who wanted a car had to put their name on a waiting list, unless part of "essential demand". When their name came to the top of the list they received a car at the current retail price. The MTA made new car buyers sign a covenant under which they agreed not to sell the car for at least one year. However, the government did not give the covenant legal sanction. As a result, the covenant was often ignored and cars sold at grossly inflated prices. For example, some privileged doctors who were given immediate delivery were alleged to have made considerable profits from the scheme. By 1950 public consternation over this was sufficient to make the MTA instruct their members not to sell cars to people who already
had cars in good condition. Still, since there were no records
of who had had new cars, or who currently owned them available to
retailers, the 1950 instruction was easily circumvented. Only
in 1952 was a false declaration about ownership of post war
vehicles made grounds for legal action. By then excess-demand
was just about at an end.

In June, 1945, the government introduced petrol rationing. Before that no petrol had been available to ordinary citizens. Initially, every car was provided with a monthly ration sufficient to travel one hundred and fifty miles. In March 1946 the ration was raised by thirty miles. In August 1946 it was increased a further ninety miles. Then, following the 1947 energy crisis and balance of payments difficulties it was withdrawn. In response, two and a half million people signed a petition of protest organised by the Special Joint Committee of the Royal Automobile Club and the Automobile Association. In June 1948, the petrol ration was renewed at eighty miles per month. In June 1949 it was doubled. In May 1950 it was abandoned.

In 1950 Britain still faced balance of payments difficulties so petrol imports had to be curbed. However, for some time it had been argued that motoring was a middle-class luxury. Therefore, higher prices would make more efficient use of scarce petrol than rationing. The Labour government appeared to accept these arguments when it abolished rationing. The petrol tax was doubled from ninepence to one shilling and sixpence.
Basic conditions: Excess demand in the home market enabled manufacturers to sell any make or model there. For example, in 1951, Nuffield had to ship back from the United States a number of cars which could not be sold there. The cars were overhauled, reconditioned, converted to right hand drive and then sold for a price which included all these additional costs, including the shipping. There is little doubt that the manufacturers exploited the licence to sell anything that the waiting lists allowed them and that quality declined.

There is no doubt that the manufacturers greatly overestimated excess-demand at home. Given that the second hand price of a nearly new car was sometimes double its list price, the MTA's system of distribution encouraged everybody who vaguely hoped to be able to pay for a new car to put their name on the waiting list. No deposit was required when a car was ordered. Therefore, if one's turn came up and the car was not wanted, either it could be refused, or it could be briefly held and then sold for a considerable profit. In addition, people could put their name on more than one maker's list. Looking back, it is apparent that the waiting list was a poor indicator of the extent of excess-demand. Nevertheless, manufacturers used the waiting list as evidence that a huge pent-up demand for cars existed in Britain. At the time this seemed reasonable. New car sales in Britain had been heavily curtailed since 1938 so that the existing stock of cars had a high average age. Consequently, it was reasonable to believe
they needed replacement. Usually petrol rationing will cause a decrease in car demand. Between 1945 and 1950 it is likely that excess-demand for cars would have been greater if adequate supplies of petrol had been available.

Conduct: The post war sellers market in Britain removed much of the incentive for manufacturers to be efficient. There was little pressure to rationalise sales networks or provide superior parts and service. Prices were set at levels which were not so high as to generate government interference on the grounds of profiteering. Then, manufacturers sold cars to a public grateful for anything it could get. As a result, there was little emphasis on quality.

Petrol rationing policy affected designs. All cars received petrol for a given mileage. The purpose of this was to encourage the acceptance of larger cars in the home market. The government felt Britain should produce larger American sized cars in order to be competitive in export markets. Consequently, the opportunity given by petrol rationing to encourage small economical cars was foregone. None of the small post war British designs were as economical as the smallest French and German cars. At the same time, the failure of other government policies to effect rationalisation and cost efficiencies in the motor industry meant that the larger British cars were considerably more expensive than similar American designs.
Performance: Distribution policy frustrated both technical and structural efficiency. It offered little incentive to the rationalisation of production methods, the lowering of costs or the improvement of quality. It did not seem to hold up industry progress. Whilst the nature of designs was affected, manufacturers knew competition would soon return. Thus, they went ahead with new designs. Excess-demand had beneficial effects on employment. It meant there was steady employment year round, since the usual seasonal factor in home demand for cars was eliminated.

TAXATION POLICY

In March 1944 the Society of Motor Manufacturers and Traders submitted a report entitled "Postwar Reconstructions" to the Board of Trade. In this report the S.M.M.T. asked for four things. Firstly, adequate protection from competitive imports. Secondly, elimination of unnecessary traffic regulations. Thirdly, establishment of a national transport and national road construction programme. Fourthly, support for the industry's export activities, "both by using the country's purchasing power to the full as a bargaining factor in obtaining the necessary facilities from British and foreign countries, and by encouraging the maximum use of motor vehicles in the domestic market."

Since 1920 the British market had been protected by the 33 1/3% McKenna duties and the R.A.C. horsepower tax. The horsepower tax had encouraged the design of long stroke engines unsuitable for high speed long distance travel common overseas.
It also had meant that shorter stroke imported cars were overtaxed in Britain in relation to their power output, as compared to similar domestic cars. If British export activities were to be successful after the war, reform of the car taxation system was essential.

A conflict developed about the nature of tax reform between the Standing Joint Committee of the Royal Automobile Club [RAC] and the Automobile Association [AA] and the motor transport industry. The RAC and AA were concerned about equity and rising car ownership costs after the war. They wanted the burden of any new tax placed on car usage. Therefore, they recommended that the government increase fuel taxes and abolish licence fees. The motor industry claimed such tax changes would increase transport costs. In frustration over this difference of opinion in the motor industry, the government decided to tax engine cubic capacity. The government's viewpoint was voiced by Sir Stafford Cripps, President of the Board of Trade.

"It would help the government more if you could all speak with one voice. The horse power tax rating has been altered in the direction which we believe the majority of the motor industry desired, but we still do not know whether you think the steps should be small or large. The matter has been left adjustable during the discussion of the Tax Bill if but only if - a strong and decided preference is shown by the industry to assist in its export policy - if, that is
to say, it has one!"60

The government decided that after January 1947 cars would pay an engine capacity tax of one pound per hundred cubic centi-

metres, with a minimum of seven pounds and ten shillings. This tax would still be protective, particularly against anticipated large cheap American imports, but gave more freedom to engine design.

By 1947 it was apparent that there was worldwide excess-demand for cars. The threat of American imports to Britain disappeared.62

Furthermore, the costs of car ownership relative to average in-

comes had increased.63 Consequently, the motor industry supported a move by the RAC and AA to have taxation policy changed once more.64

In June 1947, negotiations between the motor industry and the government, through the National Advisory Committee, proved effec-

tive. Less than six months after the introduction of the cubic capacity tax, the Chancellor of the Exchequer announced a new scheme.65

All cars registered after January 1947 would pay a flat rate licence duty of ten pounds per annum.

Prior to the change all but the smallest cars had paid over ten pounds in licence fees. To offset revenue losses the Chancellor considered increasing petrol taxes but decided against it. He felt such an increase would have borne too heavily on commercial users. Additionally, he concluded that a refund system for com-

mercial users would be too complicated and open to abuse. In-
Instead, he decided that the old horsepower tax system would continue to apply to older cars first registered before 1947. Also, the purchase tax on the minority of new cars with a base price of over one thousand pounds was doubled to 66 2/3%.

**Basic conditions:** Both the post war licence fee systems were introduced by the government in response to the wishes of the motor industry. Both systems sought to affect the nature of demand for cars. The cubic capacity tax was intended to make British cars more acceptable in overseas markets without opening up the British market to the Americans. The flat rate licence system sought to modify British demand towards larger cars. At the time it was believed larger cars would sell more easily overseas. Therefore, government taxation policy after the war sought to persuade the British motor industry to emulate the export success of large American designs.

**Structure:** One aim of the taxation reform was to encourage motor industry rationalisation. Both tax systems introduced after the war provided an incentive to the manufacturers to reduce their model range. As a result economies of scale might be exploited and costs lowered, particularly by the larger firms. However, between 1945 and 1953 the effect of taxation policy on structure was limited. Taxation changes were a necessary but not sufficient condition for the rationalisation of industry structure. The changes in taxation took place in the vacuum created by the government's export policies. As all firms made adequate profits
there was little incentive for firms to give way to merger and takeover movements. Consequently, taxation reform had little effect on structure.

Conduct: The cubic capacity tax system meant the motor manufacturers continued to be "tax engineers". Still, it initially pleased the S.M.M.T. because it afforded desired protection for the motor industry. The Times was less sanguine. It felt the tax was unlikely to help exports. The Economist felt the tax gave way to 'special interests'. Basically, the cubic capacity tax would have continued to restrict designs and have handicapped the motor industry's ability to contribute to the balance of payments.

The flat rate tax removed restrictions on car design. It encouraged the development of more efficient engines. Potentially, it facilitated standardisation and the reduction of costs. It also encouraged British manufacturers to design larger cars and place less emphasis on economy models. Before the war, British manufacturers had been at the forefront of small car design.

Performance: In 1947 the Economist noted that motor taxation had not been successful in the past as a means to modify industry structure. They commented,

"If the government would waste a little less energy on changing the ownership of industry and be a bit more forthright in asserting the national interest in the politics pursued by industry, they would better deserve the name Socialists."


Post war taxation policies had limited effects on performance. Whilst there was some influence on designs, hoped for improvements in efficiency were not achieved. Too many firms continued to produce too many models and economies of scale were not exploited.71

With reference to the balance of payments it is doubtful whether the 1947 changes to a flat rate tax had a significant effect. The new larger designs of the late forties were received no more enthusiastically overseas than their predecessors. British cars continued to sell well only where there was excess-demand. Indeed, in the early fifties exports may have suffered. The flat rate licence, in conjunction with the fixed mileage petrol ration, had discouraged small car design. Britain's smallest cars were considerably heavier, more expensive, and less economical than the smallest French and German cars.72 In Europe the smallest cars had found a rapidly growing market. The larger British cars could not compete.

With reference to the equity goal it would appear that the application of the flat rate tax system was inequitous. The owners of older cars were taxed under the old RAC method and paid higher taxes. The lower flat rate system only applied to newer cars. In 1947, it was doubtful whether the Chancellor of the Exchequer felt the implementation of the tax change was regressive.73 Until the fifties any motor car was regarded as a luxury of the middle class. At that time therefore, almost all car taxes were paid by
upper income groups.

ROADS POLICY 1945-53

As well as licence fees, petrol rations, purchase taxes, petrol taxes and covenants the roads themselves affect a country's motor industry. They are thought to affect motor industry performance in two important ways. The first relates to the question of a saturation point for motor car demand. The second relates to the nature of motor car design.

The idea of a saturation point has been popular for a long time. By this argument, the total demand for cars is eventually a function of the road network. At some point congestion on the roads will become so bad that a constraint is put on further motor car ownership. The costs of congestion outweigh the benefits, for aspiring motorists, of car ownership. Although this argument was to be raised again in the late fifties, between 1945 and 1953, the government, by artificially keeping down the number of cars on the road and the number of miles they were driven, obviated the likelihood of a saturation point in demand ever appearing even a possibility.

The second concept, the relationship between the nature of the roads and car design, was highly relevant between 1945 and 1953. Different road classification systems in different countries complicate a direct comparison between British roads and those of other countries in the post war years. However, United States roads were excellent because the law dictated that road expendi-


### TABLE VI

Public Roads in Great Britain at 31st March, in miles

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<td>Class 1 (A1)</td>
<td>4,459</td>
<td>8,190</td>
<td>8,189</td>
<td>8,176</td>
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<td>17,691</td>
<td>17,700</td>
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<td>48,351</td>
<td>48,584</td>
<td>48,614</td>
<td>48,682</td>
<td>48,678</td>
<td>48,693</td>
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<td><strong>Total</strong></td>
<td>135,334</td>
<td>89,313</td>
<td>89,684</td>
<td>89,608</td>
<td>89,735</td>
<td>90,676</td>
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**SOURCE:** Great Britain Statistical Office

Annual Abstract of Statistics

1955
tures increased proportionately with motor tax revenues. In Germany, Hitler had built the famous autobahns. In France, dating from Napoleonic times, there was a national main trunk system, with long straight roads relatively free of obstacles. In Britain, the roads tended to follow the rights of way determined by medieval institutions.

There was no doubt that Britain's roads had been neglected when compared with her motor manufacturing competitors:

"For fifty years motoring has been overtaxed. Motor cars have been treated as if they were visible symbols of the selfishness of arrogant wealth. This attitude largely explains the wasted years between the wars when the development of the motor industry and of the roads was strangled by taxation. If, instead, automobile development had been encouraged, some millions of man years wasted in unemployment might have been used to good account and by 1939 this country would have been equipped with a greater engineering industry, a fine road system, a stronger balance of payments and a significantly higher standard of living." 74

Pre-war road expenditures had been niggardly in comparison to revenues. Post war governments continued the trend. 75 In May 1946 the Labour government announced a new road programme aimed at promoting road safety, increasing agricultural efficiency, improving industrial and urban development and reducing road congestion. 76 However, before the programme was even begun, balance
of payments difficulties caused a reduction in government expenditures. The roads were an obvious candidate for postponement. From 1948 to 1953 roads policy was one of 'patch and mend'. Even compared to pre-war levels roads expenditures were low. Between 1948 and 1953 only sixty-six per cent of the amounts spent between 1936 and 1938 were made on minor improvements and maintenance, and only twenty-one per cent of the amount on major improvements and new construction.

**Basic conditions:** The neglect of the road system had an important impact on British car demand. To understand this it is helpful to imagine the state of the main A-1 road from London to the north and Scotland in the post-war years. Firstly, the A-1 bypassed few of the major conurbations in its path. Thus, the main street of Newcastle, the seventh largest city in Britain, was also part of the A-1. Through traffic could not avoid the busy city centre. Secondly, sixty-six per cent of this road consisted of a single lane with no shoulder in each direction. Finally, all commercial vehicles over three tons in weight were limited to a maximum speed of twenty miles per hour. British roads were slow and congested. Cars suitable for these conditions were ones which would trundle along easily in top gear at twenty miles per hour with sufficient engine torque to accelerate to forty or fifty miles an hour when the opportunity to pass slow traffic arose. Demand for such cars was incompatible with much overseas demand.
The poor road system had further negative effects on overseas demand. The antiquated roads of Britain were a poor testing ground for models which might have been competitive abroad. As a consequence, British manufacturers were handicapped in obtaining feedback on weaknesses in their models which needed remedy, weaknesses which did not show up in the unusual British conditions. It is arguable that the poor reputation gained by British cars abroad was partly a result of the failure for defects to appear on models sold at home. Therefore, a longer time lag took place before information about problems was relayed to the British manufacturers for remedial action, as compared to her continental competitors. In the meantime, the reputation of British cars declined and overseas demand decreased.

**Structure:** No clear effect.

**Conduct:** Poor British roads affected product strategy and research and innovation. Designs were created which were suitable mainly for British conditions. Research was directed towards the problems created by British roads.77

**Performance:** Inadequate designs for overseas meant exports were lower than would otherwise have been the case. Thus, inadequate roads had negative effects on the balance of payments. To the extent that balance-of-payments problems necessitated restrictions on home demand, the poor road system can be seen as retarding progress. Poor roads also slowed progress in the industry by retarding the development of the technology appropriate
to models suitable for a modern road system.

LABOUR RELATIONS POLICY, 1945-53

In the post war years government labour policy with reference to the motor industry was mainly one of setting the ground rules. Unless the industrial democratic process broke down the government did not get involved in day to day problems. For example, in 1947 most of the motor industry moved to a five day week from a five and a half day week. At the same time the Trades Union Congress (TUC) moved that a forty hour week should be introduced in the industry. Asked for action on this, the government replied that it was a matter for negotiations, not legislation. 78

Nevertheless, government labour policy did influence the industry. Firstly, the wartime legislation which allowed trade unions in the motor plants changed the ground rules considerably. Secondly, when labour relations broke down the government set up Courts of Inquiry. These examined problems, made recommendations, and set precedents.

Whilst there were a number of strikes between 1945 and 1953, 79 there was only one occasion on which a Court of Inquiry was established. The question involved in the 'McHugh' strike was whether Austin had victimised a shop steward called McHugh. McHugh was one of a number of workers declared redundant. Set up by the Minister of Labour, the Court concluded that McHugh's dismissal, "...was neither selective nor irregular in form and cannot be attributed to victimisation on account of...trade union
activities. Furthermore, (the strike) was not based upon any real grievance as to (McHugh's) dismissal or the form which it had taken, but was designed by (the Area Organiser of the National Union of Vehicle Builders) to secure the principle of preferential treatment for shop stewards. The Court of Inquiry ruled that shop stewards should not get preferential treatment.

Basic conditions: Before the war the motor industry had a reputation for 'hire and fire' practices. During the war, trade unions had been introduced into all previously non-union factories, sometimes under duress. This affected basic conditions. The wartime legislation had encouraged the motor firms to allow many different unions into the factories. This meant that to coordinate the activities of workers from different unions at the shopfloor level, the shop stewards had to play an important role. The fact that in some cases unions had been forcibly introduced created scope for management-labour antagonism. The fact that shop stewards, rather than local union officials, really represented the shopfloor created scope for shop steward-union official jealousies and antagonism. In an industry particularly vulnerable to seasonal and cyclical demand, such a labour relations system was likely to be unsatisfactory.

Structure: As early as 1947, at the Morris Motors Annual General Meeting, Sir Miles Thomas, the managing director, reported that "extravagant expansions" had been cancelled because of labour
difficulties. However, other factors were in evidence in 1947 which would also have discouraged expansion. It is possible that labour relations were simply a convenient justification for the cancellations.

More clearly, the poor labour relations system had a negative effect on the cost structure of the industry. Distrust and insecurity meant that labour relations in the motor industry became characterised by a rigid adherence to demarcation and a reluctance to permit the introduction of new technology and labour saving machinery. British trade unions tended to oppose moves for modernisation and improved efficiency which might possibly have involved the elimination of jobs. An example of this was a case at Austin in 1948 which ended in a strike that closed down the factory. Austin wanted to introduce a new spindle cutter which had the ability to increase productivity by one hundred and forty per cent. Shop stewards feared the new machine would result in a "speed up" with possible adverse effects on jobs. Therefore, they opposed the introduction of the new machine.

The same Austin strike reflected another negative aspect of a poor labour relations system on costs. This developed out of the piecework systems. Under piecework the worker was paid for each unit he produced. The faster he was able to produce the more he got paid. The difficulty with such a system was that it made innovation difficult and expensive. Firstly, if the worker could no longer control his rate of output with a new machine, as
was the case with Austin's spindle cutter, it was likely there would be resistance to change. Secondly, a new machine applicable to piecework would only be accepted if it was likely to generate higher wages than the old machine. At Austin, the strike was aggravated by difficulties in setting a new wage rate for the spindle cutters. The problem was that once one group got a new rate for the job, parity meant demands by other groups for wage increases. With over twenty unions to a plant the scope for conflict and increased pressures on costs was considerable. 84

Conduct: The effect of the labour relations system on conduct was fairly limited. Firstly, it meant considerable effort was wasted on labour relations problems which might better have been applied elsewhere. Secondly, poor labour relations might have discouraged research and innovation. Every time new methods and techniques were introduced into production they created a hazard for labour relations. Therefore, research and innovation may have been slowed.

Performance: Between 1945 and 1953 labour relations affected technical efficiency, progress, employment stability and the balance of payments. Resistance to productivity improving technology, demarcation and strikes reduced technical efficiency. Hostile and defensive attitudes by the unions 85 slowed progress and discouraged capital expenditures by the motor firms. The existence and attitudes of the trade unions probably affected employment stability. The existence of unions meant firms made
greater efforts to avoid redundancies than before the war. Firstly, better production planning was encouraged. Secondly, firms were more likely to hoard labour in times of weak demand. Lastly, the labour relations system had negative effects on the balance of payments. Whenever the system broke down and strikes occurred exports were lost.

Whilst strikes do not necessarily indicate a poor labour relations system, the number of strikes in the British motor industry after 1945 suggest weaknesses. One major weakness stemmed from the government legislation and policy during the war which had permitted trade unions in the factories. It had given no incentive to a rational trade union structure such as one union to each plant. Instead, far too many unions were present in each plant for efficient labour relations.

**COMPETITIONS POLICY, 1945-53**

Traditionally Britain has had an open economy and has had little need for monopoly legislation. Furthermore, in Britain the attitude towards monopoly per se has been less critical than in the United States. In Britain, if a monopoly approached the goal of allocative efficiency then, generally, it was accepted. Not until 1948 was monopoly control legislation passed. The Monopolies and Restrictive Practices Act of 1948 was a mild piece of legislation which reflected the above attitudes to monopoly. Under the act, the Board of Trade could refer individual industrial arrangements to a Monopolies Commission for examination.
After 1945, the government clearly favoured greater concentration in the motor industry. In addition, the government encouraged cooperation between independent firms, believing this would lead to mergers and increased efficiency. Therefore, it was with pleasure that the Minister of Supply announced that the 'Big Six' had agreed to pool the results of production experiments and to allow the other manufacturers to inspect the technical and administrative resources of its rivals.

Yet, though the government clearly favoured the rationalisation and integration of the motor firms, other policies frustrated this goal. As a result, relatively few mergers occurred between 1945 and 1953.

Structure: The most important merger of the period occurred between Austin and Morris. Since before World War II the two American companies, Ford and Vauxhall, had taken an increasing share of the British market. At the end of 1948, plans for technical collaboration were made between Austin and Morris. The move was spurred on by current difficulties in meeting export quotas. In 1949, following devaluation, the profits of both Austin and Morris more than trebled. Consequently, neither company felt the need to sacrifice any autonomy. The merger was called off. In 1951, the austerity created by rearmament put pressure on both companies again. In November 1951 the desire to effect the maximum standardisation, coupled with the most efficient manufacture, and by the pooling of factory resources...
and consequent reduction in costs" led to a complete merger. The government saw the merger to be in the public interest for two reasons. Firstly, potential production economies of scale created the opportunity to lower costs. Secondly, the merger strengthened the purely British sector of the industry in relation to Ford and Vauxhall. The managing director of the new British Motor Company (BMC), Leonard Lord, saw the merger as a defensive one against the American companies. The government was pleased that the merger had occurred.

The two companies involved were approximately the same size in terms of output. However, Nuffield, whose market share had declined since 1937, was comprised of a number of manufacturing companies accumulated over the years. The largest of these was Morris Motors at Cowley. In addition, there was MG at Abingdon, Wolseley at Birmingham, Riley at Coventry, and Morris Commercials at Birmingham. Component parts manufacturers in the Nuffield group were Nuffield Metal Products (body builders) and SU carburetters. In contrast, Austin was a highly integrated company based on a single large plant at Longbridge. Austin claimed their plant was as advanced as any in Europe.

At the time of the merger, BMC produced thirteen different engines and twenty-three different body styles. To be effective in exploiting potential economies of scale the new company required a considerable reorganisation.

In 1953, two of the large independent body suppliers were
taken over by the motor manufacturers. Ford purchased Briggs Body suppliers and BMC absorbed Fisher and Ludlow. Neither move was opposed by the government which believed the vertical integration of the firms would improve efficiency. Indeed, the fact that the Treasury allowed Ford scarce American dollars to purchase sixty-two per cent of Briggs' shares from the American parent company and other American interests, reflected a very strong government inclination to that merger.

A number of factors led to the Ford takeover of Briggs. Firstly, there had been considerable labour problems at Briggs. Ford believed that these would be eased by a closer integration between Ford's Dagenham works and their adjoining body suppliers.100 Secondly, in 1953 excess-demand for cars came to an end. As competition became more intense101 all the manufacturers became more concerned about guaranteeing their supplies. Thirdly, after the war the manufacturers introduced designs featuring unitary body construction.102 This meant the body became a more important part of the car.

The last two factors explaining the Ford merger explained the BMC takeover of Fisher and Ludlow. BMC produced unitary body designs. BMC wished to guarantee their supplies of this major item.

Conduct: The intention of mergers policy in this period was to encourage industry rationalisation and a reduction in the number of models produced. However, a lenient attitude towards monopolies was a necessary but not sufficient condition for the
rationalisation of industry structure. Similarly, mergers were a necessary but not sufficient condition to achieve a satisfactory model range. Between 1945 and 1953 a single merger occurred and this did not lead to a satisfactory model range. Consequently, the effect of competition policy on conduct in this period was limited.

As a note of interest, the government permitted the BMC-Fisher and Ludlow merger only upon assurances that, "future trading will be materially unchanged" and that, "all enquiries and orders (whether from the motor industry or not) will receive the same attention as before." Before the merger Fisher and Ludlow had supplied bodies to Standard. Hence, after the merger BMC supplied bodies to a major competitor.

**Performance:** Between 1945 and 1953 competition policy had limited effects on performance. Other government policies thwarted the encouragement given by competition policy to industry rationalisation. Consequently, performance goals were relatively unaffected.
REGULATORY POLICY, 1954-60

With the end of rearmament, the Conservative government reverted to more traditional laissez-faire policies. Essentially, it was thought the government should avoid interfering in industry. Consequently, export quotas and steel quotas for the motor industry were abandoned. The motor industry was left to act in its own best interests without specific government interference. As a result, the motor industry abandoned the emphasis on exports. Instead, attention was paid to replacing the outdated stock of cars on British roads and making new sales at home. Between 1951 and 1955, home sales grew annually by thirty-eight per cent. At the same time exports stagnated and did not even achieve the levels of 1951.

Nevertheless, the Conservative government's "hands-off" policy did have a considerable impact on the motor industry through regulatory policy. Government regulatory policy, after 1953, became caricatured as "stop-go" policy. The need for such a policy resulted from Britain's high marginal propensity to import, an over-valued pound at a fixed exchange rate, and the consequently vulnerable nature of the British balance of payments. Whenever the British economy experienced economic growth, imports tended to grow faster than exports. As a result, the balance of payments tended to move into deficit. To remedy the balance of payments, the government introduced restrictive measures on the internal economy until the balance of payments improved. Thus,
the economy tended to follow a "stop-go" pattern.

The motor industry was probably affected more by "stop-go" policies than any other industry in Britain. It was vulnerable to such policies from two standpoints. Firstly, as the country's major exporting industry, any decline in motor exports had a noticeably harmful effect on the balance of payments. Secondly, whenever it was necessary to improve the balance of payments, the government would reduce internal demand. Consumer durable demand, particularly demand for cars, was very susceptible to general restrictions. Hence, the motor industry tended to feel the brunt of the country's balance of payments difficulties.

"Stop-go" severely affected industry progress from 1953 to 1960. From the end of rearmament until 1955 was a period of "go". Output nearly doubled between 1952 and 1955. All the increase in production was delivered at home.

Failure to export more cars partly explained the balance of payments problem which developed in 1955 and necessitated "stop" policies. Exports of cars to North America, Europe and Australia declined. The government reacted by tightening credit. Hire purchase restrictions on cars were increased and the down payment raised. In addition, the business allowance on cars was abolished. The intention of these moves was to cut home demand and to squeeze more cars to the declining export market.

1956 turned out to be a "brutally disappointing year" for the British motor industry. The industry was already suffering
from the government's "stop" policies when the Suez crisis occurred. Suez severely affected demand. Firstly, at home, petrol taxes were raised and petrol rationing introduced to deal with the oil shortage. As a result, home demand for new cars plummeted. Secondly, overseas demand increased in those export markets also short of oil. In 1956 output fell by forty per cent.

The motor industry was so badly hit by the "stop" policies and Suez that the government took special action to help "for the time being." Hire purchase deposits were lowered and the Board of Trade's Export Credit department stretched its insurance credit to British manufacturers. However, neither move helped very much. The hire purchase balance on new car sales at home still had to be repaid within two years. Thus, the lower deposit had minimal impact, particularly as most new car sales involved the trade-in of an older car.

Although the government continued its "stop" policies, a fortuitous external event brought back some prosperity to the motor industry. In 1957, North America rediscovered the small car. Demand for all European cars increased rapidly. As second cars, as students' cars, and as fun cars, sales of the European products were higher than ever before. British exports to North America quadrupled, though some European manufacturers enjoyed even larger increases. Despite controls, home demand also increased in 1957. An end to petrol rationing and a rise in consumer confidence following the end of Suez appeared to offset the
effects of increased hire purchase deposits reimposed by the government.\(^9\)

By 1958 the balance of payments was considerably improved following two years of "stop" policies. Increased car exports were a contributory factor in this improvement. The government decided that the economy could be expanded. All hire purchase restrictions were removed. Home sales of cars increased rapidly.\(^10\) Extra capacity which had been created since 1954 in the industry was fully utilised for the first time. In 1957, output had been 860,000 units; in 1958, it just exceeded one million; in 1959 it approached 1.4 million, a figure originally forecast for 1965.\(^11\) Still, in 1959, there were waiting lists of up to nine months for some models at home. Optimism swept the industry and all firms made bold expansion plans.\(^12\)

By the summer of 1960, the balance of payments had seriously deteriorated. The government was forced to implement "stop" policies again.\(^13\) The effects on the motor industry were disastrous. Industry output in October 1960 was less than forty per cent of the peak summer levels.\(^14\) The smaller firms were particularly hard hit.\(^15\)

The deterioration in the balance of payments in 1960 occurred for two reasons. Firstly, an anticipated rise in imported goods of all sorts accompanied the period of economic growth from 1958. Secondly, the export of British cars to North America which had begun in 1957 came to a natural end. The increased penetration
of European imports caused the North American manufacturers to
develop compact cars. For 1960, the Chevrolet Corvair, the Ford
Falcon and the Chrysler Valiant were announced. Demand for
British cars in the United States was more affected than demand
for the other European makes. A major reason for this was
British post war taxation policy which had discouraged economy
British cars. Most British exports were small four door saloons
with engines of between thirteen hundred and twenty-six hundred
cubic capacity and sports cars. The British saloons were
closer substitutes to the North American compacts, than the French
Renaults and German Volkswagens. British saloons were virtually
eliminated from the North American market. Renault sales fell by
only thirty per cent. Sales of the German Volkswagen were least
affected. Nevertheless, Volkswagen had to launch a major adver-
tising campaign for the first time in order to maintain sales.
Volkswagen used the slogan "Think small," which emphasised that
a Volkswagen offered the most basic transportation available.

As usual when a recession hit the motor industry, the in-
dustry appealed to the government for relief. In 1960, the re-
sponse from the Chancellor of the Exchequer was that hire pur-
chase controls and purchase tax "would be eased only when the
government thought that the economy as a whole justified it."21
By that time, the motor industry "had come bitterly to feel that
no move in monetary policy as recently understood in the United
Kingdom, would be complete without special discrimination against
Basic conditions: On the supply side, "stop-go" policies did not seem to affect business attitudes and confidence. Suez was an exceptional event whilst the period of "stop" in 1960 was short enough that investment plans by the companies were not affected. During the "stop" of 1960 all the companies had bold expansion plans underway. There is no evidence that any of these were cancelled or curtailed. Nevertheless, the "stop" periods did appear to affect trade union attitudes. "Stop" policies necessitated redundancies, reinforcing insecurity and distrust amongst the workforce.

Regulatory policy and "stop-go" had a dramatic effect on demand. At home "stop-go" policies aggravated cyclical trends considerably. It also affected exports. During periods of "go" there was little pressure on the industry to export. However, one of the intentions of "stop" policies was to squeeze home sales and so put pressure on the manufacturers to increase exports. Consequently, government regulatory policy encouraged stop-gap export efforts by the motor companies.

Finally, every time "stop" policies were applied, growth of demand for cars was slowed.

Structure: Regulatory policy had limited effects on industry structure during this period. "Stop" policies tended to weaken the smaller companies. They were more affected by cyclical demand, as well as having smaller financial resources. This put
some pressure on the smaller companies to merge to effect industry rationalisation. However, it seemed a drastic way to achieve rationalisation. Furthermore, the "stop" periods rarely lasted long enough to achieve this end.

Conduct: "Stop-go" policies discouraged the long term development of overseas marketing. Only during "stop" periods was there a strong effort to sell overseas. Then prices were reduced in overseas markets. It is likely that "stop" periods discouraged research and innovation, since profits were squeezed.

Performance: Regulatory policy affected productive and allocative efficiency, progress, employment and the balance of payments. Productive and allocative efficiency was harmed in two ways. Firstly, during periods of "stop" plants operated well below capacity so raising unit costs. Secondly, redundancies associated with "stop-go" encouraged trade unions to be more conservative and less cooperative. As a result, labour was used less efficiently and costs increased. Progress was retarded by "stop" policies. Firstly, "stop" policies discouraged investment. Secondly, by squeezing profits, "stop" policies dried up a major source of investment funds in the British motor industry. Regulatory policy meant that employment in the industry was unstable, despite the efforts of trade unions and management. Finally, regulatory policy had important consequences for the balance of payments. In the short run, "stop" policies squeezed production into export markets. However, in the long run it is
questionable whether regulatory policy helped the balance of payments. "Stop-go" provided little incentive to produce models really appropriate for export markets. "Go" periods focused the manufacturers on the home market. Furthermore, periods of "stop" halted progress in the industry. Thus long run international competitiveness was harmed. In the long run, "stop-go" harmed the contribution of the motor industry to the balance of payments.

EXPORT POLICY, 1953-60

With the end of rearmament export quotas were abandoned. A clear statement of the government's export policy for the motor industry was made in 1956. A debate about the recession in the House of Commons took place in which a government spokesman said, "It is not for the government to export cars; it is for the motor industry to do that. Whilst it may have seen some decline in the share of world markets, it is still the premier exporter in the world."29 Though the government disclaimed responsibility for car exports, it was still "deeply interested in the export performance of the industry." The government claimed it would, "continue to promote exports whenever possible."30 In addition, "All the services of information, help and advice provided by the Board of Trade and overseas offices for exports generally (were) available to the motor industry; so (were) the facilities for export credit insurance offered by the Export Guarantee Department."31

Government policy was to leave exporting to the motor industry.
Any government influence on motor exports was indirect through regulatory policy. Regulatory policy encouraged the motor industry to concentrate on the home market, as from 1953 to 1955, and to turn to export markets only in times of difficulty.

Basic conditions: After the export quotas were ended, manufacturers allowed export markets to stagnate. At the same time home demand grew rapidly. Given these trends, it was reasonable for the manufacturers to believe that growth of the home market would be the most rapid in the future.

Structure: The government's policy of benign neglect had an apparently minimal effect on industry structure.

Conduct: The government's lack of emphasis on motor exports affected two aspects of industry conduct. It modified product designs and overseas sales strategy.

Since the manufacturers were encouraged to focus on the home market, they produced designs for that market. As a result, Britain failed to produce the economy cars which were very popular in France and Germany in the sixties. These economy cars also proved to have a greater following in North America once compacts were introduced there in 1960. There were four reasons why Britain failed to produce such economy cars in the fifties. Firstly, the British flat rate licence tax scheme was a disincentive to the production of economy cars. Secondly, Britain had a large stock of second-hand cars in comparison to France, Germany and Italy. In those countries, prewar and post-war production had
been lower than in Britain, and wartime destruction much greater. Consequently, in the fifties, in Britain, there were good substitutes available for economy cars in the form of second-hand cars. Thirdly, the tax on petrol in Britain was lower than on the continent. Fourthly, the British manufacturers claimed that when they costed for a hypothetical smaller car, they found that they squeezed out value faster than they squeezed out costs.

In 1955 the Spectator commented on the manufacturers' policy of producing models suitable for British conditions. It said that in Switzerland British cars were called "old men's cars," because of their antiquated designs.

British sales strategy overseas was inadequate. A major reason for this was an excess of competition by the British. For example, in 1957, it was reported that in the United States, Britain offered twenty-six different makes and models for sale, Germany six, and France five. This meant that, on average, each British model sold just a few thousand units per year in the United States. It would have been hopelessly uneconomic to maintain sufficient spare parts to provide adequate service on so few sales. Therefore, the assumption is that the necessary back-up service on sales was not provided. In comparison, Volkswagen sold one single model which underwent no major design change. This enabled all Volkswagen agents to carry sufficient spares without the fear of being left holding out of date stocks or new outdated models.

The existence of too many British manufacturers selling too
many models in export markets created a form of prisoners' dilemma for the manufacturers. It would have been better\(^39\) for each manufacturer to have agreed to concentrate on perhaps a single export model. Then, the British manufacturers would not have competed head-on with each other in overseas markets as did, in fact, occur. However, the British manufacturers were in competition with each other. Even if the manufacturers had agreed upon a national overseas sales policy, the temptation for a manufacturer to break the agreement would have been considerable. Imagine that company A, producer of a complete range but agreeing to export only its small car saw exports of company B's medium sized car increase, because of a change in tastes. If company A believed its medium sized car competitive with company B's, it could argue that its responsibility to its shareholders made it essential to exploit the market and export its medium sized car. This would have been so particularly in a recession when responsibility to workers and the desire to avoid redundancies would have provoked such a move. Obviously, in a dynamic context intra-British competition overseas was a negative sum game. However, given the industry's structure and government policy,\(^41\) it is difficult to see how the game could have been avoided. As a result, in the fifties, Britain offered too many models overseas, with too little exposure and too little service and spare parts back-up.

Performance: The government's non-interference export policy for the motor industry affected progress, employment stability and
FIGURE 4  Total Motor Exports, by country, 1946-74

Cars in '000's

the balance of payments.

Progress was retarded in two ways. Firstly, an excess of competition by British manufacturers meant every model achieved low penetration levels in overseas markets. As noted, offering too many models was a negative sum game. Secondly, for the longer run, since no single British model really established itself in any market, and as British cars gained a poor reputation for service, the rate of growth in demand for British cars in export markets was slowed.

Employment stability was affected negatively by the government's export policy. When the government wished to encourage exports it severely restricted home demand. This caused redundancies.

The balance of payments was helped in the short run when the government applied pressure to export. However, failure to emphasise exports on a permanent basis, and to establish exports on a rational basis, harmed the balance of payments in the long run. Britain's motor exports showed a dramatic decline in performance relative to the other European producers. This is shown in Figure 4.

In conclusion, the government's export policy of non-interference, given the structure of the motor industry, was less than satisfactory. The consequences of such a policy were summed up by Mr. Roy Jenkins, a future Chancellor of the Exchequer. In 1956, in the House of Commons, he said,
"What has happened recently is that government policy, so far as it has affected the industry, has deliberately accentuated swings which in any event might have taken place to a limited extent. ...... In every conceivable way the future of the motor industry is bound up not only with its ability to solve its own problems but with the framework within which the government are to allow it to apply to these problems. The attitude which government spokesmen constantly adopt...that the industry must be left to solve its own problems to work out its own salvation; does not make sense, because the industry is operating within a constantly changing framework, and will continue to do so in the future, and the authority that determines that framework is the government."43

COMPETITIONS POLICY, 1953-60

During this period, there were two distinct developments in competitions policy. They are discussed under two separate headings, restrictive trade practices policy and mergers policy.

RESTRICTIVE TRADES PRACTICES POLICY, 1953-60

In 1956 the Restrictive Trade Practices Act was passed. Before 1956 the Board of Trade had referred individual cases to a Monopolies Commission.44 Under the stronger 1956 Act, all agreements which fell within the meaning of the act had to be registered.

Essentially, restrictions between two parties of the following nature, had to be registered: prices to be charged; terms or con-
ditions on or subject to which goods would be supplied; the areas or places in which goods were to be sold. Other restrictions had to be registered too, but these three applied to the manner in which the motor companies distributed their products. The Court did not automatically exclude such restrictions, but the presumption was that they were not in the public interest. Therefore, all those registering had to demonstrate that the restrictions were in the public interest.

Conduct: The 1956 Restrictive Trades Practises Act had three important effects on the motor industry. It outlawed multilateral agreements and so removed abuses within the industry. It reduced manufacturers' restrictions on dealers. It outlawed collective resale price maintenance.

Firstly, the 1956 Act outlawed multilateral agreements in the motor industry. In the summer, Austin brought a test case before the courts. Previously the manufacturers had had multilateral agreements between the distributors, dealers and retailers. The Court found these to be illegal but that bilateral agreements with each distributor, dealer and retailer could be registered. Under the new agreements (1) Exclusive dealing was dropped, (2) Any person could be put on a list of dealers if they satisfied certain conditions, (3) Agreements would be legal and enforceable. The companies were concerned about the weak conditions to be satisfied if somebody was to qualify for their list. They would have liked to see larger showrooms and parts service re-
Whilst the effect of abandoning the old multilateral agreement had limited effect on the public, it did remove major abuses which had taken place within the industry. In 1949 the Lloyd Jacob committee had commented,

"We believe, however, that as a matter of principle it is extremely undesirable to encourage any sanction for breach of agreement, which is not applied through the due process of law. The complex system which is built up by many associations to detect breaches of agreement may not in itself be positively harmful — although in our opinion it is wasteful, unnecessary and undesirable — but the use of extra-legal sanctions which may deprive a trader of his livelihood is not, in our opinion, justified." 47

This described exactly what had happened in the British motor industry. Extra-legal sanctions had been imposed by the British Motor Traders Association (BMTA) on members who breached agreements and sold at below agreed prices.

The matter came up on the British Broadcasting Corporation's programme "Any Questions". Two members of Parliament criticised the BMTA and one of them, Mr. Anthony Greenwood, called the association 'a completely restrictive monopoly'. Although the BMTA persuaded the BBC to delete part of the programme it emerged that:

(1) The BMTA was used by the motor vehicle and the motor accessory manufacturers to compel retailers to sell to
the public at the price the manufacturer had set.

(2) An offence against any one manufacturer was treated, under the multilateral agreement system as an offence against all manufacturers and was penalized by fines and boycotts.

(3) "Investigators", often retired policemen, were used by the BMTA to find offenders. Although the BMTA instructed these investigators not to incite offences, it was reported that they did sometimes do so.

(4) Private courts, constituted by and answerable to the BMTA, were set up to try and punish alleged offenders. Secondly, the 1956 Act removed restrictions on dealers. It allowed them to stock more than one make. In practice not many did, but before 1956 the manufacturers had been able to forbid shared showrooms.

Thirdly, under the 1956 Act, collective resale price maintenance was forbidden. Following the introduction of the Restrictive Trade Practises Act in 1956 the British manufacturers and foreign concessionaires, in all sixty-five signatories, set up the Motor Vehicle Distribution Scheme. Basically this scheme to maintain "orderly marketing" was a scheme to retain resale price maintenance. The bilateral franchises which were signed after the 1956 Act all contained a resale price maintenance clause, although non-franchised dealers were not bound. Under the Motor Vehicle Distribution Scheme the signatories agreed to prescribe prices and
trade discounts for their products, and to see that these were adhered to by dealers. The scheme also governed the sale of vehicles to the trade and to fleet buyers. In 1960 the Restrictive Trade Practises Court rejected the claim that the Scheme, which also set minimum standards for dealers, gave "specific and substantial benefits to the public.”

By the 1956 Act, although collective price maintenance was outlawed, individual price maintenance was still acceptable. In the first two years of the individual agreements the manufacturers took six cases to court in which retailers were price cutting - two in motor cars, two in tires and two in spark plugs. In all six cases the manufacturers won. In all cases the BMTA provided the evidence and thereby denied their own thesis put forward in 1956, that individual price maintenance would be too slow, cumbersome and expensive to be effective.

For the public it is doubtful whether these legal changes had a major impact in the market for new cars. Since World War II dealers had been competitive, in terms of price, through the use of generous trade-in allowances over and above the resale value of the used car. This form of avoidance of resale price maintenance continued.

The ability of the manufacturers and the BMTA to enforce resale price maintenance was not severely tested during the boom years between 1957 and 1960. In 1960, as export markets in the United States collapsed and as the government began to squeeze
the home market, Vauxhall found stocks of cars building up. For years they had tended to have the shortest waiting lists so that they were worst hit when the 1960 recession arrived. Their first step was to allow a discount of about seven per cent to dealers, hoping that by offering higher trade-in prices sales could be maintained. When this failed to be sufficiently effective Vauxhall decided to abandon resale price maintenance. Prices fell considerably, by up to fifteen per cent in some cases, and Vauxhall's sales in July doubled.\textsuperscript{50}

Performance: The 1956 Act had limited effects on allocative efficiency and equity. It removed the ability of the manufacturers to exercise resale price maintenance through multilateral agreements, and so may have increased competition marginally. However, the industry continued to recommend trade-in prices to avoid aggressive competition.\textsuperscript{51} By removing the BMTA abuses, a step towards greater equity was made.

**MERGERS POLICY, 1953-60**

In the period 1953 to 1960 the Conservative government mildly encouraged mergers. No obstacles were put in the way of the considerable merger activity which took place during this period. After 1952, all the restrained pressures for industry rationalisation were set free.\textsuperscript{52} As competition worldwide became more intense, all the smaller British companies sought new partners.

Traditional Conservative policy meant the government was unlikely to oppose mergers between British companies. The Conserva-
tive government also proved unwilling to oppose mergers and take-overs by foreign companies.

The government's position on foreign investment was stated in 1959. In 1959, Standard-Triumph (STI) sold its tractor plant to Massey-Ferguson of Canada. Since the sale had implications for British industry of general interest, the matter was discussed in the House of Commons. The workers at Standard-Triumph had passed a resolution. In this they stated extreme concern that they should not be bought and sold without consultation. Specifically they expressed anxiety about investment, employment and exports policy decisions being made in North America. In the House of Commons, the government was questioned about the effect of the takeover on Britain's labour relations and strategic strength. The government was asked to stop the merger by using the Exchange Control Act. The government refused. The merger satisfied the criteria set down by the government to evaluate foreign investment as it affected the national interest. In the House of Commons, the Economic Secretary to the Treasury, Mr. Nigel Birch, laid out these criteria. When considering such cases the government examined the impact of foreign investment on likely import trends, export trends and the possible increase in special technology and know-how that might result. The STI sale was likely to meet all these criteria. It would add to Britain's currency reserves and encourage trade liberalisation in general. The government favoured such inward investment which
was to the mutual advantage of both parties.

In November 1959, the Ford Motor Company of America bid $129 millions for the forty-five per cent of Ford of Britain not already owned by Ford of America. This was a considerably bigger foreign takeover than the STI tractor plant sale. Again the government found the bid to be in the national interest, since it met their criteria for foreign investment.

Thus, between 1953 and 1960 the government opposed neither national nor international mergers. However, neither did it actively encourage them.

Basic conditions: The government's merger policy during this period did not have a major effect on basic conditions. By permitting foreign takeovers some 'know-how' may have been imported. Through increased intercourse with American business, some change in business attitudes may have occurred. It is possible that insecurity in the trade union movement was aggravated, as claimed by the unions.

Structure: The government's policy towards mergers had considerable impact on structure during this period. Since the war, the government had encouraged cooperation and communication between the firms through various public and private bodies. As a result, there was open communication between the firms. Between 1953 and 1960 a number of moves between the firms towards industry rationalisation were made. Some of these were successful.

The problem facing all the motor companies, except the two
largest, was summed up by Graham Turner in the Leyland Papers.
In a discussion of Standard-Triumph he said,

"For Standard-Triumph, the 1950s had been a period of almost constant turmoil. Its basic problem was lack of size; it was too small to compete against giants like BMC and Ford. It had to struggle to develop new models, and when it did develop them, their sales were seldom sufficient to bring an adequate return."57

Amongst the 'Big Five' Rootes, like STI, was too small. Vauxhall depended upon support from her parent company to survive. The pressure on the smaller companies, Rover, Jaguar, Jowett and Singer, was even more acute.

In 1954 Jowett became bankrupt.58 In 1955 Singer, faced with financial difficulties, was taken over by Rootes. Rover and Jaguar survived by selling up-market, but in a precarious position. By 1954 Rover had found the development costs of new models very expensive and therefore risky.59 For these reasons Rover and Standard held full scale negotiations for a merger in 1954. Poor profits from STI persuaded Rover to opt out.60 In 1955 a merger between Rootes and Standard collapsed because of an inability to agree on the composition of the board of the new company. The restraints of 1956 acted as a further incentive to mergers and the talks continued between the firms. All the while there were rumours that Chrysler was attempting to buy out a British company. Therefore, despite a great deal of merger
activity, and an obvious desire to achieve industry rationalisation within the industry, few changes occurred. In many cases, the companies found that the sacrifice of autonomy and the risks involved in a merger meant the final decision to merge was never taken. Only in the case of Singer, which faced bankruptcy, did the merger occur.

The theme of a desire to remain independent can also be seen in the STI sale of their tractor plant. For years, tractors had been STI's main profit source. The tractors were made under contract from Massey-Harris. It was unlikely that Massey-Harris would renew the tractor contract, due in 1965. Consequently, STI sold the tractor plant before the contract ended. This provided STI with sufficient liquid resources, either to enable it to expand as an independent manufacturer, or to act as an incentive to gain attractive merger conditions for STI.

In conclusion, despite much merger activity between 1953 and 1960, the greatest change in structure was the purchase of the remainder of Ford (UK) by Ford (USA). If the government had taken a more active role as matchmaker in fostering industry rationalisation, it is probable that more of the merger ventures would have been brought to fruition. Instead, structural change was limited and the failure to exploit production economies of scale continued.

Conduct: Mergers policy between 1953 and 1960 had a limited effect on conduct. British manufacturers continued to offer a
wide range of models. Rapid growth between 1957 and 1960 encouraged all the manufacturers to produce new designs. In 1959, in particular, many technically exciting new models were introduced. Thus, competition in the industry emphasised product differentiation. It reflected that research and innovation had not been harmed between 1953 and 1960 by the failure to rationalise industry structure.

The effects of the Ford (US) takeover of Ford (UK) on the conduct of the firm are unclear. In a letter from Ford of America to Ford of Britain it was suggested that the commercial future of the firm would be unaltered. The letter read,

"Our objective is to obtain greater operational flexibility and enable us better to coordinate our European and American manufacturing facilities, and integrate further our product lines and operations on a worldwide basis. We would like to add that, so far as we are concerned, we intend that your company’s operations shall continue under your direction without change in its employment policy or in its development programme."62

However, as the Economist pointed out, "one does not bid one hundred and twenty-nine million pounds for administrative tidiness.63 Probably the reason for the bid was to be found in two possible developments. Firstly, European cars might have continued to sell well in North America even after the compacts were introduced. If so, the British firm might have needed further expansion.64
Secondly, in 1959, Britain appeared likely to join the European Economic Community in the near future. If so, Britain might become a good springboard into Europe. In a letter to his shareholders, the chairman of British Ford, Sir Patrick Hennessey, remarked, "...other things being equal greater support is likely to be given to the expansion and development of companies in the Ford group which are wholly owned rather than to that of companies in which minority interests are held outside the group." Neither event occurred. There was no need to produce special models for the United States or Europe. Probably conduct by the firm was unchanged.

Performance: Mergers policy between 1953 and 1960 affected productive efficiency, and possibly progress, the stability of employment and the balance of payments. Failure to rationalise the industry meant firms continued to produce at below minimum efficient levels. This meant that too many models in too few numbers were produced at too high a price. To the extent that a fragmented industry structure generated inadequate profits, progress was slowed. There was no evidence of this before 1960. The increased share of the industry acquired by the North Americans offered scope for additional investment and technology. This may have made some contribution to progress. The increased share of the industry controlled by multinational companies affected employment in the motor industry. Employment decisions were made in a worldwide, rather than British, context. Labour demand became
more vulnerable to external events. However, between 1953 and 1960 no significant consequences for labour can be observed. Finally, in the short run, the increased North American interests had a favourable effect on the capital account in the balance of payments. For the long term, it was possible that increased technology and investment would lead to increased exports. Additional exports might then offset the outflow of dividends and interest to North American shareholders.

**TAXATION POLICY, 1953-60**

Between 1953 and 1960 taxation policy acted rather like a postscript to competitions policy. Only one change of importance to the motor industry was made. The impact of this change was felt on industry structure.

In 1959 the government introduced measures which allowed only the first two thousand pounds of expenditures on cars by companies to be deducted for taxation and depreciation purposes. As a result, there was a decline in demand for the more expensive luxury cars of the specialist producers. For this reason, Armstrong Siddeley ceased production in 1960. In the same year, the British Small Arms Company sold its expensive luxury car subsidiary, Daimler, to Jaguar.

Since Jaguar and Rover produced cars for under two thousand pounds, their demand responded favourably to the taxation change. For Jaguar the taxation change was doubly beneficial. Not only did demand increase but, by purchasing Daimler, they were able to
increase capacity without becoming involved in the government's regional policy.

**REGIONAL POLICY, 1953-60**

By the late fifties the Conservative government had become disappointed by Britain's relatively slow rate of growth. They had also been impressed by the success of planning in France. The government therefore adopted a more interventionist approach to policy.

The first aspect of increased government intervention to affect the motor industry was government regional policy. As part of their local employment policy, the government provided incentives to the motor industry to locate new investment in areas of high unemployment. This meant a movement by the motor firms away from the traditional areas of the Midlands and South East England. By 1959, all the motor firms had made plans for expansion, as a result of the rapid increase in demand since 1957. It was the location of this investment the government intended to influence. The incentive to the manufacturers to relocate was government financial assistance and subsidies. The disincentive to prevent expansion in the traditional areas was development certificates. The government controlled the issue of development certificates. The government stopped issuing them for the construction of new plants by the motor firms in the traditional areas.

The government's local employment policy was introduced just
before the biggest investment boom in the motor industry's history. The previous investment booms had been in 1954 and 1957. Thirty million pounds and forty million pounds had been spent, respectively. For 1961 and 1962 the industry planned to spend eighty million pounds in each year. The government persuaded the motor firms to spend over half of this in the areas of high unemployment. As a result, there was a considerable impact on the location of the industry which became geographically dispersed.

Basic conditions: The government inspired relocation of the motor industry's expansion plans affected basic conditions in two ways. It affected trade union attitudes and supplies of inputs.

Expansion meant the creation of tens of thousands of jobs in Wales, Scotland and on Merseyside. As an incentive to the industry to move there, the trade unions agreed to accept lower wage rates in the new areas than in the traditional areas. In the new areas the motor industry agreed to pay the same "rates and earnings" as those ruling in the district. Initially, this meant labour costs would be lower in the new areas, if new workers could adjust to the rigour and monotony of motor factory operations.

The relocation of the motor industry also had consequences for the suppliers of raw materials and parts to the motor industry. The motor industry had an important role in the economy in final factor demand. The investment by the motor manufacturers induced further industrial investment by companies which were sup-
pliers to the motor industry. The most important and the major part of this induced investment was the decision to build a new steel mill at the Spencer Works in Newport Wales, and to make extensions to the Scottish steel plant at Ravenscraig and the Welsh plant at Port Talbot. This induced investment was estimated to cost one hundred and fifty million pounds by 1965, nearly as much as the motor industry intended to spend on expansion. In addition, Pressed Steel planned to increase its capacity to produce bodies by fifty per cent in order to keep up with forecast motor vehicle production. In accordance with government policy it planned a major new plant for construction at Linwood in Scotland as well as factories at Jarrow and Swindon. Bodies for Rootes, BMC and Standard-Triumph would be produced and by 1962 expected total capacity was to be three million.

Structure: The government's regional policy had a considerable impact on the location of the industry. However, it failed to encourage industry rationalisation. As a result of the government's financial incentives, all the manufacturers were encouraged to expand to the new areas.

Overall, BMC planned to spend nearly fifty million pounds to increase capacity to over one million units in 1962. The Board of Trade persuaded BMC to spend over twenty million pounds at places on their list of "locations with high unemployment." Completely new factories were built in Scotland, Wales and on Merseyside. All planned increases in BMC's labour force was for the new
areas. The government paid for the new factories whilst BMC paid for the equipment.

Ford had made plans to invest seventy million pounds when it met with the Board of Trade. As a result of those negotiations, Ford agreed to spend thirty million pounds to build "an integrated car body plant, including stamping, body assembly, paint, trim and final assembly operations to employ about eight thousand in the production of two hundred thousand cars a year" at Halewood, Liverpool. Whilst, for Ford, this plant was not a first choice location, it had certain benefits. Firstly, it was large enough to exploit most technical economies of scale. Secondly, Halewood is not far from a source of sheet steel; in neighbouring Cheshire, J. Summers operated the Shotton Steel Mill. Thirdly, as in the case with BMC, Ford was to get government financial assistance and the trade unions agreed to the payment, initially anyway, of local wage rates. Finally, Halewood is located reasonably close to the major part of the home market, the south east and Midlands.

Vauxhall and STI were also induced to expand to Merseyside. Vauxhall built an integrated commercial vehicle plant at Ellesmere Port. They then concentrated all passenger vehicle production at their original Luton plant. STI built a new body plant at Speke, near Liverpool.

Rootes was the last company among the 'Big Five' to announce its expansion plans. By the time they made their decision the government had decided sufficient development had been announced
for Merseyside and that further public financial assistance would not provide much more benefit there. Accordingly, Rootes decided to build a new integrated plant at Linwood, near BMC's new Scottish plant. Among the two specialist companies, Jaguar avoided the government's relocation policy by a shrewd takeover of Daimler, whilst Rover decided to build a plant to produce the aluminum bodied Land Rover at Cardiff in South Wales; ironically, for this was near the steel mills.

The relocation of the motor industry's expansion plans had negative effects on their costs. This was reflected in that the government's financial incentives were inadequate to induce relocation. The government had to refuse to grant development certificates in the traditional areas. In addition, most of the firms had their original regional location plans rejected. This implies the industry believed the plants would have had lower costs situated elsewhere.

Conduct: It is unlikely that the government's regional policy had a major impact on firm conduct.

Performance: The government's local employment policy involved a clear trade-off between overall economic goals. The government was prepared to trade-off efficiency in the internationally highly competitive motor industry for a lower unemployment rate.

Relocation increased costs. The manufacturers' reluctance to relocate reflected this. No data are available to measure the
effects of relocation on costs. However, some comments can be made. Merseyside was not very far from supplies of sheet steel, from the component suppliers in the Midlands, or from the major part of the home market. Therefore, when Vauxhall and Ford built completely integrated plants on Merseyside net cost penalties were probably not very great. The STI move to Speke must have added to their costs. STI's total output even from a single plant was clearly too small to exploit potential economies of scale. Rootes was probably the worst affected. Although the new Linwood plant in Scotland was fully integrated, Rootes, like STI, was too small to fully exploit available economies of scale. Furthermore, the Linwood plant was a considerable distance from the major components suppliers, and the bulk of the home market.

However, further misallocation of resources was generated by the fact that the government only redirected investment. It failed to coordinate it. All the new investment which the government channelled to the areas of high unemployment had a significant effect on capacity. In 1960 capacity was a little over two million. In 1962 it was almost three million with nearly one quarter produced on Merseyside and in Scotland. Much of this investment was made by the manufacturers on the assumption that it would help them increase their market shares. Obviously they could not all increase market shares. Government policy encouraged overexpansion.

For example, the Economist noted that since 1955 home demand
had grown at an average rate of seven per cent per annum. If this rate were to continue and exports were to rise by twenty per cent, sales in 1963 would have been one and a half million, or about sixty per cent of capacity. At that time Britain was negotiating to join the European Economic Community and the government implicitly suggested that it was here that additional sales would be made, for its own comments on the home market did not suggest much growth was hoped for there. Mr. Maudling said,

"No one is expecting to see in the 60s the eleven, twelve or thirteen per cent annual increase in production which we saw in the late 1950s."

Similarly, the President of the Board of Trade told the motor industry to expect a rate of increase in output approximately the same as the rest of industry. And whilst Mr. Erroll also said that he saw, in regard to the motor industry,

"no reason why we should not get an increasing share of the expanding markets of Europe",

this viewpoint must have been made on the premise that Britain would join the European Economic Community. For on the 1st January, 1961 the first external tariff by the community was to come into effect. As a result Britain would pay 14.8 per cent versus 11.9 per cent for members of the community on imports to Germany; 24.0 per cent versus 16.8 per cent into the Benelux countries; 29.0 per cent versus 21.0 per cent into France and 38.5 per cent versus 31.5 per cent into Italy.
Indeed the assumption in 1960 that exports would rise appreciably in the future was highly questionable. In Canada new import restrictions had been imposed, whilst in the United States the success of European imports had caused the United States manufacturers to introduce compact models. Both the government and the industry revealed notable optimism, or recklessness, with public money, in the efforts made to increase capacity in the industry.

A major effect of the relocation on performance was the negative effect on the allocation of resources. It also affected employment, equity, progress and the balance of payments. The impact on employment and equity was positive. Over fifty thousand new jobs were created in the motor industry as well as a stimulus given to the local economies. This stimulus helped to reduce the differential in living standards between the areas of high unemployment and the more affluent regions of Britain. The effect on the balance of payments was negative. Increased costs meant British cars were less competitive in export markets.

ROADS POLICY, 1953-60

In the previous chapter it was argued that the roads system was an important effect on the motor industry. It can provide an eventual saturation point to demand and it can influence designs. Between 1953 and 1960 the roads system continued to receive low priority for government expenditures. In 1960, the Minister of Transport, Mr. Ernest Marples, was asked to compare road expendi-
tures over the previous twenty years. In 1938-39 fifty-one million pounds had been spent; in 1951-52 fifty-seven million pounds; in 1958-59, seventy-five million pounds. In real terms expenditures had more than halved.

Nevertheless, some changes were made in road transport policy. By the mid-fifties society found it less easy to absorb the car. The Economist commented, "...the road vehicle population may be expected to grow at the rate of half a million vehicles a year, adding inexorably to traffic congestion." The road system did not appear to act as a constraint on car demand. Perhaps there was no saturation point. In 1956 the Traffic Act allowed the speed limit on some urban roads to be raised to forty miles per hour and permitted parking meters to be used to control parking. In recognition of the increased importance of the roads the Ministry of Transport was reorganised in 1959. Civil aviation was given its own Ministry, so allowing the Ministry of Transport to emphasise roads policy. In 1960 the Road Traffic and Roads Improvement Act was passed. This gave the Minister additional powers to introduce new traffic schemes.

However, during the fifties, roads policy achieved little. By 1960 about two hundred miles of motorway had been built. Maintenance and minor improvements had absorbed the rest of the limited roads budget.

Basic conditions: The poor roads of Britain affected car demand. Poor roads created a disincentive to the industry to
produce designs suitable for overseas. Consequently, overseas demand was less than it would have been if British cars had been appropriate for overseas conditions. Furthermore, to the extent that British roads were overcrowded, a disincentive to home demand was created. Thus the rate of growth of demand was reduced.

Structure: Poor roads had no clear effect on industry structure.

Conduct: Britain's poor roads necessitated special designs. For example, the new small cars of 1959 had excellent manoeuvrability and top gear flexibility. They did not have the same ability for sustained high speed cruising as a Volkswagen. Research and innovation in the industry had been directed towards Britain's special needs.

Performance: Britain's inadequate roads handicapped the ability of the motor industry to contribute to the balance of payments.

LABOUR RELATIONS POLICY, 1953-60

Between 1953 and 1960 the government continued its policy of general non-interference in the industrial democratic process. Still, government policy had a strong influence on motor industry labour relations. Firstly, government regulatory policy affected labour relations, once excess demand came to an end in 1953. Secondly, the government continued its policy of setting up a Court of Inquiry when the industrial democratic process broke down.

Figure 5 shows the inverse relationship between strike acti-
FIGURE 5

PRODUCTION AND STRIKES, 1946-64

Source: SMMT and H. A. Turner et al., op cit., p. 110.
vity and production. By using the motor industry as a general economic regulator the government caused considerable fluctuations in production which aggravated labour relations. The government did not appear aware that regulatory policy implied a labour relations policy. For example, in 1956 BMC had to lay off one worker in every eight with no redundancy pay. The Times called BMC's action "unjustified provocation", and in a letter to that paper a Conservative M.P., Martin Lindsay, wrote to say BMC's action; "affronted everyone who has a fundamental belief in the decencies and dignity of man". The Economist reported that Sir Anthony Eden, the Prime Minister, "nodded vigorously" when Labour members criticized BMC action. The Conservative government seemed unaware of their role in causing BMC's decision, however arrogantly BMC handled the matter. The New Statesman did not miss the relationship between the crisis and government policy, which, it said, had failed to impose any planning on the industry, abandoned any pressure to induce the industry to export and had tamely permitted the manufacturers to raid the soft home market.

Only one Court of Inquiry was set up between 1953 and 1960. The strike involved stemmed from the government's regulatory policy which necessitated redundancies at Ford's Briggs body plant late in 1956. The essence of the strike concerned the role of shop stewards in the plants. At the centre of the "bellringer" dispute was a Mr. McLaughlin, chairman of an "unofficial" shop
committee. When Ford announced redundancies, his shop passed a resolution calling for an immediate meeting if anyone in his shop was dismissed or made redundant. In January 1957, two shop stewards in McLaughlin's shop were disciplined for unauthorised absence from work. In direct contradiction of the shop foreman, McLaughlin immediately called for a stoppage of work. For this action, McLaughlin was fired and a strike was called.

The Court of Inquiry found that McLaughlin had been justifiably dismissed. Ford had publicised their intention to discipline breaches of procedure. McLaughlin was not a scapegoat, as the union claimed.

The Court of Inquiry also examined the history of labour relations at Ford. It found that beneath the McLaughlin incident lay matters of a more general nature. Firstly, Ford's procedure to curb unofficial stoppages did not work. Secondly, there was much ill-will between management and labour. The Court found that a section of the shop stewards' organisation was largely responsible for the ill feeling. Thirdly, the existence of an uncontrolled shop stewards' organisation was undesirable from the unions' and management's viewpoint.

An analysis of labour relations between 1953 and 1960 finds an industrial relations system that was unsuitable for the motor industry. The government was partly responsible for this.

In addition, government regulatory policy during this period created additional pressures and insecurity which the industrial relations
system could not handle. Consequently, after the end of excess-demand in 1953, developments occurred which gave the motor industry a reputation for labour problems.

Basic conditions: The major effect of government labour relations policy was on the basic conditions of supply in the motor industry. Firstly, the attitude of confrontation between management and labour created an inflexible, and therefore inefficient workforce. Secondly, poor labour relations retarded technological advance in the motor industry.

Clack has written "...automation has only been a direct cause of conflict where it has led to redundancy: and redundancy has caused conflict whether or not it has been associated with automation. But although automation has in fact seldom caused unemployment, fear of its labour-saving potential may well have added, during the middle 1950s at any rate, to feelings of insecurity originally derived from the pre-war pattern of large seasonal variations in employment. .... It is therefore not surprising that many were still inclined to subscribe to the view that automation leads to redundancy."98

The only strike directly caused by automation in the British plants was that at Standard in 1956. In 1956 Standard, who had a good record as an employer, planned to re-tool the tractor plant. To avoid lay-offs they planned to do this in the summer when motor car demand is usually at a peak. They would then be able to absorb the unneeded tractor workers into the car plant. Unfortun-
ately, that summer, the expected peak in demand never materialised because the government introduced a credit squeeze at the same time that overseas sales declined. Standard had no alternative but to lay off 3,500 men as redundant.

Standard had already moved to a three day week and it was felt that had only kept the plant running for the benefit of the workers. The two largest unions at Standard, the Transport and General Workers Union and the Amalgamated Engineers Union, had accepted that for reasons largely beyond Standard's control, namely the government's credit squeeze, not all could work. The Communist dominated Electricians Trade Union had a Shop Steward's Liaison Committee at Standard and they passed a resolution that no labour saving machines should be allowed to replace labour and called for a strike. The resolution was along the Communist Party line. The appeal for a strike put the other unions of a more moderate approach in a quandry. They knew that the resolution, in a highly competitive industry, was "sheer madness" but decided to recognise the strike out of the fear that not doing so, in the face of redundancies, would drive more workers to the Communists.

Structure: Poor labour relations raised costs to the motor industry.

Conduct: Poor labour relations worked against research and innovation, and the development of new models.
Performance: Poor labour relations decreased productive efficiency and slowed progress. Regulatory policy added to the instability of employment within the industry. Strikes meant that cars for export were lost. Ill feeling amongst the workforce detracted from product quality. As a result, overseas demand was reduced and the balance of payments suffered.
CHAPTER 5, 1961-69

REGULATORY POLICY, 1961-69

By 1961 the Conservative government had become more interventionist in the economy. To carry out its purpose the National Economic Development Council (NEDC) was set up. Made up of members of the government, industry and the unions, the Chancellor of the Exchequer hoped it would achieve, "a better coordination of ideas and plans". In 1963 the NEDC published Growth of the U.K. Economy to 1966. This document attempted to ascertain the effects of a four per cent economic growth rate in the following years.

Late in 1964 a new Labour government came to power. The economy had not followed the NEDC plan. The new government began work on a more ambitious National Plan. This involved considerably more government involvement in the economy. New government bodies were set up. These included a Ministry of Technology, a Department of Economic Affairs, a National Board for Prices and Incomes, an Industrial Reorganisation Corporation (IRC), Regional Economic Councils and Economic Development Councils. The National Plan hoped to overcome the problems of "stop-go" policies. It set a goal of a twenty-five per cent increase in gross national product by 1970.
The problem with both these plans was that neither really provided a solution to the balance of payments problems which had plagued the country since 1945. In July 1966, the government sacrificed the growth goal of the National Plan when it introduced deflationary measures to deal with the balance of payments. One authority has suggested that Britain had been in a "fundamental disequilibrium," because of an overvalued pound, since the late fifties. Up until 1967, British governments sought to maintain the parity of the pound to the detriment of other policy goals. When devaluation did occur in 1967, it was of the order of fifteen per cent. This required a considerable transfer of resources to the balance of payments. There were increases in taxation, cuts in public expenditures, monetary restraint and wage and price controls. Still, the measures taken in Britain were inadequate, requiring further tough budgets in 1968 and 1969.

For the motor industry the government's interventionist spirit of the sixties made things more difficult. Government determination to make the plans work encouraged longer periods of "go" economic policies in the early sixties. When "stop" policies became necessary, in the later sixties, these lasted longer too. Since the plans introduced no new policy tools, the government continued to use monetary and fiscal policy to control aggregate demand. In the sixties, the motor industry continued to be very sensitive to these weapons.
Tables 7 and 8 and Figure 6 show the general trend in hire purchase rates, taxes and production. Basically, between 1962 and 1964, the motor industry experienced rapid growth, then from 1965 to 1969 it showed a gradual decline under the government's "stop" policies. Over the decade, there was a slight increase in production, home registrations and exports.

1961 was the worst year for the motor industry since the Suez crisis. In the new year the industry operated at forty per cent capacity. The government relaxed hire purchase requirements to give the industry some relief. However, in the summer, poor balance of payment figures forced the government to introduce a temporary surcharge, to tighten credit restrictions and to introduce a wage freeze. It was very apparent that, "... demand for motor cars in Britain (was) cyclical with the rhythm conducted by the government ...". By the end of 1961, production was at an annual rate of half a million units a year, as a result of government restrictions. At the same time, total capacity in the industry was being increased to three million units a year, as a result of the incentives of the government's local employment policy.

In 1962, a three year boom in the motor industry began. A revival of export markets and an increase in consumer confidence enabled the motor industry to increase production.
### Table VII

**Hire Purchase Restrictions 1945-75**

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<th>Max. Repayment Period</th>
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<td>18</td>
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<tr>
<td>February 1955</td>
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<td>33 1/3</td>
<td>24</td>
</tr>
<tr>
<td>February 1956</td>
<td>50</td>
<td>24</td>
</tr>
<tr>
<td>May 1957</td>
<td>33 1/3</td>
<td>24</td>
</tr>
<tr>
<td>October 1958</td>
<td>--</td>
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<td>August 1967</td>
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<td>36</td>
</tr>
<tr>
<td>July 1968</td>
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<td>24</td>
</tr>
<tr>
<td>May 1971</td>
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<td>--</td>
</tr>
<tr>
<td>August 1973</td>
<td>33 1/3</td>
<td>24</td>
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## Table VIII

Purchase Tax on Motor Cars in the United Kingdom

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*only on cars costing over £1,000.
†V.A.T. introduced

FIGURE 6  Motor Vehicle Production, by country, 1945-74

Cars in '000's

Source: SMMT, The Motor Industry of Great Britain, various years
As exports increased, the balance of payments improved. The government felt able to remove the purchase tax surcharge and lower purchase tax. Then, in November 1962, the Chancellor of the Exchequer, Mr. Maudling, decided to make a dash for growth. He argued that if all restraints on the economy were lifted, an initial worsening of the balance of payments would occur. Later, exports would begin to rise and the balance of payments would move into equilibrium. As part of this plan, purchase tax on cars was cut from forty-five per cent to twenty-five per cent, a rate comparable to other European countries. The relaxation on home sales coincided with a motor boom in Europe and a revival of sales to the United States. By the end of 1963 the industry was working at capacity.

By the late summer of 1964, the balance of payments was in a serious deficit, as Mr. Maudling had expected it to be. A general election was called for October. The opposition Labour Party exploited the monthly deficits to the full. Maudling believed that the deficits were a temporary phenomenon which would be overcome. The Labour victory meant Mr. Maudling never had a chance to test his thesis. By the time Labour came to power there was great pressure on Britain's foreign reserves; a pressure increased by Labour's own successful campaigning. Some cuts to the Conservative's growth policy had to be made. Still, the Labour government believed strongly
that sustained growth could be achieved, a belief reflected
in the National Plan. Hence, selective controls on the motor
industry were avoided for the time being.

From 1964 to 1967 the Labour government tried to resist
devaluation. Initially, the new Labour government only raised 16
income taxes and implemented a credit squeeze to control the
balance of payments. Nevertheless, it was enough to weaken the
motor boom and usher in five years of decline. As the balance
of payments continued to deteriorate, the motor industry was
used as a regulator once more. Over the summer of 1965, car
licenses were increased and credit restrictions tightened.
The Labour government was determined not to be a devaluation
party. Therefore, in 1966, further deflationary measures
were taken. These included abandonment of the National Plan,
a price freeze, a change in investment incentives and more
restrictions on the motor industry. One reason for the poor
balance of payments picture was an apparently stagnant export
market for cars. The 1966 Motor Show at the end of the year
opened to, "a cacaphony of complaints about governmental unfair-
ness to Britain's biggest export industry." Yet, so long as
protection of the pound was the government's top priority,
little relief could be expected for the motor industry. Early
in 1967, the Prices and Incomes Board allowed B.M.H. and Ford
20 to raise prices by between ten and fifteen pounds. The move
evoked the comment that,

"... all the motor makers have driven coach and horses through the price freeze. The whole range of increases looks very much like part of a deal between the government and the motor industry, who (sic) had been singled out for punishment last July, but are still far the biggest exporters in the country."

By the summer of 1967, the government's prolonged squeeze eventually had some effect on the value of sterling. In appreciation of the heavy burden born by the motor industry, the government relaxed credit restrictions on cars. Further relaxation followed later in the summer. Home sales increased. However, it was an Indian summer for the industry. In the autumn, the balance of payments deteriorated once more. In November 1967, the government finally had to devalue, after three years of resistance.

Post devaluation measures served to reduce estimated home sales from 1.3 million to 1.1 million. Petrol taxes, car licenses and credit restrictions were increased. The 1968 budget cut aggregate demand by a further nine hundred and seventy-five million pounds. Purchase tax was increased and petrol tax and car licenses raised again. Failure to effectively restrain wages meant real incomes grew. This necessitated more restraint. Further restrictions on the motor industry were imposed later in the year. Purchase tax was raised once more and credit restrictions tightened again.
Justifying the new measures in the House of Commons, the Chancellor used language which would have been a credit to Lewis Carroll. He said, "... prices are better, at least lower than expected, and consumption, partly as a result is higher, which in a sense means worse." Finally, in 1969, the government's policies had their required effect on aggregate demand. Home sales fell.

Following devaluation car exports increased. In addition, export prices were set at more profitable levels. For example, E.M.H. reduced prices in Europe by just twelve per cent. This reflected the negligible profits on exports in previous years. Exports to Canada, Australia and West Germany doubled, to the United States they increased fourfold.

The government's restraints in 1969 put more pressure on the motor firms and exports increased further. Still, home sales were so low that the motor industry pleaded with the government for some relief. For example, Rootes-Chrysler reported negligible profits, despite exporting fifty-six per cent of production, whilst B.I.L. and Ford claimed profits were insufficient to cover planned investment expenditures. In November 1969, the Prime Minister devoted a whole day to a meeting of the NEDC subcommittee on the motor industry. Despite threats by the industry that investment would be cut, no change in policy was made. The motor industry had earned
over one billion dollars in exports that year, sixteen per cent of all manufactured exports for the year. In the House of Commons the Chancellor of the Exchequer said that high profits had to be earned overseas.

At the end of 1969, government restrictions meant that the motor industry was operating at about fifty per cent of capacity.

Basic Conditions. On the supply side, the long periods of "stop" and "go" between 1961 and 1969 mainly affected attitudes. The short period of restraint in 1961 did not have major effects on the motor industry's expansion plans. As in 1953 and 1957, recovery came quickly enough to avoid harming business confidence. In comparison, the slump from 1965 was sufficiently long to create business pessimism. In 1967, the Economist commented,

"a third year of slipping production is about as much as an industry so geared for expansion can take without loss of nerve."

In the second half of the sixties real investment fell. The long years of "stop" also affected labour relations. These became more troubled and hostile towards the end of the decade. Constant redundancy and short-time were a factor in making the workforce more responsive to the demands of militants.
On the demand side, government policy had a strong effect. Maudling's dash for growth created a spectacular increase in car demand until 1964. The Labour government's defence of the pound caused home demand to decline until 1969. After 1965, restrictions on home demand caused the manufacturers to make greater efforts to sell overseas. After 1965 the proportion of production going to overseas markets increased.

**Structure.** The boom years had limited effect on industry structure. The prospect of entry to the European Economic Community and government financial aid were sufficient to make all manufacturers carry out large investment plans in the early sixties. Thus, although by 1964, industry capacity was nearly three million units a year, Britain continued to have too many producers. Between 1965 and 1969, all companies operated below capacity. This created pressures for the rationalisation of industry structure. These are discussed under mergers policy.

Failure of the Prices and Incomes Board to control wages affected industry costs, particularly in 1968. At a time of price restraint wage costs to the motor industry increased. This reduced profits, consequently limiting available investment funds.
Conduct. Government regulatory policy affected pricing behaviour. Until 1967, an overvalued pound meant that overseas prices had to be kept at levels which made little contribution to profits. After 1966, home prices were also held down by the government's prices and income policies. As a result, profits were squeezed.

One consequence of low profits was a reduction in research and innovation. In the late sixties very few new models were produced by the British motor industry.

Performance. Government regulatory policy had consequences for productive and allocative efficiency, progress, employment and the balance of payments.

Maudling's boom of the early sixties created an over-expansion of the motor industry without a rationalisation of industry structure. This was particularly harmful for the British motor industry in that, by 1965, the European motor industry experienced over-capacity, so intensifying international competition. As a result, between 1965 and 1969 the British motor industry consisted of manufacturers who were too small and failed to exploit potential economies of scale, and who operated well below capacity. Unit costs rose as prices were frozen. Profits fell to inadequate levels. The motor industry paid heavily for the
government's reluctance to devalue in terms of productive and allocative efficiency.

Progress also suffered. Inadequate profits slowed investment and the research and development necessary for new models and increased productivity. Tables and show how poorly the British motor industry progressed in comparison to the European and Japanese.

Constant restraint harmed employment and employment stability in the second half of the decade. In both the traditional and new motor manufacturing areas of Britain there were constant lay-offs and short-time workings. Failure of the industry to grow reduced the number of new jobs created.

In the long run, the balance of payments suffered. Initially, an overvalued pound discouraged exports. Although government restraints led to short run increases in exports, in the long run exports were reduced. Poor profits, a failure to invest and develop new models slowed progress in the industry. As a result, productivity increased more slowly in Britain, and international competitiveness declined. Earlier devaluation would have helped the motor industry significantly.
Taxation policy during this period is really an addition to regulatory policy. Firstly, the government raised license fees and changed purchase tax on several occasions. However, the significant effect of taxation policy was a new registration system introduced in 1967.

In 1967, the system of registration plates was changed. The new model year for cars, on the plates, was changed from January to August of the previous year. This encouraged additional home sales of cars in the autumn and early winter and discouraged them in the late summer. Consequently, car demand was redistributed from traditionally peak demand periods to a traditional period of low demand. This helped smooth the seasonal cycle of demand in the motor industry. As a result, employment stability was improved.
EXPORT POLICY, 1961-69

During the sixties, the government operated several policies which influenced the motor industry's export performance. Firstly, during the sixties considerable efforts were made to join the European Economic Community (EEC). Secondly, the government negotiated for lower international tariffs as part of the Kennedy Round. Thirdly, the government used fiscal and monetary policy to reduce home demand for cars with the intention of squeezing more cars into export markets.

By the sixties, the British government had re-evaluated membership of the European Economic Community. It felt Britain should join. However, the French opposed British entry. In 1962 and 1967 the French vetoed Britain's application to join.

Despite the vetoes on E.E.C. entry, trade conditions were eased during the sixties as part of the Kennedy Round. Tariffs on imported cars to Britain fell from thirty-three and one-third per cent to thirty per cent in 1962. They were then slowly reduced to seventeen per cent in 1969. Despite the wishes of the motor industry, the government was not very aggressive in pursuing tariff cuts on cars. For example, in 1967, the government did little to resist French
pressure to have motor vehicles with engines over twenty-eight hundred cubic capacity excluded from cuts in the E.E.C.'s external tariff.

Finally, the government continued to use regulatory policy as an incentive to export more cars. These three policies, E.E.C. entry, Kennedy Round cuts, and regulatory policy, had a notable impact on basic conditions, conduct and performance.

**Basic Conditions.** On the supply side, lower tariffs in the sixties encouraged more international trade in cars and components. For example, to exploit this situation, Ford of Britain and Ford of Germany coordinated activities to form Ford of Europe. All companies increased their foreign components content.

Nevertheless, in terms of attitude, the motor manufacturers continued to see the home market as the major market. For example, at the end of the sixties, the Chief of World Sales for B.M.H. said,

"Our export business grew up as a Saturday afternoon exercise done after the week's work for the home market was finished."44

On the demand side, as tariffs were lowered during the sixties, both overseas demand for British cars and British demand for foreign cars increased. Nevertheless,
by 1969 imports to Britain still accounted for less than ten per cent of sales.

Structure. During the sixties, international competition increased as tariffs fell. This encouraged concentration to be increased in all countries as firms attempted to increase efficiency and lower costs. Mergers in Britain are discussed below.

Conduct. In the early sixties, the British manufacturers were optimistic that Britain would enter the E.E.C. and desired lower tariffs. They sold cars at a loss in anticipation of E.E.C. entry. At the same time, British designs were technically quite advanced. By the late sixties, there were considerable criticisms of British quality, few new models had been introduced and much of Britain's optimism and competitiveness had been lost.

Performance. Failure to enter the E.E.C., government regulatory policy, and the timing and nature of lower tariffs had negative effects on allocative efficiency, progress and the balance of payments.

Firstly, failure to enter the E.E.C. in 1962 contributed to the existence of excess capacity in the British motor industry in the sixties. Consequently, unless there was unusual stimulation of home demand, as occurred in 1963,
plants were not used as efficiently as possible, implying a misallocation of resources. Secondly, the use of regulatory policy meant that progress in the industry was slowed. Whilst exports did increase in the short run in response to restraint at home, home sales declined more rapidly. As a result, during the second half of the decade, there was limited incentive for the motor industry in Britain to invest, at a time of heavy investment by the Japanese and Europeans. The long squeeze harmed international competitiveness and hence progress. Thirdly, throughout the decade, at the same time that British international competitiveness declined, tariffs were lowered. Throughout the decade the British share of most markets outside the European Free Trade Area (EFTA) declined. The motor industry failed to make the contribution to the balance of payments that might reasonably have been expected of it at the beginning of the decade.
COMPETITIONS POLICY, 1961-69

Competitions policy in this section is discussed under three headings. Firstly, mergers between British companies; secondly, multi-national developments; and, lastly, restrictive trade practices are discussed.

(i) MERGERS POLICY, 1961-69

With the establishment of the Industrial Reorganisation Corporation in 1966, the government's merger policy changed. Instead of being passively in favour of mergers, the government became actively involved in promoting them. During this period only one merger was referred to the Monopolies Commission. This merger was permitted.

Government deflation in 1965 created pressures which led to a series of mergers. These effectively divided the British owned sector of the motor industry into two firms, Leyland and British Motor Holdings. Nevertheless, by 1967, three years of decline in the industry meant that both firms were considerably smaller than either Fiat or Volkswagen in Europe. As the government saw B.M.H.'s market share and profits decline, it became convinced that a merger between B.M.H. and Leyland was essential, if the British sector of the motor industry was to survive into the seventies. The I.R.C. was used to achieve this goal.

Basic Conditions. No clear effect.
Structure. With the government's blessing, a number of mergers took place in the sixties. The first major one was in 1961. Leyland, a lorry and bus producer, made a somewhat bizarre diversification into the motor industry, when they purchased S.T.I. As an independent mass producer S.T.I. was too small to survive. The 1960 recession created great financial difficulty for S.T.I. However, with Leyland's financial resources and an upgrading of the product line, the company flourished during Maudling's dash for growth in 1963 and 1964. By 1965, the company was well established and profitable.

The 1965 deflation put considerable pressure on all the manufacturers. They had all expanded in anticipation of E.E.C. entry and continued economic growth. In an attempt to lower costs through vertical integration, B.M.C. purchased the only remaining large independent body supplier, Pressed Steel. Since Pressed Steel supplied bodies to Rover and Jaguar, the merger was referred to the Monopolies Commission. The Commission approved the merger on the grounds that it added to efficiency. Dependency upon B.M.C. for bodies, increased European competition and the deflation of 1965 made it clearly apparent to the two specialist companies, Rover and Jaguar, that their survival depended upon some form of amalgamation with the larger companies. In the summer of 1965 Jaguar agreed to merge with B.M.C. to form British Motor Holdings (B.M.H.). A condition of the merger was that
Jaguar would continue to be run autonomously. As a defensive measure against an overly large B.M.H., Leyland absorbed Rover at the end of 1965.

As early as 1965 Leyland and B.M.C. had had discussions without any government prompting. Both sides agreed that some form of amalgamation was essential. As so often had occurred in the motor industry, problems arose over the means by which the union should take place. Ostensibly, the timing was unsuitable, so merger plans were shelved.

In 1966 the I.R.C. was set up. Losses by B.M.H. that year and the declining share of the home market going to British owned companies; made the motor industry a prime target for the I.R.C. Early in 1967, the head of the I.R.C., Sir Frank Kearton, received permission from Leyland and B.M.H. to make a private investigation of the two companies. He did this in the light of a recent Ministry of Technology survey. This concluded, firstly, that both companies were too small to survive as independents and, secondly, that B.M.H. was not very efficient and needed reorganisation and a new management. At the same time, the managing director of Leyland assessed the impact of the merger. He decided that despite B.M.H.'s current losses and disorganisation, a merger would give a fair chance of survival for a British
By October 1967, the government had become impatient with the lack of progress. Accordingly, the prime minister had the heads of the two companies to dinner to add encouragement to their efforts. Still, the companies found it impossible to settle on terms satisfactory to both sides. The talks dragged on. Kearton of the I.R.C. made considerable efforts to keep the two together in discussions. Eventually, in January 1968, with much ill feeling on both sides, an agreement was reached. A major incentive to the merger was a twenty-five million pound loan on favourable terms from the I.R.C.

Much of the credit for the successful amalgamation must go to the perseverance of the government. Without it, it seems likely Leyland would have abandoned the merger plans.

Conduct. The new company was called British-Leyland (BL). Upon consideration of its accumulated outdated plants, inadequate product line, and poorly coordinated marketing network, one government official concluded that the new managing director, Mr. Donald Stokes, was undertaking, "the toughest management job in British industry." In terms of sales, B.L. compared satisfactorily with other European giants. In 1968, B.L. sales were $1.9 billion, Volkswagen's were $2.5 billion and Fiat's were $1.7 billion.
However, in terms of model ranges and productivity, the new organisation was weak. It produced twice as many models as General Motors did in the United States, but produced only one-fifth the output. Thus, although B.L. was the fifth largest motor manufacturer in the world, it still failed to exploit all available economies of scale. This, added to low capital per worker and the poor British labour relations system, meant that 185,000 employees at B.L. produced $1.9 billion of sales. At Chrysler in the U.S.A., a similar labour force produced $5.65 billion of sales.

In the years following the merger few of these problems were rectified. The model range was not significantly reduced. One new ex-B.M.H. model was considerably revised. Just as Morris had appeared to infect Austin with inefficiency after 1952, so did B.M.H. infect Leyland after 1968.

Performance. The history of mergers in the British industry suggests that without the government to act as a catalyst, British motor firms tended to continue as independents for as long as possible. This acted to the ultimate disadvantage of the firms themselves, the industry and the country. Against this background, the intervention of the
government's I.R.C. was favourable. However, the 1967 Ministry of Technology report identified two problems. Firstly, B.M.H. and Leyland as independents were too small. The merger solved this. Secondly, B.M.H. needed reorganisation. The government placed Leyland's head, Mr. Donald Stokes, in charge of B.L. The job appeared beyond him. Thus, the second problem was never solved. Having achieved the merger the government did little to ensure that it worked. Consequently, the anticipated benefits of industry rationalisation on efficiency, progress, employment and the balance of payments did not materialise. B.L. did not keep up with Volkswagen and Fiat.
(ii) MULTINATIONAL DEVELOPMENTS, 1961-69

Up until 1964, the Conservative government welcomed foreign investment in the motor industry. The Labour opposition frequently criticised such an open door policy. In 1964, Mr. Harold Wilson, with reference to the motor industry, said,

"Do not the (Conservatives) distinguish between those forms of foreign investment in this country which are and always have been welcomed, which introduce 'know how' which we do not possess, or which lead to the creation of new industries or new factories and employment for our people on the one hand, and, on the other, those which involve a partial or complete take-over of existing British firms which are already well run?"72

Another Labour spokesman commented on an American company that,

"... if it had to choose between sacking men in Detroit or men in Coventry or Linwood, it would certainly act to the disadvantage of this country."73

Therefore, after 1964, the government's policy towards foreign investment changed to one of opposition. Nevertheless, when it became necessary to save a British motor firm in financial difficulties in 1967, the government preferred to allow further foreign investment, rather than nationalise the firm.
Basic Conditions. Increased foreign ownership may have brought "know-how" to the British motor industry in the sixties. It certainly affected business attitudes. Since World War II Ford had been Britain's most successful company in terms of sales growth and profitability. In the late sixties other British firms sought to emulate Ford's Dearborne inspired management techniques. For example, after the creation of B.L., many Ford executives were hired in an attempt to increase efficiency at the new company.

Structure. In the sixties, the third large American motor company, Chrysler, entered the British motor industry. In 1964 Chrysler obtained a minority holding in Rootes. In 1967, they obtained complete control.

Despite Maudling's dash for growth in the early sixties, Rootes was in constant financial difficulties. Chrysler's bid for one-third of the family-owned company in 1964 was therefore welcomed. The government concluded the move was in Britain's interest, particularly as ultimate control still rested with the Rootes family.

The period of "stop" from 1965 onwards had a dismal effect on Rootes' profitability. In 1967 the Rootes family
decided to sell more shares to Chrysler. Government permission was required for this. The Minister of Technology, Mr. Anthony Wedgewood-Benn, was against further American investment. Therefore, he approached both B.M.H. and Leyland to see if either of them would buy out Chrysler and Rootes to keep the company British. I.R.C. financial assistance was offered as an incentive. However, neither of them had sufficient funds to justify such a venture, given Rootes' weak finances. The Labour government was not prepared to take over Rootes itself. Therefore, they allowed Chrysler to take majority control of Rootes. As a result, all three large American companies had a stake in the British motor industry. Together, they controlled over half the industry, in terms of market share and capital invested.

The net effect of increased American ownership of the British motor industry is unclear. On the one hand, after 1964, the three American companies spent more on investment, relative to their market shares, than the British companies. Chrysler poured considerable investment into Rootes, although by the seventies, Rootes' costs were still above average for Europe. On the other hand, it is highly questionable whether there was room in the British industry for a third American company, if all were to exploit potential
economies of scale. Chrysler bought Rootes as a springboard to Europe when Britain entered the E.E.C. The long delay in joining meant that Rootes persistently lost money for Chrysler.

**Conduct.** The large American presence affected the motor firms' sales policies, and purchasing policies. It is doubtful whether Chrysler brought additional "know how".

As regards sales policy, exporting decisions for Britain were made in a world-wide context, on occasion. In 1959 the United States market for British cars collapsed. During the sixties, Vauxhall and Ford of Britain made little effort to sell in the United States. For example, in 1964 Vauxhall sold under one hundred cars there, whilst B.M.C. sold over thirty-three thousand. *The Times* argued that it was

"necessary to persuade the two American owned companies to institute a sales drive in the United States."82

Similar criticisms, that decisions against British interests occurred, were also made concerning purchasing policy. For example, the Machine Tools Trade Association accused Ford of Britain of unnecessarily purchasing capital equipment from the United States for non-economic reasons.
They said,

"We know that in some instances in the past, Ford in particular has imported dollar machines, whether new or second hand from Detroit, simply because Detroit says so."

Finally, Chrysler appeared to add little to research and development. Only one new British Chrysler was ever produced. It was an extremely conventional design.

Performance. The nature of the multinational presence affected productive and allocative efficiency and the balance of payments. The existence of three American companies made it difficult to exploit available economies of scale, particularly for Vauxhall and Chrysler. The inflow of investment funds helped the balance of payments, though these were offset by the nature of the American companies exporting policies.
(iii) **RESTRICTIVE TRADE PRACTICES, 1961-69**

During the sixties the government took action which affected restrictive trade practices. In 1961, car guarantees were changed to comply with the Sale of Goods Act. In 1964, the Resale Price Maintenance Act was repealed. In 1963 and 1966, respectively, the Monopolies Commission investigated firms supplying electrical equipment to the motor industry, and firms supplying wire harnesses to the motor industry. These matters affected firm conduct.

**Conduct.** Up until 1961, buyers of new cars signed away some of their rights under the Sale of Goods Act when accepting guarantees. In 1961 the British Standards Institute made a strong criticism of this practice. Before legal action was taken the manufacturers changed their warranties.

The Repeal of the Resale Price Maintenance Act in 1964 had little effect on the motor industry. Since 1959 resale price maintenance had not been strictly adhered to by the manufacturers. Furthermore, most new car sales involved a trade-in, and inflated trade-in prices were used to circumvent resale price maintenance.
In both the cases examined by the Monopolies Commission which affected the motor industry no exploitation of the manufacturers was found to occur. The manufacturers exercised countervailing power over monopolistic suppliers.
REGIONAL POLICY, 1961-1969

In the prosperity of the late fifties all the motor manufacturers had undertaken bold expansion plans to new locations with governmental financial aid. This had been done in the hope of increasing market shares. The increased capacity enabled a rapid increase in production during Maudling's dash for growth. The decline of the second half of the decade discouraged much further investment in the new regions. Still, the effects of the investments undertaken at the beginning of the decade were felt throughout the sixties.

Basic Conditions. Regional expansion created labour relations problems. It had been hoped that workers in the new areas would be grateful for the new high paying jobs and that the factories in the new regions would be less hampered with the problems of piecework. Instead, the new areas became characterised by labour militancy and management frustration.

The reasons for labour difficulties were partly economic, partly sociological. The people of Merseyside and Scotland had traditionally worked in the shipyards, down the mines and on the docks. There, the work was hard
but offered some variety. In comparison, work in the new motor plants was clean, light and high paying. It was also soul-destroyingly monotonous on the assembly lines. In addition, particularly after 1964, there were constant lay-offs and short time operations. During the thirties, unemployment had been very high both on Merseyside and in Scotland. The instability of work in the motor industry evoked bitter memories of those years. Consequently, the frustration of the work and the instability of employment made the labour force of the new factories susceptible to the demands of militants.

Structure. The militant demands of the trade unions for parity in the new areas soon meant that the advantages of lower wage costs there were eroded, particularly when the costs of stoppages and labour hostility were taken into account. Regional policy for the motor industry had been so unsuccessful that in 1964 the small Reliant motor company abandoned plans for expansion, rather than expand to Merseyside, when the government denied them a development certificate for the Midlands.

Conduct. To the extent that regional policy gave encouragement to workforce militancy, costs were increased in the industry and research and innovation discouraged. Increased costs implied higher prices.
Performance. Regional policy affected productive and allocative efficiency, equity and the balance of payments. The effects on productive and allocative efficiency have been discussed elsewhere. These effects were aggravated by poor labour relations.

Regional policy was originally introduced to improve equity in Britain. As far as the motor industry was concerned it was not a success in Scotland. The main part of the Scottish development was Rootes' Linwood plant. At Linwood, Rootes built Scotland's own car, the small Hillman Imp. Unfortunately, even in 1963 and 1964, the car was a failure and sold poorly. Many anticipated jobs never materialised. For the four thousand workers at Linwood there was constant short-time and redundancy. The Linwood experience showed that regional policy was more complicated than the setting up of new factories and the relocation of plants. The whole Linwood project as a growth centre rested on the success of a single model. This was too narrow a base for regional expansion.
LABOUR RELATIONS POLICY, 1961-69

Government policy towards labour relations in the motor industry changed radically during the sixties. Until 1964, the structure of labour relations in the motor industry was satisfactory to the government. The Conservatives continued a policy of basic non-interference. When necessary, Courts of Inquiry were set up. In the late sixties, the government attempted to achieve structural change. During the long years of "stop" from 1965 labour relations deteriorated considerably. This is shown in Figure 7. The government's response was to influence labour relations with the Prices and Incomes Board, Courts of Inquiry, new labour legislation, a series of reports and informal discussions at the Prime Ministerial level.

During any recession strike activity increased. This was the case in 1960. The Minister of Labour was concerned about the number of strikes and the increase in the number of working days lost that year. He set up a committee, chaired by himself and made up of leading representatives of the employers and unions, to examine the matter. A statement was published in the Ministry of Labour Gazette which said the committee had,
"... agreed on a number of points on which action should be taken in our respective fields to assist individual companies, work people and trade unions in their day to day relations .... We have fully and candidly considered the various procedures and we have satisfied ourselves that these procedures are generally adequate if operated in the right spirit." 98

Essentially, they argued that current methods would work if established procedures for handling problems were followed. More consultation, communication and circulation of information was needed.

In 1963, a Court of Inquiry was set up to examine a strike which had occurred at Ford in 1962. The conclusion of Professor Jacks' Committee, which made up the Court, was that "following procedure" at Ford had led to considerable discontent. Implicitly, the Jack Report criticised the strong stand approach recommended by the government and followed at Ford. The Jack Report also suggested changes in the structure of labour relations at Ford. Few of the recommendations of the 1957 Court of Inquiry had been implemented. The Jack Committee recommended firstly, that a full time union official be appointed to oversee the activities of shop stewards; secondly, that a six man negotiating committee replace the current committee which had one member from each of the twenty-two unions on it; thirdly, that secret balloting
be introduced; fourthly, that education programmes be established for shop stewards. None of the recommendations of this Court of Inquiry in 1963 were ever implemented either.

In 1965, working days lost in the motor industry were more than double those for the previous two years. It became increasingly apparent that proper procedures were inadequate, as Professor Jacks' Committee had reported. Furthermore, after 1965, many of the strikes were of a new sort. They were not about rule book interpretation and demarcation, but about "bloody minded" small groups in key positions abusing those positions and the many dependent upon them. As technology increased the number of key positions in the motor industry, so did the potential for abuse increase. The unions seemed unwilling or unprepared to reorganise to fit the times. By default, the responsibility fell to the government.

"The employers agree that one union per plant might sometimes be dangerous but they regard the evil as necessary. They can put no pressure on the unions to hand over power to a single bargaining unit unless the government helps. The one union shop is usually anathema, usually not agreed to without some heads being broken .... If something can be done — and it is largely up to the government to make the first move, if the unions will not — then the recession will have done positive good. Otherwise it could be just like old times."
The new Prime Minister, Harold Wilson, appeared willing to help. Perhaps harping back to the Atlee administration which had successfully persuaded the unions to undertake voluntary wage restraint, Wilson undertook a policy of friendly discussion as regards motor industry labour relations. A series of meetings was set up between the industry and union leaders. Again shop stewards were excluded. The Courts of Inquiry's reports in 1957 and 1963 should have provided sufficient insight to suggest that, however well intended, such meetings were unlikely to meet with success. The Economist commented,

"... it is hard to discuss the futility of the government's latest industrial manoeuvre. Unofficial strikes cannot be abolished by cozy chats at Number Ten. These are workshop problems that fail to be settled at workshop level, a tiny minority of the disputes that arise every day throughout industry."

The necessity for labour relations structure to reflect the increased interdependence of one group upon the other as the industry became concentrated was made in two reports by Mr. Jack Scamp's Motor Industry Joint Labour Council. Reporting in 1966 on troubles at the Morris Bodies Factory at Coventry, and at S.T.I., he found that the problems had arisen largely from the piecework system. The system, when it worked, was highly productive but,
because of its dependence upon labour peace at all suppliers' factories, it tended to provide highly irregular earnings. Furthermore, when it was working it tended to provide higher earnings for the piecework workers than some more skilled workers received, such as inspectors. Here was another bone of contention.

In a year end report on labour relations in the industry, Scamp found that although there were specific weaknesses in management the major cause of poor labour relations was the total and general incompetence of the trade unions. It was the lack of internal structure of the many unions which made it impossible to enforce collective agreements, and so created a situation of "anarchy".

This inefficient set-up continued on to 1968, against the background of the Prices and Incomes Board established in 1966; hardly an institution to improve labour relations. In 1968, the third year of recession in the motor industry, strike activity increased to more than twice the previous year's level. In October, the controversial Secretary of State for Employment and Productivity, Mrs. Barbara Castle, called the two sides together for a much publicized "cards on the table" meeting. Again it was the top union officials
Again, as in 1965, the shopfloor representatives were not present. Reports on the absence of the shopfloor representatives from the Minister's talks quoted the case at B.M.H. where Mr. Dick Etheridge, shop steward convener for 23,000 men, was not even allowed to receive telephone calls at work. This man was undoubtedly the most important and influential negotiator at B.M.H. A member of the TUC General Council remarked that:

"Dick is the only man who knows the way from Longbridge canteen to the works manager's office."  

Yet he was not invited to Mrs. Castle's "cards on the table" talk, and without him the workers were not fully represented.

Mrs. Castle had made up her mind by 1968 that new arrangements in British labour relations were necessary. It was perhaps unfortunate that by the time her new proposals were made, ill-feeling against the government over its attempts to squeeze resources towards the balance of payments through the Prices and Incomes Board was running high. Still, the government was determined to introduce labour reform. The proposals put forward by Mrs. Castle were in the form of the paper In Place of Strife. The paper recognized that the existing methods of dealing with industrial disputes were inadequate and that changes in the existing machinery was necessary. It said,
"Little has been done to reform outdated and generally condemned procedural arrangements -- such as those now existing in the engineering industry. Too often employees have felt that major decisions directly concerning them were being taken at such a high level that the decision makers were out of reach and unable to understand the human consequences of their actions. Decisions have been taken to close down plants without consultation and with inadequate forewarning to employees.... Unions too have often failed to involve their members closely enough in their work, or to tackle with sufficient urgency the problems of overlapping membership and unnecessary rivalry, which always diminish their effectiveness and sometimes their reputation. Many employers' relations with unions have been greatly complicated by the large number of unions that may have members in a single factory."

Among other things, In Place of Strife proposed that collective agreements be made binding, that there be compulsory conciliation pauses, that there be secret ballots over strikes, and that unofficial strikers be fired. This aroused very considerable union hostility. Rather than split the party, the Labour government backed down. By the time the proposals were debated in Parliament, secret ballots had been abandoned, and the conciliation pause and system of fines for unofficial strikes rendered ineffective.

The Prices and Incomes Board also played a role in the government's labour relations policy. Trade union antagonism to wage restraint was reflected in increased
strike activity over wage demands after 1966. In 1968 the government intervened in strikes in the nationalised railway and nationalised engineering industries. In both cases, rather than endure strikes against the government, inflationary settlements were allowed. In 1969, a huge strike at Ford occurred. Ostensibly, the strike was about wages and important changes in procedure. However, from the beginning, there was a general belief that unions, government and management saw the strike as an attack on the government's prices and incomes policy in the private sector, not about Ford's settlement offer.

Bad feelings between the union officials erupted in the third week of the strike. Mr. Mark Young of the electricians union and chairman of the unions' negotiating committee resigned that position in disgust at the more militant attitude of the TGWU and the AUEF. They asked for an increase in the pay offer and a withdrawal of the Ford procedure changes before they would consider an end to the strike. The chairman of the electrician's union said,

"We would be fooling our members... if we agree this was a viable proposition for a return to work. Even if we could assume that Ford would capitulate, then the government would take up the battle within twenty-four hours. Having beaten Ford into the ground they would then have to beat the government into the ground. So far as some people are concerned that is exactly what they intended in the first place."
But that is what did happen. The powerful militant sector of the trade union movement, particularly, in this instance, the TGWU (the biggest donor of funds to the Labour Party), was able to exert its muscle and achieve its goals. Rather than risk a split in the party the Labour government backed down. Barbara Castle agreed to a settlement which provided all the pay that Ford had offered but only token remains of the incentives to steadier production and higher productivity. The deal was given approval by the Secretary of State for Employment and Productivity. This meant it was not necessary to have it ratified by the Prices and Incomes Board. Since the ten per cent wage increase would not have been acceptable to the Prices and Incomes Board the settlement was a good sign to other militant groups in the country that government defences of incomes policy were surmountable.

Basic Conditions. The major impact of government's labour relations policy during the sixties was on attitudes. These were affected for the worse.

In the early sixties, the government misread the labour relations situation with its strong stand on accepted procedures proposals. Implementation of these proposals caused labour - management hostility. It took the Jack Report to point out fundamental weaknesses in the system.
After 1964, the government became much more involved in labour relations reform. Yet, despite considerable government energy expended in meetings, enquiries, committees and legislative reform, attitudes deteriorated. Government policy aggravated the situation further. Firstly, the government continued to ignore the important and powerful shop stewards. In the motor industry, they had a minor role in official trade union structure, but a major role in trade union activity through their control of the shopfloor. Secondly, when legislation was introduced to update labour relations, the Labour government backed down in the face of union opposition. Thirdly, by allowing many "exceptional cases", the goals of the Prices and Incomes Board were thwarted.

In conclusion, the government showed itself to be fainthearted over labour relations. It introduced policies which created hostility with the unions, then failed to implement them. Every time such policies were introduced attitudes deteriorated. Every time the government backed down from the implementation of those policies, it opened itself up to additional militant trade union blackmail.

**Structure.** Increased strike activity in the late sixties increased costs. By then, unofficial strikes
affected day-to-day operations. If there was not a strike in a car plant itself, production was likely hampered by a strike-bound supplier.

**Conduct.** Strike activity and labour hostility affected the quality of products. Design changes and technical modifications to existing designs were slowed by the failure to deal with the problem of piecework in the car factories.

**Performance.** Increased labour relations difficulties as the decade progressed affected all performance goals. Resources were wasted and profits lowered. Progress was retarded. Strikes jeopardised employment for those in related industries. Exports were lost. Towards the end of the decade imports began to fill the gap when strikes held up home deliveries.
By the early sixties the extension of car ownership meant the car had begun to exert considerable pressure on the British road system, and upon society as a whole. The roads were becoming saturated. Accordingly, the Conservative government had to review those policies which affected car demand and to reassess the role of the car in society.

Basically, the government had three choices. Firstly, the government could change the environment to suit the demand for cars. Secondly, the government could create disincentives to the use of the car, but not its purchase. For example, it might limit the use of the car in cities at peak hours. Thirdly, the government could implement a policy to restrict the use and supply of cars. It could make the car fit the environment.

Despite considerable opposition, the government accepted the recommendations of its own Crowther Report. This said:

"A car-owning electorate will not stand for a severe restriction. And even if a severe restriction could be got on to the statute book, it would be almost impossible to enforce. It is a difficult and a dangerous thing in a democracy to try to prevent a substantial part of the population from doing things that they do not regard as wrong; black markets and corruption are the inevitable fruit of such attempts at prohibition."
The government had recently encouraged a major expansion of the motor industry. A different verdict was unlikely. Two other government reports concluded that it was the responsibility of local governments to deal with the problem of controlling cars in the cities.

The Labour opposition agreed with the Conservative government. Labour spokesmen called the reports, "brilliant and exciting documents." Both parties were "inextricably committed" to the point of view that no restrictions should be placed on car ownership. The cities should be altered to accommodate the car.

Therefore, in the early sixties, the government finally made a total commitment to the motor car. Figure shows how road expenditures tripled between 1960 and 1970. Motorway mileage was increased from seventy-five miles to over seven hundred miles. At last, Britain had the framework of a modern highway system.

Basic Conditions. Improved roads and motorways affected the nature of home demand. After 1960 it was possible to drive at sustained high speed on some British roads. As a result, demand for cars in Britain became more similar to that in overseas markets. Improved roads and
Figure 8

Annual Expenditures on Road Building in Britain, 1935-70, (£ millions, current)

Source: Basic Road Statistics
increased prosperity meant that after 1960 the share of the home market going to small cars declined.

In addition, the motorways meant that for long distance inter-city travel a car could compete with an express train. This encouraged some shift of demand from the railways to the roads.

Structure. No clear effect.

Conduct. Motorways encouraged the design of cars capable of cruising at reasonably high speeds.

Performance. A commitment to the roads encouraged some reallocation of resources from other forms of transport. Potential growth for the motor industry was increased. The net effect on the balance of payments was unclear. As British designs became more internationally acceptable, export opportunities increased. At the same time, imported designs were better suited to the improved road system.
ENVIROMENTAL POLICY, 1961-69

Increasingly in the sixties, questions about safety and pollution were raised with reference to the car. The United States took the lead in trying to find answers. In comparison, British government policy concerning these matters was limited.

During the sixties, the government made it mandatory that the manufacturers fit seat belts to new cars. Overall speed limits were imposed. Annual safety checks on cars were required. Discussions were held with the governments of other countries about standardising safety features on cars. Small government research grants were made for research on safety and pollution. However, British manufacturers were more affected by the stiffer United States standards which applied to British car exports.

The government's low priority for these matters was reflected in the slowness with which changes were introduced. In 1962, the Ministry of Transport announced its intention of making seat belts standard equipment. The policy was carried out in 1967. In 1960 the Ministry of Transport first introduced vehicle tests. Not until 1969 did all cars have to take the test.
Basic Conditions. Environmental policies affected car demand. Vehicle tests influenced product life. In 1959 the scrap rate for cars was 4.8 per cent. In 1961 it rose to 7 per cent. As the sixties progressed, it approached 10 per cent, the same rate as in the United States. The manufacturers welcomed the vehicle tests which increased demand for new cars. They did not welcome the introduction of overall speed limits. They claimed speed limits discouraged demand for high speed sophisticated cars.

Structure. No clear effect.

Conduct. Environmental policy redirected research efforts and modified designs. Overall speed limits discouraged research expenditures to improve engine design, suspension and braking. It also discouraged the design of refined high speed cars. Rather, product design was encouraged towards safety features and anti-pollution devices.

Performance. Environmental policy had no major effect on performance. There was some reinterpretation of progress, which emphasised safety and anti-pollution. Overall speed limits had a minor effect on the balance of
payments. In the late sixties, international trade in fast sophisticated saloons increased. Britain failed to enjoy the increase in exports of this type of car experienced by countries where there were no speed limits.
Since 1965, the motor industry had borne the brunt of a succession of credit squeezes and policies to support the pound. Finally, late in 1969, some improvement in the balance of payments occurred. Despite rising inflation, the government introduced expansionary policies early in 1970. From 1970 to 1973 the Conservative government continued with growth policies, although inflation worsened and the balance of payments deteriorated.

The expansionary measures of 1970 were followed in 1971 and 1972 by tax cuts of over one billion pounds in each year. In 1971, a programme of voluntary price restraint was introduced to control inflation. In 1972, the voluntary programme was replaced by a statutory prices and incomes policy. A Prices Commission and Pay Board enforced the controls.

In 1973, the increase in oil prices by the OPEC countries and the consequent recession of the western economy had a disastrous effect on Britain's inflation rate and balance of payments. Throughout 1974 and 1975, the Labour government sought to control aggregate demand in an attempt to defend sterling and fight inflation. The major features of the Labour government's restraint were a "social contract", a voluntary incomes policy, and traditional fiscal and monetary measures.

Basic conditions: Government regulatory policy affected home demand in a different context after 1970. Since 1945, the motor industry had been a powerful tool with which to regulate aggre-
gate demand. One reason for this was the captive home market. By 1970, lower tariffs and increased competitiveness from imports had altered the relationship between home demand and government regulatory policy. This was demonstrated in July 1971 when the government introduced measures to further stimulate the economy. The summer is usually the period of peak demand in the motor industry. The government's measures increased demand by 43 per cent. The British motor industry was completely unprepared for the unexpected rise in sales. In previous years, waiting lists for British cars would have resulted. By the seventies, changed market conditions meant that imported cars filled the gap. In addition, the increase in home demand redirected exports into the domestic market.

The government's expansionary policy of 1971 unintentionally created a change in tastes in the British market. The apparent loyalty of the British for British cars was weakened permanently. As a result, when deflationary measures were introduced in 1974, the import penetration of the British market continued at high levels. The British motor industry suffered severely.

Government policy in 1974 affected the supply of energy to the motor industry. The oil embargo badly crippled the British economy early in 1974. For the first two months of the year, the government implemented a three day working week to save energy. Consequently, there was inadequate steel available for the motor industry. This caused further reductions in production.
Structure: The government's expansionary policies of 1971 and 1972 encouraged a dramatic increase in import penetration to the British market. However, since an important prerequisite for this was lower tariffs, the effects on structure are discussed under import and export policy.\textsuperscript{13}

Failure to control inflation meant that costs rose in the industry. Particularly, between 1973 and 1975, costs rose rapidly at a time of decreasing disposable income.\textsuperscript{14} Excess capacity in the motor industry existed\textsuperscript{15} as a result.

Conduct: The government's use of voluntary and statutory incomes policies affected prices in the motor industry. For example, in the autumn of 1972, B-L raised domestic prices. They had not agreed to participate in the government's voluntary controls.\textsuperscript{16} The three American companies who had agreed to voluntary controls waited until the end of the year before raising prices. All the motor firms raised prices in anticipation of statutory controls.

The years of restraint in the late sixties reduced profits and apparently sapped business confidence. As a result, research and development and investment were slowed. In 1970, investment plans and production targets in the motor industry were cut.\textsuperscript{17}

No British based firm made sufficient profits to cover investment.\textsuperscript{18} Accordingly, few new models were introduced in Britain in the seventies.\textsuperscript{19}

Performance: In the seventies, the effect of years of govern-
ment regulatory policy on allocative efficiency, progress and the
balance of payments could be seen. Table 9 shows the effect on
profits and investment.\textsuperscript{20} Between 1967 and 1971 the return on
capital in the British motor industry was one-third that of
Germany.\textsuperscript{21} Despite considerably lower wages and a devalued pound,
Britain was unable to compete with European export and produc-
tion levels.\textsuperscript{22} Productivity compared poorly.\textsuperscript{23} By 1974, the
British motor industry had become unprofitable and uncompe-
titive and its contribution to economic growth and the balance of
payments seriously diminished.

In the early sixties, the government had seen the motor
industry as a powerful leading sector capable of creating regional
economic growth.\textsuperscript{25} It is difficult to be precise in pinpointing
at what time the industry ceased to be a leading sector. Accord-
ing to one indicator it was 1970. Some stock market analysts
claim the stock market is a good predictor of events. In 1970,
British Leyland shares began to decline seriously in value. There-
fore, in 1970, the stock market began to reflect doubts about
whether the only remaining large British car firm could survive.
In a world of increasingly intense competition,\textsuperscript{26} the onslaughts
of government policy and the British labour relations system might
be too much.\textsuperscript{27}

In the seventies, the long run effects of government regu-
latory policy were reflected in the balance of payments. It has
been argued in previous chapters that government restraint in-
### TABLE IX

Investment and Cash Flow in the British Motor Industry, 1960-73, in millions of pounds

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Earnings</th>
<th>+ Depreciation</th>
<th>= Cash Flow</th>
<th>Gross Fixed Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>52.7</td>
<td>31.9</td>
<td>84.6</td>
<td>60.1</td>
</tr>
<tr>
<td>1961</td>
<td>28.5</td>
<td>32.6</td>
<td>61.1</td>
<td>88.2</td>
</tr>
<tr>
<td>1962</td>
<td>22.3</td>
<td>42.0</td>
<td>64.3</td>
<td>87.5</td>
</tr>
<tr>
<td>1963</td>
<td>46.3</td>
<td>47.3</td>
<td>93.6</td>
<td>86.5</td>
</tr>
<tr>
<td>1964</td>
<td>53.6</td>
<td>53.8</td>
<td>107.4</td>
<td>89.0</td>
</tr>
<tr>
<td>1965</td>
<td>57.2</td>
<td>61.4</td>
<td>118.6</td>
<td>97.2</td>
</tr>
<tr>
<td>1966</td>
<td>30.9</td>
<td>66.2</td>
<td>97.1</td>
<td>97.5</td>
</tr>
<tr>
<td>1967</td>
<td>(2.0)</td>
<td>69.8</td>
<td>67.8</td>
<td>86.9</td>
</tr>
<tr>
<td>1968</td>
<td>56.8</td>
<td>88.8</td>
<td>145.6</td>
<td>58.8</td>
</tr>
<tr>
<td>1969</td>
<td>40.0</td>
<td>85.2</td>
<td>125.2</td>
<td>101.8</td>
</tr>
<tr>
<td>1970</td>
<td>(2.1)</td>
<td>88.5</td>
<td>86.4</td>
<td>140.0</td>
</tr>
<tr>
<td>1971</td>
<td>4.1</td>
<td>102.5</td>
<td>106.6</td>
<td>107.3</td>
</tr>
<tr>
<td>1972</td>
<td>47.8</td>
<td>101.1</td>
<td>148.9</td>
<td>81.5</td>
</tr>
<tr>
<td>1973</td>
<td>63.3</td>
<td>100.3</td>
<td>163.6</td>
<td>141.7</td>
</tr>
</tbody>
</table>

creased exports in the short run. However, the effect of such policies was to reduce profits and investment discouraging research and development and the development of new designs. In the long run, the balance of payments suffered. Since 1945, the motor industry had been Britain's major export industry. Over the same period, car imports had been low. In the seventies, British mass produced cars ceased to be internationally competitive, whilst, at the same time, import penetration of the British market increased rapidly. By 1973, the balance of trade in cars was just in surplus.\textsuperscript{28} The long run effects of a quarter of a century's use of the motor industry as an economic regulator were clearly felt.

Finally, employment in the industry was affected by regulatory policy. As the motor industry's viability as a leading sector came into question, the many jobs dependent upon the motor industry were placed in jeopardy.

**EXPORT AND IMPORT POLICY, 1970-75**

By the seventies, in formulating policy, the government had to take account of policy changes on imports as well as exports. Before this, a number of factors\textsuperscript{29} had meant there was a captive home market for the British motor industry. In the seventies, the nature of international trade for the United Kingdom was markedly different to that between 1945 and 1969.

Government policy affected import penetration levels in the seventies. It did this through tariff agreements, regulatory
policy and specific moves to limit imports. Firstly, in 1972, tariffs on imported cars were reduced to 1 per cent under the Kennedy Round agreements. In 1973, Britain finally entered the European Economic Community. This provided the opportunity for increased international trade in cars. Secondly, in 1971, the government gave a sharp stimulus to car demand in Britain as part of regulatory policy. As discussed above,\(^30\) this led to a rapid rise in imports when British producers could not meet the rapid increase in demand. Thirdly, in 1975, the Prime Minister imposed some controls on car imports. In 1974, imports increased, particularly from Japan. Sir Ray Brookes, president of the SMMT, asked the government for help.\(^31\) At the summit meeting of world leaders at Rambouillet in 1975, Mr. Wilson obtained agreement for some controls on car imports.\(^32\) Late in 1975, Mr. Peter Shore, the British government's Trade Secretary, went to Japan. He obtained a promise of voluntary restraint on exports to Britain by the Japanese.\(^33\) By that time, Nissan outsold Vauxhall and Chrysler in Britain, and import penetration was approaching forty per cent.\(^34\)

In the seventies, government policy continued to influence exports. It did this through tariff policy, regulatory policies and specific policies to help exports. By 1974, following the oil crisis, the ability of British producers to increase exports as the home market was squeezed had diminished. This was despite lower tariffs to foreign markets as a result of the Kennedy Round and British membership in the EEC. Although the pound had been
allowed to float downwards, British cars were no longer as competitive as before in export markets. In 1975, the government became directly involved in car exports. Following the oil crisis, all European companies made attempts to increase trade to the Middle East. A major effort by the Labour government enabled Chrysler to obtain a one hundred million pound contract to produce the outdated Hillman Hunter in Iran.35

Basic conditions: Government import and export policy affected British and overseas demand. Throughout the sixties imports had taken about six per cent of the domestic market.36 In February 1970, NEDO forecast that by 1975, as tariffs declined, the British motor industry should expect import penetration to rise to 15 per cent. In July 1970, imports took 15 per cent of the market.37 By 1975, imports took 40 per cent.38 Reductions in tariffs and membership of the EEC were supposed to increase overseas demand for British cars. Nothing comparable to the sixfold increase in imports occurred.39 After 1971, the American firms in Britain ceased to export to North America because of poor quality.40 Ford and GM sourced entirely from Germany, Chrysler sourced from Mitsubishi in Japan. B-L continued to export to North America. Nevertheless, B-L was 90 per cent reliant for exports on an outdated range of sports cars and the Marina saloon. In 1975, B-L ceased sales of the Marina there. By then, Swedish, French, Italian, German and Japanese cars outsold the once dominant British. After 1973, in the EEC, Germany, France and Italy all exported over fifty
per cent of their production. Britain only exported thirty-three per cent of a smaller production total. The world recession in 1974 meant there was excess capacity in Europe and intense competition aggravated by an increased Japanese presence. Consequently, Britain gained little advantage from EEC membership.

**Structure:** Lower tariffs led to a considerable change in industry structure. Importers became significant in the market. Japanese, German, French and Italian products accounted for two cars out of every five sold in Britain by 1975. For the largest importers, such as Volkswagen and Nissan, market shares justified assembly plants in Britain. These would have been established had it not been for labour problems. At the same time, by 1975, Vauxhall and Chrysler had experienced home market declines without a corresponding increase in exports. Thus, both companies operated below capacity at production levels which failed to exploit potential economies of scale. As a result, Chrysler made plans to run down Chrysler in Britain. Later these were changed and Chrysler (UK) was integrated more closely with Chrysler (France). General Motors decided to increase cooperation between Vauxhall and the larger German subsidiary, Opel.

**Conduct:** Lower tariffs meant that the ability of British manufacturers to discriminate by price between home and overseas markets was reduced. Even in Britain, imports undersold the British products. The home market had ceased to be the captive profitable market of bygone days. Still, there is some evidence
that British manufacturers continued to dump cars overseas.\textsuperscript{45}

Lower tariffs affected product designs and product strategy in 1974 and 1975. Firstly, in Britain it was questioned whether B-L should continue to produce mass produced cars, given Japanese and European competitiveness.\textsuperscript{46} It was suggested that B-L might have more success in exports by concentrating on its up market luxury saloons, Rovers and Jaguars.\textsuperscript{47} Nevertheless, a new B-L range of mass produced cars was planned, not so much for export but as import substitutes.\textsuperscript{48} Secondly, at Vauxhall and Chrysler, the policy of producing distinct British designs was abandoned. In the future, Chrysler (UK) would produce Chrysler (France) designs, whilst Vauxhall would produce essentially Opel designs.

Performance: The main effect of tariff policy was on the balance of payments. Allocative efficiency, progress and employment were also affected. As a result of lowered tariffs and the decline of British competitiveness,\textsuperscript{49} the balance of trade in cars deteriorated substantially. As imports grew more rapidly than exports, total demand for British cars suffered a relative decrease. Firms tended to operate at less than full capacity, with negative effects on efficiency, profits, progress and employment opportunities. Specific government policies to help exports, for example; the Iran deal, helped the balance of payments.

COMPETITION POLICY, 1970-75

Competitions policy is discussed under two headings. Firstly, mergers policy is examined. Mergers policy may be a misnomer for
developments in the seventies, but is used for consistency with other chapters. Changes in ownership which occurred in the motor industry involved the government directly. Secondly, restrictive trade practises are briefly examined.

(1) MERGERS POLICY, 1970-75

In the early seventies, the Conservative government allowed the IRC to lapse. In 1974, the new Labour government returned to the same underlying concept of the IRC. In the Industry Bill, a National Enterprise Board (NEB) was proposed. The NEB would have powers to restructure apparently healthy industries which might be in danger of failing. Comparable bodies had been successful in Japan and France. In Germany, the powerful banks had fulfilled a similar purpose. The NEB was established in 1975. The first industry to receive NEB interference was the motor industry. In addition to the work of the NEB, the government provided financial aid to some car producers to maintain them as ongoing entities. During this period no mergers between independent public companies occurred, nor were there any foreign takeovers.

The role of the NEB in the motor industry had its origins in the IRC inspired merger between BMH and Leyland in 1968. B-L proved difficult to rationalise. By 1974, B-L still offered six basic models, compared to four by Ford of Europe. On average, only about 140,000 units of each model were produced annually. Table 10 shows that by 1974 the company was at the bottom of the productivity table for European firms.
TABLE X


<table>
<thead>
<tr>
<th>(1974)</th>
<th>Value added per man</th>
<th>Gross output per man</th>
<th>Fixed assets per man</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.M.C. (U.S.)</td>
<td>£8,600</td>
<td>£17,495</td>
<td>£4,346</td>
</tr>
<tr>
<td>Ford (U.S.)</td>
<td>£7,966</td>
<td>£19,905</td>
<td>£5,602</td>
</tr>
<tr>
<td>Opel</td>
<td>£5,875</td>
<td>£14,747</td>
<td>£3,612</td>
</tr>
<tr>
<td>Daimler-Benz</td>
<td>£5,207</td>
<td>£12,672</td>
<td>£4,662</td>
</tr>
<tr>
<td>Volvo</td>
<td>£4,886</td>
<td>£14,186</td>
<td>£3,608</td>
</tr>
<tr>
<td>Ford Germany</td>
<td>£4,883</td>
<td>£11,087</td>
<td>£3,832</td>
</tr>
<tr>
<td>Volkswagen</td>
<td>£4,767</td>
<td>£19,972</td>
<td>£3,141</td>
</tr>
<tr>
<td>Saab</td>
<td>£4,637</td>
<td>£19,972</td>
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<tr>
<td>Renault</td>
<td>£4,133</td>
<td>£12,928</td>
<td>£2,396</td>
</tr>
<tr>
<td>Ford (U.K.)</td>
<td>£3,901</td>
<td>£11,397</td>
<td>£2,657</td>
</tr>
<tr>
<td>Chrysler (U.K.)</td>
<td>£2,765</td>
<td>£9,968</td>
<td>£1,456</td>
</tr>
<tr>
<td>Vauxhall</td>
<td>£2,560</td>
<td>£7,975</td>
<td>£1,356</td>
</tr>
<tr>
<td>Fiat</td>
<td>£2,259</td>
<td>£8,142</td>
<td>£3,160</td>
</tr>
<tr>
<td>B.L.M.C.</td>
<td>£2,129</td>
<td>£6,539</td>
<td>£920</td>
</tr>
</tbody>
</table>

In 1973, B-L undertook a major investment plan in an attempt to modernise. These expenditures coincided with the fall in demand following the oil crisis. In 1974, the firm was in financial difficulties. B-L approached the government for help. As a condition for giving financial support, the government had a report made about B-L's future. This was done by Sir Donald Ryder, an eminent British businessman.

When the NEB was established in 1975, Sir Donald Ryder was appointed chairman. Acting on the strength of the Ryder Report, the first target of the NEB was B-L. Basically, the government agreed to save the ailing company.

The Ryder Report was not published in full because parts of it were libellous. Remedies had to be taken against the wide product range, overmanning and the effects of years of underinvestment. The Ryder Report estimated that, at current prices, nine hundred million pounds would have to be injected into the company between 1975 and 1978; five hundred million pounds as long-term loans, two hundred million pounds of government equity and two hundred million pounds in bank loans. Additionally, whilst the government was not to nationalize the company, it did offer to buy all existing shares at ten pence. If all shareholders accepted the offer this would cost a further sixty million pounds. Then, between 1978 and 1981, another five hundred million pounds would be needed. That meant that the total cost of saving B-L, in 1975 prices, was 1.3 billion pounds.
The Ryder Report recommended that none of B-L's fifty-five factories be closed. The company would be reorganised into four groups. The largest would be cars. In addition, there would be international products, special products and trucks and buses. The Ryder Report's recommendations for structural reorganisation contradicted those of the managing director of B-L, John Barber, who resigned. He had been hired from Ford following the creation of B-L in 1968. Lord Stokes was effectively dismissed as chairman by an appointment to honorary president.

The Ryder Report said that without improved labour efficiency the company could not survive. Improved productivity would stem from cuts in the numbers of workers, greater movement and interchangeability between jobs, and a reduction in the number of bargaining units. Ryder concluded that B-L's success depended upon labour cooperation. If that was not forthcoming by 1978, Ryder recommended that further investment should be halted.

Although the government accepted the Ryder Report to save the remaining British owned car company, considerable criticisms were levelled against the plan. Firstly, critics argued that Ryder had been asked the wrong question. Ryder was asked, "What was necessary to make B-L profitable without financial restraint?" It was said that he should have been asked, "What was necessary to save B-L?" For example, at Bristol University, sixteen alternative programmes, including the Ryder scheme, were examined. It was concluded that the Ryder scheme would not generate profits.
Instead, the Bristol team advocated loss minimising programmes. Secondly, Ryder was criticised for being overoptimistic. The Trade and Industry sub-committee of the House of Commons believed that Ryder relied too much on B-L's own forecasts about increased world penetration. He also underestimated required redundancies and gave "a signal lack of supporting argument" to the proposal that B-L could compete with mass produced cars. Thirdly, the Ryder Report made stringent demands on labour. As this thesis has shown, the post war history of labour cooperation with government and management has not been good.

To carry out the Ryder plan at B-L, Sir Ronald Edwards, a former head of the National Electricity Board and Professor of Industrial Organisation at London University, was appointed chairman. His difficult task of modernising B-L was made no easier by the government's decision late in 1975 to save Chrysler (UK).

Since acquiring Rootes in the mid-sixties, Chrysler had lost over four hundred million pounds in Britain. Quite simply, Chrysler (UK) was too small. Twice in 1975 the government turned down Chrysler's requests for financial aid along the lines given to B-L in 1974. Finally, Chrysler threatened to allow their British operations to run down. When Chrysler requested aid a third time, aid worth over seventy million pounds was given. The government gave in to Chrysler for political reasons. Firstly, the government wished to placate the Iranian government. In Iran, Chrysler (UK) had built an assembly plant. In 1974 the Iranians
had lent Britain over one billion dollars. Iran put pressure on the British government to support Chrysler. Secondly, in 1974, it was possible that the Scottish Nationalists would split the Labour party. If Chrysler withdrew, jobs in Scotland, and hence Labour party support, would be lost. Financial aid to Chrysler made no economic sense. By maintaining Chrysler, the government simply made the outlook for B-L and the ailing Vauxhall more difficult.

Basic conditions: Direct involvement by the government in the motor industry affected basic conditions of supply and demand. Union attitudes were influenced, so was the context which determined car demand.

At the time of the Ryder Report, it was reported that the trade unions were disappointed because their hopes for some worker control were not fulfilled. This added to trade union alienation. However, Mr. Jack Jones, leader of the largest union in Britain, the Transport and General Workers Union, turned down the government's offer to serve on the four-man organising committee of the NEB. Trade unions also turned down the offer of workers participation at Chrysler, including worker participation on the company board.

Government administration of the Ryder Report and of financial help to Chrysler aggravated trade union attitudes. Ryder said that the success of B-L depended upon labour cooperation. In December 1975, Ryder threatened to send the workers home if
28 1/2 cars per hour were not produced. When production did not reach that level the bluff was called. The workers were not sent home. The government lost credibility. As employer and part owner of B-L, the government was no more successful than the old management in gaining labour cooperation. Similarly, in the Chrysler negotiations, although the final outcome was in the workers' favour, antagonism was created. During the government's negotiations with Chrysler about financial help, the government refused to talk to the shop stewards. Eventually, the shop stewards had a sit-in at the House of Commons. Then, Mr. Varley, Secretary for Employment agreed to see them.64

The context within which car demand was determined was also changed. After 1974, the government had a direct interest and responsibility towards the motor industry. Consequently, a constraint was imposed upon its use of the industry as a general economic regulator. It was less able to create wide fluctuations in car demand to control aggregate demand.

Structure: Government interference in 1974 and 1975 meant there was no change in the number of sellers in the motor industry. B-L continued in production, whilst the three American automobile firms maintained their subsidiaries in Britain. Support of Chrysler (UK) imposed cost penalties on B-L, Vauxhall and Ford. Without Chrysler (UK) their market shares would have increased.

Conduct: As part of the Ryder plan, B-L began preparations
to replace its outdated model range. Infusions of government financial aid enabled increased research and innovation and the development of new B-L designs.

Performance: Government financial support for the motor industry affected productive and allocative efficiency, progress, employment and the balance of payments. As yet, the full ramifications of government financial aid have not been felt. The large investment in B-L will make the company more efficient and enable it to rationalise its model range and exploit economies of scale. Chrysler will continue to be too small. Saving the motor firms has maintained employment in the short run in the motor industry. It has also meant that Britain will continue to produce import substitutes, with favourable effects on the balance of payments.

(ii) RESTRICTIVE TRADE PRACTICES, 1970-75

In the seventies, the Monopolies Commission continued to have limited impact on the motor industry. However, one development concerning firm conduct occurred in 1972.

By 1972 it was generally accepted that quality control was superior in Germany, Sweden, the Benelux countries and Japan than in Britain. To deal with the problem the government decided to establish a new Monopolies Commission. This had powers of reference which included the ability to deal with complaints about low quality. A central examination agency was set up to examine the quality of British goods for export. However, each individual
case for examination still had to be authorised by the Minister. Thus, by 1975, the new measures had had no significant effect on the motor industry.

LABOUR RELATIONS POLICY, 1970-75

Partly as a result of government policies in the late sixties, by 1970 labour relations in the British motor industry were poor. The newly elected Conservative government came to power with a mandate to put labour relations into a legal framework with legally enforceable contracts.

In 1971, the Industrial Relations Bill was placed before Parliament. It sought to end unofficial strikes, introduce legally binding agreements and to ban closed shops. It attempted to obtain a transfer of power from the shop stewards to the union officials. It offered the unions greater access to information relevant to bargaining. To qualify for these legal privileges trade unions had to register with the Registrar of Trade Unions.

The Conservative government intended the privileges of registration to act as an incentive to registration. No compulsion was involved. It was hoped labour relations reform would come about as a result of trade union response to incentives.

In 1971, at the Trades Union Congress, a vote not to register was passed by a small majority. Obviously, within the Trade Union movement a large section was in favour of reform. The majority saw the Industrial Relations Bill as an attack on hard earned privileges. As a result, 1971 was the worst year for
labour relations in the motor industry since the General Strike of 1926.73

In 1974, a Labour government was elected to power with a mandate to repeal the Industrial Relations Bill.74 Legally, labour relations were returned to the same basis as had existed before 1971. It was hoped a Social Contract would improve labour relations.

The Social Contract was an agreement between the unions and the Labour government. The spirit of the agreement was that the unions would only put in for wage claims to keep pace with the cost of living. Almost immediately, the contract was put to the test. Early in September, a strike at Ford's Dagenham plant in support of a wage claim in excess of the social contract occurred.75 This placed the government in an awkward position. Whilst Mr. Jack Jones, leader of TGWU, attempted to make the contract hold, at least until the next election,76 the Labour government blamed the strike on the previous Conservative government's income policy. Mr. Michael Foot, the Secretary of State of Employment, said that, "...one of the difficulties of Fords (sic) and elsewhere are the injustices and anomalies left over by that statutory incomes policy..."77 However, in fact, the social compact was inadequate to the task of dealing with Britain's labour relations problems and inflation. Not even all the trade unions supported it. In the AEU Journal, Mr. Hugh Scanlon, leader of the Amalgamated Engineering Union, wrote, "The social compact is not really a
compact at all...inflation must be solved but this will never be achieved by wage restraint... . We very much regretted that the debate on the social compact should have taken place at all."

Basic conditions: The major effect of government labour relations policy in the seventies was on basic conditions. Failure to remedy the labour relations problem caused trade union and business attitudes to deteriorate.

Three factors were important in explaining the increasingly hostile labour relations picture in the seventies. Firstly, attempts to place labour relations on a legal basis provided fertile ground for militant elements in the movement to create industrial strife. Secondly, the system was incapable of handling an inflationary situation. Thirdly, since the sixties, a decrease in the concept of "brotherhood" and an increase in self-centredness appears to have occurred. Specific cases are used to illustrate these points.

In 1971, a huge strike occurred at Ford during the passage of the Industrial Relations Bill. By 1971, Ford was the only profitable car firm left in Britain. In 1970, Ford had had 155 strikes and eleven overtime bans. In January 1971, a strike took place over a pay dispute. Ford agreed to trade union demands upon the condition of a twelve month grading standstill. A deadlock occurred. By the seventh week, over 100,000 vehicles, worth over seventy million pounds, had been lost. The newspapers reported that the strike was against the government's labour
relations policy, as well as Ford. The strike dragged on for four more weeks during which it was apparent that further stoppages could not provide financial benefits to the unions. Business attitudes were also harmed by the strike. In a letter to The Times, Henry Ford II announced that Ford had scrapped investment plans for a new thirty million pound engine plant in Britain. The plant would have produced the engines for the North American Ford Pinto. In addition, after talks with the Prime Minister, Mr. Ford said that, "...the labour situation has got to be cleaned up otherwise our customers will go elsewhere."

The inadequacy of the motor industry's industrial relations system to handle inflation stemmed from the fact that in the industry, particularly where there was still piecework, there were a myriad of different wage agreements. Facing up to twenty unions in seventy factories British Leyland, for example, made new wage agreements daily. As inflationary expectations created a further variable in negotiations, historical parities became increasingly difficult to maintain. Each new inflationary settlement tarnished the satisfaction given by the previous one to a different group.

Inflation served to aggravate problems already existing in the factories. As inflation began to spiral upwards in the seventies so did labour problems. With up to four hundred accredited shop stewards in a factory, often with left-wing bias, there was a lot of room for stoppages. Although by 1970, Ford, Vauxhall
and Chrysler had gone over to a day rate system. British Leyland still had 134,000 workers on piecerate. Increasingly, too, difficulties arose from components suppliers who still operated on piecerate. One company chairman in 1970 said,

"I can count on the fingers of one hand the number of days during the past twelve months that our factories have not lacked supplies of at least one part of a car."\(^8\)

In 1970, a number of strikes occurred which reflected the interacting problems of a poor labour relations system, a lack of "brotherhood", and inflation. One of these was at GKN-Sankey, a manufacturer of car wheels. There, five thousand men asked for a weekly rise of eight pounds and ten shillings, about twenty per cent. The management resisted the inflationary demands. Within four weeks, over one third of the industry's labour force was laid off and Standard-Triumph was completely closed. Commenting on the strike at a TUC meeting, Mr. Vic Feather noted that, "One man's strike means another man's lay-off."\(^9\) Still, the GKN workers were prepared to hold off for a fifth week when GKN, under pressure, yielded.

One outcome of this sort of strike was demands by the unions for guaranteed pay when stoppages occurred because of strikes in other factories.\(^10\) These agreements added to the anarchy in the labour relations system. Workers with a guaranteed wage put less pressure on their striking "brothers" to return to work. In effect, it meant the employers subsidised unofficial strikes.\(^11\)
The havoc caused by an out of control labour relations system was well demonstrated by a strike at Chrysler (UK) in 1973. It began when the Ryton plant was shut down because of a strike at another Chrysler plant. Upon their recall to Ryton the workers found that parts of the cars were 'shoddy' so that eventually the line had to be shut down and the men sent home again. The dispute arose over whether the men should be paid for a ninety minute period when the line did not operate. It was a question of whether the men or the parts were at fault. One foreman said, "I was responsible for the panels coming in from Linwood, and they were not up to scratch. It makes it very difficult for the foreman when he puts a tab on a car for quality and management nips it off. The foreman has no face..." Foremen are part of management. The chaos caused by strikes had undermined management relations as well as labour relations. The unofficial Ryton strike was further aggravated when the Chrysler (UK) managing director, Mr. Geoffrey Hunt, threatened that until labour relations improved no further investment in the United Kingdom would be made. Eventually, the management agreed to talk with the strike's unofficial leaders. This reflected the fact that current official procedures did not work. The strike lasted five weeks.

The Ryton strike was big enough to inspire a long debate in the House of Commons about the "growing conflict in the motor industry." The motion requested, "a full and independent inquiry
into labour relations in the industry."\textsuperscript{91} Although the motion failed, the debate provided some useful insights. One of these was to the effect that labour relations reform might be necessary, but not sufficient condition for the restoration of industrial sanity. Perhaps Britain was an unsuitable place to produce cars. In Japan, Brazil and Spain, the recent memory of poverty was sufficient to outweigh the tedium of work on the production lines.\textsuperscript{92} Consequently, these might be better areas to produce cars. A similar point was made in a letter to The Times by the former managing director of Chrysler (UK), Mr. George Cattell. He said,

"Men were engaged on repetitive operations with a 1.6 minute cycle for eight hours a day, five days a week, with little interest in what they were doing and little prospect of change. I know from experience that the very monotony gave rise to unreasonable and uncooperative attitudes."\textsuperscript{93} Charlie Chaplin's characters from Modern Times\textsuperscript{94} would have been familiar with a seventies car factory.

By the seventies, labour relations had become impossible. Not only were labour-management relations in chaos and management-shop floor management weak, but labour-labour relations were in disarray. In 1973, rebellions against militant union leaders occurred. For example, in February 1973, a meeting held by the convenors at Ford to realise a desired strike vote failed. In the same week, the men at Ford's Dagenham plant voted to call
off an overtime ban. Henry Ford II was sufficiently impressed by the lack of militancy to announce that his confidence had been restored in the British Ford workers. The same thing happened in May when the national negotiating committee of the eighteen unions at Ford called for a strike against Ford's wage offer on the basis of reassurances from the shop stewards that there was wide support among the members for such a strike. However, when local newspapers balloted the men they found four out of five were against strike action and a strike vote against strike action was taken. At the same time, management let it be known that they had received requests from workers for secret ballots because their own elected shopfloor representatives would not allow them to have them.

Opposition among the moderates to perpetual strike activity was also seen in 1974 at the British Leyland Cowley works. In April, about 12,000 were laid off over a dispute about lay-off pay. B-L decided to take the opportunity of low market demand to rid itself of an unpopular Trotskyist shop steward, a Mr. Alan Thornett, chairman of the joint shop stewards' committee. Before any action in support of Thornett had taken place the wives of the Cowley workers arrived at the factory gates in support of the B-L management. They, they said, were fed up with the perpetual strikes at Cowley, often over political matters, which had cost them, the Cowley housewives, ten pounds per week since the beginning of the year. This support enabled the moder-
ates to prevent a strike.

These examples were exceptions to the generally strike torn environment of labour relations in the motor industry in the early seventies. For the most part the more active, aggressive and militant factions continued to rule the situation. However, the cases at Ford and B-L related above suggest that there was considerable support for labour relations reform to create a less chaotic system. The government was unable to identify with, and use, that support to achieve successful labour relations reform.

Structure: The failure of government labour relations reform policy had several consequences for industry structure. Firstly, as noted above, Ford and Chrysler cut back on investment plans in Britain. Secondly, Volkswagen decided not to open up a plant in Britain, "...because of labour troubles and economic uncertainties." This was despite the fact that by 1970 the hourly rate for skilled labour was below German rates. Thirdly, the failure of the government to remedy the labour relations situation led to an increase in costs. Hundreds of strikes in the motor firms and components suppliers created a constant disruption of production schedules. To handle this problem in the seventies, the motor firms adopted two precautionary policies. The first policy was to make "crippled" cars. Whenever necessary, and if possible, cars were produced without unavailable components. These parts were then fitted later, when available. Production scheduling became largely a matter of improvisation. The second policy
adopted by the motor firms was dual sourcing. At considerable additional cost, two suppliers of vital components were kept. 102 If one supplier should go on strike, the other could keep the production lines moving.

**Conduct:** Failure to reform labour relations was reflected in higher costs. Higher costs were passed on in the form of higher prices. Fear of labour resistance, aggravated by the piecework system where it still applied, discouraged the improvement of models. At B-L, labour resistance was a factor in the slow pace at which the model range was reduced and the firm's organisation rationalised. 103 Poor quality, partly a consequence of poor labour relations, was a major factor in the decision of Ford, Vauxhall and Chrysler (UK), in 1971, to cease exports from Britain to North America.

**Performance:** Frequent strikes in the motor industry caused large production losses. For example, in 1972 it was estimated that 225,000 cars were lost through strikes. 104 Given the fairly high break even point for the car firms, the lost production had a considerable impact on profits. 105

Low profits and labour problems discouraged progress in the motor industry in the seventies. By the seventies, the industry had lost much of its force as a leading sector in the economy.

Constant labour problems created highly unstable employment in the industry. By the seventies, a small strike in a key area by tens or hundreds of workers could place the jobs of tens of
Finally, poor labour relations in the British motor industry had serious implications for the balance of payments. The rapid rise in imports in 1972 was partly attributable to lost production as a result of strikes. About one quarter million cars were imported that year, about the same number that were lost through strikes. Discussing the increased sale of imports in Britain, Vauxhall’s chairman, Mr. David Hegland, said, "...so long as strikes interrupt production and delay delivery of British cars, imported cars will fill the gap."  

ROADS AND ENVIRONMENTAL POLICIES, 1970-75

Previous chapters paid considerable attention to the road policies of British governments. It was argued that in the post-war era failure to create an adequate infrastructure had a deleterious effect on designs and performance. During the sixties, highway expenditures increased rapidly so that, at last, Britain did have a satisfactory road network insofar as motor car designs were affected. During the seventies, the motorway system was expanded and improved, but it was the first thousand miles, built in the sixties which had been critical. As regards safety and pollution control requirements the standards of the United States exerted the major influence. Following withdrawal from the United States market and the reduced enthusiasm for these causes during the world recession, these matters became of less consequence. Therefore, in the seventies those matters had no major effect on structure, conduct and performance in the motor industry.
SUMMARY AND CONCLUSIONS

The previous chapters have traced the effect of government policy on the British motor industry. The thesis has not attempted to show that government policy alone was responsible for the relative decline of the motor industry. Other factors were also involved. Rather, it has attempted to isolate the government's role in that decline, and to point to the strengths and weaknesses of government policy towards the motor industry between 1945 and 1975.

The decline of the British motor industry was more than a consequence of the relative decline of Britain during the post war decades. Other growth industries of the post war years survived and prospered.

In chapter one, three goals for this thesis were established. In this chapter the main points made in chapters three to six are summarised. The possible outcomes of counterfactual policies are briefly examined. Some comments on the exogeneity of government are made. Finally, an overall and personal conclusion is made about the adequacy of government policy towards the motor industry, in the context of stated economic objectives.

1945-53: Between 1945 and 1953, a main concern of the government was the balance of payments. As regards the motor industry, the government adopted a policy of "limited intervention" to encourage exports. This involved setting export quotas for the
motor industry. Steel allocations were used as the incentive to meet these export quotas. Export policy dominated the period. In addition, an important role was played by rearmament policy, roads policy, taxation policy and distribution policy. The main points made in chapter three were as follows:

1) Export Quotas and Steel Quotas were successful in generating an apparently large increase in exports between 1945 and 1953. However, many of these exports were to protected Commonwealth markets where American cars were unavailable.

There were several weaknesses to this policy. Firstly, steel quotas tended to support the smaller, weaker companies at the expense of the larger more efficient companies who could not get additional steel to enable expansion. This hindered the development of a more concentrated, rationalised industry structure. Secondly, government pressure to export whatever, wherever and whenever possible imposed high costs on the British motor industry for the long run. As a result of this policy, many imports of British cars into foreign countries were of a stop-gap nature. Consequently, the British manufacturers did not make long term export plans and British products gained a poor reputation for service back-up. Thirdly, government policy stressed the maximisation of exports by individual companies. As a result, each producer was in competition with other British producers overseas. This meant too many models with too little service back-up were offered in too many overseas markets. If a British
Marketing Agency had been set up in overseas markets, only the most appropriate model need have been sold there. This could then have been backed up by one larger and more adequate parts and service network. Intra-British competition was harmful to British car exports in the long run. Fourthly, the all out stress on exports was unnecessary. In 1953, the delivery of just an additional one hundred and five thousand cars that year was sufficient to remove all excess-demand that had supposedly accumulated since 1940. Slightly larger home deliveries in the immediate post war years would have dispelled the myth of a huge home demand waiting to be filled from developing. Furthermore, without the quotas, it is likely that the smaller companies which proved financially unsound in the sixties would have been absorbed by the unrestrained larger companies and a more rationalised industry structure have come about.

As regards export policy, the British motor industry needed either more or less government interference. Post war export efforts were described as "quite sensational", in comparison to pre-war efforts. Pre-war efforts were not the correct yardstick. Alternative policies would have been more successful. The quotas muddled and impeded long term free enterprise development of the industry without imposing an alternative government plan. As noted above, limited additional home deliveries would have eliminated excess-demand. The manufacturers would then have had to turn to export markets on a long term basis to increase sales.
Alternatively, the government could have become more involved in the export effort. Firstly, it could have used a marketing board to establish exports on a rational basis. Secondly, it might have nationalised the industry in order to achieve a rational industry structure upon which to base exports. 11

2) Rearmament Policy set defence ahead of the balance of payments goal. The motor industry produced military vehicles and cut back on passenger car production. Whilst criticism of the government's reordering of priorities is outside the scope of this thesis, a weakness was manifest in the manner in which rearmament policy was carried out. By spreading defence orders, the government failed to exploit an opportunity to encourage industry rationalisation.

3) Distribution Policy was used to allocate scarce cars and scarce petrol. By allocating petrol for a given mileage, the government discouraged the development of efficient economy cars.

4) Taxation Policy affected designs. After 1947, the flat rate tax discouraged small utility car designs which would have been competitive in Europe.

5) Roads Policy during this period involved minimal spending on the roads. Out-dated roads affected designs. British designs tended to be too fragile for long distance use in Australia, Canada and the United States.

6) Labour Relations were affected by government policy during this period. Firstly, a Court of Inquiry was set up by the govern-
ment to deal with a specific problem. Secondly, a poor labour relations system, inherited from the war years, was aggravated by the government's cuts in steel quotas after 1947. By cutting production redundancies were created and labour hostility aggravated.

7) The 1948 Monopoly legislation gave legal support to the government's desire for a rationalisation of the motor industry. However, in itself, it was insufficient to achieve industry rationalisation. Despite government pleas to the industry to rationalise, the government did no more than remove obstacles to that end.

1953-60: During this period the government adopted laissez-faire policies towards the motor industry as regards home and export demand and the allocation of raw materials. Nevertheless, fiscal and monetary policy, as well as regional policy, had profound effects on the motor industry. Many of the problems of the period 1945 to 1953 continued during the following years. The main points made were as follows:

1) The government used the motor industry as an economic regulator to control the economy. "Stop-go" policy had unfavourable effects on labour relations, full employment, unit costs and progress. Therefore, in the long run international competitiveness and, so, the balance of payments were harmed.

2) After 1953 the government abandoned direct interference in the motor industry's exports. However, through "stop-go" policies it created incentives to the manufacturers to alter the emphasis
of their sales effort between home and export markets. Basically, during this period, the government removed incentives to the industry to develop overseas markets for the long run. Given Britain's delicate balance of payments situation, such a policy was not optimal.  

3) The 1956 Restrictive Trade Practises Act meant that abuses between manufacturers and retailers in the motor industry were removed. As regards mergers and industry rationalisation, the government adopted a passive attitude. It allowed foreign companies to take over British companies as they desired. It failed to exploit a potential role to act as a matchmaker and encourage rationalisation of the British owned sector of the industry.  

4) Government regional policy caused a considerable geographical relocation of the motor industry. The goal of regional balance is not criticised. However, two weaknesses were apparent in the government's execution of regional policy. Firstly, it was irresponsibly overoptimistic in encouraging industry expansion in excess of anticipated future demand. Secondly, the government failed to encourage a needed rationalisation of the motor industry before encouraging a geographical diversification. As a result, unit costs in the industry were increased more than necessary with unfavourable effects on international competitiveness.  

6) Until the sixties the roads continued to receive limited attention from the government with unfavourable effects on British designs for export markets.
7) Labour relations continued to be affected negatively by "stop-go" policies. Whilst a Court of Inquiry concluded that the shop stewards had too much power, the government took no remedial action.

1961-69: These years saw the continued relative decline of the British motor industry. By the late sixties the industry was barely competitive in international terms. Although there was a considerable increase in government involvement in the industry, many well intentioned plans of the government were thwarted by the problems of sterling. The main points made in chapter five were as follows:

1) During this period, Britain experienced an overvalued pound. Regulatory Policy, consisting of prolonged periods of "stop" and "go" were used in an attempt to deal with the problem. Uncertain and erratic home demand for cars, as the motor industry was used as a regulator, had harmful effects on capacity utilisation, labour relations, profits, business confidence, investment, growth and international competitiveness. The attempt to deal with the problems of sterling imposed heavy costs on the motor industry.

2) There was no direct government involvement in exports during this period, but "stop-go" policies affected short run export efforts. Failure to enter the EEC in 1962 reduced motor export opportunities.

3) Between 1961 and 1969 the government continued to encourage mergers. In 1967, the takeover of Rootes by Chrysler (US) was
reluctantly permitted. After 1965 a number of British mergers occurred. In 1966 the IRC was set up, which took an important, direct, and critical, role in the creation of B-L. A weakness of government competitions policy was a failure to ensure rationalisation within B-L after the merger.

4) Labour relations deteriorated during these years. "Stop-go" worsened labour relations. The government again failed to act on the recommendations of its own Court of Inquiry. An attempt at labour relations reform by the government in 1968 was mistimed and mishandled.

5) Increased expenditures on the roads during the sixties meant that British design requirements became more similar to those of other western countries. Ironically, government commitment to a modern infrastructure for the car came at about the same time that Britain's motor industry became internationally uncompetitive.

1970-75: Since 1945, the government had used the motor industry as a powerful economic tool to control aggregate demand and to help achieve various economic goals. Government policy was an important factor in the decline of the motor industry's international competitiveness by 1970. Having contributed to the weakening of the motor industry, the government then came forth with a generous programme of aid to help resuscitate it in the seventies. The major points made concerning government policy between 1970 and 1975 were as follows:

1) In the seventies the government continued to use the motor
industry as an economic regulator. However, lower tariffs and increased competition from foreign makes meant the balance of payments was more sensitive to such policy. In particular, during "go" periods, the propensity to import tended to rise.

2) During this period there was a rapid increase in imports. Government use of the industry as a regulator was a factor in this increase. By 1974 the government had to take steps to limit Japanese imports. At the same time, despite EEC membership and lower tariffs, only modest increases in exports occurred.

3) The government played an important role in competitions policy. In 1974 it took a major financial interest in the ailing B-L company. In 1975 it provided financial aid to Chrysler. On purely economic grounds, neither policy was optimal.

4) Further attempts at labour relations reform were made. Again, failure to achieve reform created hostility in motor industry labour relations.

A Note on the Exogeneity Assumption: This thesis has examined the effect of government policy on the motor industry. In chapters one and two the justifications and methodology for doing this were examined. At this point, however, it may be questioned to what extent government policy was exogenous as regards the motor industry. One may ask what the effect of the motor industry was on the government. Whilst not the focus of the thesis, this closely related question deserves examination.

The influence of the motor industry on public policy was
limited. A lobby group to influence the government existed between 1945 and 1975 through such bodies as the SMMT, the National Advisory Councils and the Economic Development Councils for the industry. Whilst on occasion this lobby did obtain special treatment for the industry, as discussed in the thesis, it was unable to exert pressure on the government to stop using the industry as an economic regulator.

The general ineffectiveness of the motor lobby on important matters can be explained in terms of the balance of power between the government and the motor industry. Until the late sixties, the industry possessed few means to exert pressure on the government. At the same time, the government had policy goal priorities which provided little room for negotiations with the industry.

The limited power of the motor industry stemmed from the dominance of British ownership, the restrictions on the export of sterling and the protection afforded British cars in the home market. British ownership of the industry and government controls on the export of capital made it difficult for the industry to threaten to move from Britain if more favourable policies were not introduced. Protection of the British market made it difficult to argue that policies which reduced efficiency and progress in the industry would lead to an increase in imported cars in the immediate future. Consequently, the motor industry had a relatively weak hand with which to pressure the government for better treatment.
At the same time, the government had certain policy goals which transcended the importance of the motor industry. Most notable among these was the balance of payments and the strength of sterling. It is a Prime Minister's first responsibility to remain in power. Devaluation of the pound or a worsened balance of payments was more likely to have an unfavourable effect on this responsibility, in the short run, than measures which might weaken the long run competitiveness and viability of the motor industry. Consequently, policies which had harmful long run effects on the motor industry were often non-negotiable from the government's point of view.

Thus, although the government did make concessions to the motor industry on occasion, these tended to be non-essential matters. For example, the motor industry was given special permission to raise prices during price controls in the sixties. Also, it is likely that the motor lobby was able to apply pressure to bring forward relief from stringent measures. However, it was not able to negotiate exemption from them.

By the late sixties, the balance of power between the motor industry and the government had shifted somewhat in favour of the motor industry. The home market was less protected and there was more foreign ownership of the industry. During the seventies the foreign motor producers threatened to relocate in other countries when British public policy was unsatisfactory to them. At the same time, the likelihood of increased imports in the near
future as competitiveness declined also circumscribed government policy making as regards the industry.

For the above reasons, for most of the period under review, the motor industry was notably impotent in influencing critical policy decisions. A more detailed analysis of the activities of the motor lobby provide a focus for further research.

A Personal Conclusion: In tracing the role of government policy on the British motor industry, a number of themes kept recurring. Firstly, economic decisions were frequently constrained by politics. Secondly, possibly stemming from the first, economic decision making, as regards the industry, was frequently myopic. The long run was discounted heavily. Thirdly, economic decisions were often based on overoptimistic assumptions. Fourthly, economic decision making involved an element of brinkmanship on many occasions.

Political constraints obviously included such things as Britain's commitment to NATO, rearmament and the Suez crisis. In addition, the periods from 1947 to 1949, and from 1959 to 1967, when Britain tried to maintain sterling, imposed a serious constraint on economic policy. There was a strong political reluctance to be associated with devaluation. Furthermore, such events as the timing of "stop-go" policies, the backing away from labour relations reform and the financial assistance to Chrysler were largely politically motivated. All imposed costs on the industry.

Myopia characterised the constant use of the motor industry
as an economic regulator. Every squeeze of the motor industry meant a loss of international competitiveness. The short term outlook also characterised the government's complacency in reviewing export performance in the fifties, as Britain's share of world markets declined; it characterised the government's lack of response to the effects of poor profits, investment and confidence in the industry, in the late sixties; it characterised the government's financial incentives policy for regional relocation before industry rationalisation occurred, in the late fifties. 18

Overoptimism was repeatedly apparent. It could be seen in the export quota increases of 1947 at a time of increased world competition and materials shortages in Britain. It was visible in the regional expansion plans of the late fifties, and in Maudling's dash for growth in the early sixties. The assumptions of the national plans of the sixties were overoptimistic. So were many of the measures taken to reform labour relations. The government's confidence in the motor industry to withstand "stop-go" policies and increase exports revealed notable optimism. So did the government's hopes for the British-Leyland amalgamation, the Ryder scheme and financial aid to Chrysler.

Brinkmanship, too, seemed to be a recurrent theme. "Stop-go" policies were often introduced only on the brink of balance of payments difficulties. The schemes to save British-Leyland and Chrysler were introduced hurriedly as disaster approached. Schemes such as the post war export quotas were drawn up very
rapidly in response to balance of payments difficulties. In dealing with labour, the government frequently backed down when labour antagonism became economically and politically uncomfortable.

Summing up, careful long term planning based on realistic assumptions was noticeably scarce. There was little apparent industrial strategy for the motor industry. All too often government policies which affected the motor industry appeared to have been drawn up with limited forethought, often in the face of immediate difficulties. As regards the industry, government policy frequently stressed the short run, at the expense of the long run disadvantages. Consequently, government policy played a significant role in the decline of the industry over the thirty year period, 1945-75. To the extent that the industry was an important leading sector in the economy, much government policy was detrimental to the long run achievement of the stated economic goals.
CHAPTER 1 - FOOTNOTES


4. Ibid., 9.

5. Ibid., 10.

6. HCD 22/2/57, 800.

CHAPTER 2 - FOOTNOTES


2. Nevertheless, United Kingdom exports between 1930 and 1939 were greater than for Germany, France or Italy.


4. In 1968, the writer completed a census for the Board of Trade which showed this number of parts in a car.


6. This was observed by the writer whilst a research analyst at Ford of Europe in 1968. A supplier would be persuaded to become heavily dependent on Ford. Ford would then put pressure on the supplier to lower prices.

7. See, discussion of economies of scale, this chapter, p. 7.


11. In the early thirties, deflation had occurred and all manufacturers reduced prices as the value of money increased. At the same time, Ford was increasing its market share with the new Ford 8 and Ford 10. Therefore, some price competition may have been involved.

12. In 1959, Vauxhall reduced the price of the Victor model. This car had not been successful in Britain with its transatlantic styling. In the fifties and sixties Rootes reduced prices on old models to give them extended life. In the mid-sixties, Ford reduced the price of the Anglia, rather than produce a new model. Ford estimated that the Anglia's competition, the BMC Mini, was being sold at less than cost. This was because of BMC's poor accounting techniques. Therefore, Ford saw no profit in development of a new small car.


CHAPTER 3 - FOOTNOTES

1. At the time, there was excess-demand for cars in many overseas markets, including the United States, whilst the European producers were in disarray as a result of war damage.

2. The Board of Trade is a British government department.

3. Great Britain Parliamentary Debates (Commons), 5.4.46. 1584. (Hereafter HCD).

4. For the industry, a National Advisory Council was a preferable body to the alternative Working Council. The latter was dominated by the government and unions and had more control over an industry.


6. This was for January 1949.

7. HCD, 11th April, 1949, 2449.

8. Before World War II, the British motor industry had been bigger than that of France, Germany or Italy.


11. Ibid.

12. See, Roads Policy, this chapter, which discusses the inappropriateness of many British designs for overseas conditions.

13. The reason the United States companies could do this was that they exploited most available economies of scale.
16. In the United States, Ford reported that the steel shortage
limited production to one million units, whilst demand
was 1.7 million units for the year. This puts the
British export effort to the U.S.A. into perspective.
17. See, Chapter two, where economies of scale in the motor indus-
try are examined.
18. For example, Argentina only allowed imports of British cars
if the importer held a certain minimum amount of sterl-
ing in Buenos Aires. With external policies such as this
making it difficult for the smaller concerns to export,
it would have been unjust for the government to force
the closure of small firms which failed to export. In
addition, the SMMT argued that the success of the smaller
companies such as Healey and Allard in international
rallies added to Britain's international prestige.
19. HCD, 5th April, 1946, 2584.
20. HCD, 10th November, 1947, 41.
21. The SMMT persuaded the government that forced rationalisation
would harm the engineering industry's export effort.
22. C. Shawcross, HCD, 5th April 1946, 1584.
23. There is no evidence as to exactly how the motor industry re-
responded to these constraints on selling prices. However,
it does not appear that prices were set very much above normal equilibrium levels. Firstly, after the end of excess-demand, prices were not reduced. Secondly, profits did not fall once normal conditions returned. If excessively high prices had been set, price cuts and lower profits after 1953 would have been expected.

Throughout this thesis profits are treated with some scepticism. New arrivals at Ford of Europe's Management Programme in 1968 were told the following story about profits at Ford. Henry Ford, upon asking his accountants what the profit for the year would be, was met with the reply that it depended upon what he would like it to be. Whilst over the long run reported profits are a fair indicator of profits, on a year to year basis they are less reliable.

In the light of the above caveat some profit figures for the motor industry between 1947 and 1956 are presented. Relative to all industries in Britain, the motor industry's profit performance improved after excess demand ended. Whilst more cars were sold in the more profitable home market after 1952, this suggests that excessive exploitation before then had not occurred.
<table>
<thead>
<tr>
<th>Year</th>
<th>Gross Trading Profit (1947=100)</th>
<th>Motor, Cycles &amp; Aircraft Industry</th>
<th>All Industries</th>
<th>Col 2 as % of Col 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>100</td>
<td>100</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>1948</td>
<td>130</td>
<td>120</td>
<td>108%</td>
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<td>1949</td>
<td>154</td>
<td>124</td>
<td>124%</td>
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<tr>
<td>1950</td>
<td>214</td>
<td>148</td>
<td>145%</td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td>254</td>
<td>178</td>
<td>143%</td>
<td></td>
</tr>
<tr>
<td>1952</td>
<td>275</td>
<td>168</td>
<td>164%</td>
<td></td>
</tr>
<tr>
<td>1953</td>
<td>321</td>
<td>174</td>
<td>184%</td>
<td></td>
</tr>
<tr>
<td>1954</td>
<td>388</td>
<td>201</td>
<td>193%</td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>436</td>
<td>224</td>
<td>195%</td>
<td></td>
</tr>
<tr>
<td>1956</td>
<td>382</td>
<td>232</td>
<td>165%</td>
<td></td>
</tr>
</tbody>
</table>


24. Advertisements in *The Motor* and *The Times* in 1949 and 1950 show retail dealers selling nearly new cars for up to twice their list price.

25. HCD, 11th April, 1949, p. 2451.


31. See, Roads Policy section, this chapter.
32. See, Distribution Policy section, this chapter. It is argued that export quotas encouraged the manufacturers to grossly overestimate excess-demand at home. As a result, exports were seen as part of a short term export effort with negative consequences.

33. For example, in 1947, the government undertook a policy of making it difficult to obtain capital goods. See, HCD, 15/12/47, 656.
34. This target was never achieved.
35. HCD, 10/6/52, 135.

36. BMC made military jeeps, Rootes produced military trucks, Rover produced tank engines, Standard manufactured aeroplane engines. In total, military orders amounted to sixty million pounds.

37. Rearmament required the manufacturers to put a major effort into turning out military goods. This meant that new models, improvements and investment plans were held up.

38. In Britain, six manufacturers tended to produce a complete range of cars, each from a small car to a luxury car. Only Vauxhall did not produce a small car. In comparison, in Germany, Volkswagen concentrated on small cars, Mercedes-Benz on larger luxury cars, Opel and Ford produced medium sized cars. In France, Citroen produced very small and luxury cars. Renault produced small and
medium cars. Simca produced medium cars. Peugeot produced medium and larger cars. In Italy, Fiat dominated the market. Therefore, higher concentration levels in Europe do not tell the whole story about industry structure in the different countries.


40. This neglect of long term requirements for exports was aggravated by the fact that the export quotas did not include spare parts. Therefore, the export quotas acted as a disincentive to the long run development of export markets.


42. Originally for 1952 the government had decreed that all passenger vehicles except for sixty thousand should be exported. In the face of increased foreign competition and import restrictions on some traditional markets this proved impossible. If the government's policy had been consistent they would have forced a production cut-back once the export quota was filled. Perhaps this would have stimulated the search for new markets. Instead, as so often, the Ministry of Supply took the line of least resistance. It allowed additional deliveries at home. By October nearly fifty per cent of deliveries were to the home market. Source: Economist, 17th November, 1952, p. 362.
43. The reasons for the overestimate of home demand are clear. Firstly, there was no precedent for the motor industry of a long sustained restriction of supply. Therefore, demand estimates were of little help. Secondly, there was a conflict between the usage age of the car stock and the historic age. Historically, the stock of cars in Britain was old. However, for many years, most of the cars had been unused. Furthermore, designs had been little changed for ten years. This explained why the manufacturers overestimated excess-demand. They hoped the stock of "old" cars needed replacing. The fact that many of these cars had been little used frustrated those hopes. In usage terms many were quite "new".


45. For example, see *Austin, Annual General Meeting*, 1952.

46. See footnote 23, this chapter.


48. Since cars were a middle-class luxury, the equity question of higher petrol prices was not important to the Labour government.

49. *Austin* absorbed the conversion costs. It is interesting to note that these costs represented over forty per cent of home market price, yet people were prepared to pay this for the inferior product.

50. See footnote 43, this chapter. The manufacturers had no previous experience of this situation.
51. See footnote 43, this chapter.

52. For example, a good spare parts service would not have contributed to a firm's export quotas.

53. To encourage small cars the government should have given so many gallons of petrol for each car. Instead, they discriminated in favour of large cars by giving enough petrol to take each car a given mileage each month.

54. See Taxation Policy and Rearmament section, this chapter, for fuller discussion.

55. It can be argued that too many companies produced too many new models with too little research and development. Too few numbers of each new model were produced, therefore costs and prices were too high. A rationalised structure could have meant lower prices and faster progress in the industry.

56. HCD, 17/4/44, 920.

57. Ibid.

58. The RAC horse power tax was inspired by the Royal Automobile Club. Taxes were based on the area of the piston heads of the engine. A cubic capacity tax is based on the volume of the engine cylinders. This gives more freedom to engine designers.

59. The Times, 20/12/44.


62. The Motor, 30/4/47, in which there are estimates of future car population and excess demand.
63. For the effects of this, see chapter 2, figure 2, p. 14.

64. Sir Miles Thomas quoted in Morris Motors Annual General Meeting, 1947.

65. HCD, 17/6/47, 1821.

66. Most of the British motor firms at this time were still dominated by individual families and trusts. For example, Morris, Rootes, Jaguar and Ford.

67. The Times, 20/12/44.

68. Economist, 23/12/44, p. 386.

69. For example, the Austin seven, introduced in the late twenties.

70. Economist, October 1947, p. 496.

71. The comparison of prices in Australia gives some idea of the effect on costs of Britain's industry structure. Obviously, the more rationalised American structure, despite higher wage rates, was able to provide more value for the money.

72. For example, the Renault 750 weighed 9 cwt., the Austin A30, 13 cwt. By virtue of their rear wheel design, the Renault and Volkswagen were more efficient than the traditionally designed British cars. A Renault could carry four people at the same speed as a British car but with better fuel economy.

73. For example, the magazine of the Automotive Association, Motoring Today in 1965 related motoring experience to income class. Of those who had had cars since 1945, 70 per cent were in income groups A, B and C, whereas
60 per cent of those who had owned cars since 1956 were in income groups C₂ and DE, the lowest classes.


75. HCD, 9/6/47, 694.

76. HCD, 6/5/46, 590-597.

77. For example, British cars tended to have good turning circles, engines with excellent torque characteristics and positive steering.

78. Economist, January 1947, p. 36.


81. For example, cuts in steel supplies, the poor winter of that year, lack of access to capital goods, and decreases in demand for British cars overseas.

82. Job insecurity and consequent trade union conservatism may have been the cause, in part, for low industry productivity. In 1948 productivity was lower than in 1938. Reported in the Economist, June 1948, p. 733.

83. Economist, August 1948, p. 327.

84. In 1948, Standard Triumph International bought out their piece-work system. As a result, they paid the highest wages in the industry. In the fifties, they were persuaded by the unions to reintroduce piecework.
85. There were sound reasons for these hostile and defensive attitudes. In the thirties, some companies, for example, Ford, had violently opposed trade unions. In addition, workers in the industry in the thirties, forties, fifties and sixties carried the brunt of the consequences of the cyclical nature of car demand.

86. Trade Unions could react to unemployment with strikes, which imposed costs on the motor company. Therefore, to avoid labour hostility and strike reaction, motor firms became more likely to absorb the costs of labour hoarding rather than risk a strike.

87. Poor labour relations structure in Britain can be compared to the efficient sixteen, industry based, unions of Germany. Ironically, the British government played a role in setting up the German structure after the war, when Germany was under Allied Command.

88. The reasons for this can be seen in the discussion of economies of scale in the motor industry in chapter 2. In addition, in 1946, the Minister of Supply said the motor industry would commit "general suicide" if rationalisation did not occur. Source: HCD, 5/4/46, 1581.


90. This was shown in its acknowledgement and intercourse with the SMMT, the setting up of a National Advisory Committee in 1946, and its encouragement and support of other
intra-industry bodies.

91. See, Export policy, taxation policy and rearmament policy, this chapter.


93. See table 1.

94. As reported in the Annual Accounts of Morris and Austin.

95. The Times, 12/10/48.

96. The Austin-Morris merger was a defensive one. The company's new managing director commented, "...we expect keen competition, but we have a few shillings in the bank and friends who will lend us money. We are feeling pretty comfortable." Source: Financial Times, 28/9/54.

97. In 1937 Morris had 25 per cent of the British market for passenger cars. In 1951, Morris had 21 per cent.


100. Economist, April 4, 1953, p. 50.

101. As well as an end to excess-demand in Britain, in France, Germany and Italy, the car companies had been rebuilt with Marshall Aid. Overseas, competition was more intense.

102. With unitary construction, a single chassis-body unit replaces a separate chassis to which a body is affixed. Unitary construction offers weight savings.


104. For example, export policy, rearmament policy and distribution policy.
CHAPTER 4 - FOOTNOTES

1. See chapter one, where the contribution of the motor industry to the UK economy is discussed.

2. In Australia, restrictions on the number of imports were imposed on a temporary basis.


5. Ibid.


8. *Economist*, March 25, 1957, p. 713. France, for example in the first four months sold eight times as many cars in the United States, mostly the popular Renault Dauphine.


11. A major reason for the continued boom was a forthcoming election. The Conservatives won the election with the slogan "You never had it so good."


16. Roads Policy and Petrol Distribution Policy had also been used to discourage economy cars, see chapter three.

17. Small UK cars, in particular, were unsuitable for the United States. In order to have sufficient engine torque to handle British road conditions, small cars, such as the
the Morris Minor, were incapable of cruising at the speeds required in the United States.

18. The Renault and Volkswagen could perform satisfactorily in the United States because of their high gearing. They had insufficient engine torque for British road conditions.

19. Economist, September 24, 1960, p. 1214. In the first half of 1960 UK exports to U.S. fell 20 per cent, whilst foreign imports to the U.S., in total, fell 7 per cent.


23. Vauxhall and STI were more affected by cyclical demand because in boom conditions, as demand for the more popular Ford and BMC cars created long waiting lists, demand would spill over to Vauxhall and STI. In periods of weak demand there were no waiting lists. Therefore, Vauxhall and STI tended to experience the greatest fluctuations in demand.

24. For example, the recession of 1960 hit STI very hard and was a factor in their sell-out to Leyland.

25. For example, in 1960 the prices of most British models were reduced in the United States.

26. See J. Cubbin, Mergers Project Case Study Report, (unpublished research paper, Warwick University, 1960), 11. Cubbin notes that in Britain, outside finance was dependent upon a firm's profit record.

27. Whilst the 1960 investment plans were not affected, investment between 1956 and 1958 had been slowed because there was excess-capacity. Excess-capacity had been generated by the slowdown of 1956 and 1957.

28. The trade union presence put pressure on management to try to avoid redundancies. This is discussed in chapter three under Labour Relations policy.

29. HCD, 8/3/56, 1121.

30. HCD, 3/2/56, 513.

32. See chapter 2, figure 2.

33. A more aggressive export policy, say an export quota of thirty per cent, might have put pressure on the weaker firms and hurried industry rationalisation.

34. See chapter three, taxation policy.

35. A similar phenomenon was observed in the United States between 1945 and 1957. There, people had preferred a good nearly new large used car to a new small one. Therefore, none of the United States manufacturers made small cars. When tastes changed in 1957, the European imports had great success in the United States.

36. In 1957, Vauxhall claimed that the smallest cars were uneconomic to produce. The Managing Director, Mr. Copeland, said that when they decided to produce the four seat, fifteen hundred cubic capacity, Vauxhall Victor, they carried out feasibility studies for a smaller car. They found that with the smaller car, value was squeezed out more quickly than cost. A large stock of second hand cars and flat rate licence fees for cars also discouraged production of smaller cars.

37. HCD, 22/2/57, 726.

38. HCD, 22/2/57, 800.

39. It would have been better in the following sense. Total sales would have been greater, therefore each firm could have sold more. This would have been better for the balance of payments and for employment in Britain. It could also have been better for customers overseas who would have enjoyed better after sales service. In the long run, British cars might have enjoyed a better reputation.

40. See chapter 2, pp. 4-10, where industry structure is discussed.

41. The government's policy was one of non-interference in exports.

42. For example, the government might have instituted an export marketing agency. This would have decided which models would be sold in which markets. Since a rational export policy was a positive sum game, all the manufacturers could have benefitted.

43. HCD, 22/5/57, 800-808.
44. See, Competitions Policy, chapter three.

45. To qualify as a dealer, a garage only had to have a showroom capable of holding two cars.


47. New Statesman, 5/2/55, p. 164.


49. The Times, 20/5/58.


51. In the motor trade, a monthly publication known as the Blue Book quoted trade-in values.

52. World War II restrictions, export quotas and steel quotas and rearmament had all helped frustrate structural change in the motor industry.

53. HCD, 30/4/59, 1447.


55. HCD, 2/2/57, 574.

56. For example, the SMMT, the National Advisory Committee and a government standardisation committee for the industry.


58. Jowett blamed inadequate steel supplies for the bankruptcy, but a number of factors were at work: poor finance; costly designs; inadequate dealers; small size; inadequate demand once excess-demand ended.

59. The investment needed to put the Rover 2000 on the road was approximately equal to the issued capital of the company, in, Leyland Papers, op cit., p. 42.

60. Rover's return on capital in 1953 was 58 per cent, Standard's 18 per cent, in, Leyland Papers, op cit., p. 44.

61. For example, the BMC Mini, the STI Herald, and the Ford Anglia.


64. In 1959, Ford of Britain was considerably larger than Ford of Germany. Therefore, it was likely to be the centre of any Ford expansion plans.


68. Financial Times, 22/3/60.


70. BMC's first choice was to locate in the Midlands. Their first proposal to relocate was rejected by the government.

71. BMC repaid the government for the cost of the factory over a fifteen year period. No interest was paid.


73. Ibid.

74. Economist, October 20, 1956, supplement on motor industry.

75. See mergers section, this chapter, p. 100.

76. Those of BMC, Ford, Vauxhall, STI and Rootes had to be revised.

77. In Cheshire, J. Summers operated the Shotton Steel Works.

78. The South East and Midlands made up the most important part of the home market. These were the most populous and affluent areas of Britain.

79. See, economies of scale discussion in chapter 2, pp. 7-11. STI output at this time was less than a quarter of a million cars per annum.

80. Economist, March 5, 1960, p. 913.

81. G. Turner, op cit., p. 54.

83. HCD, 6/12/60, 1080.

84. HCD, 6/12/60, 1175.

85. HCD, 6/12/60, 1200.

86. See, chapter three, Roads Policy.

87. HCD, 31/3/60, 1112.


91. These were the BMC Mini, the STI Herald and the Ford Anglia.

92. This inverse relationship has been called the conspiracy to strike argument. Basically, during recessions, the cost to both management and labour of a strike is less than in boom periods.


94. *Ibid*.


97. See, Labour Relations Policy, chapter three. An example of the government's role in labour relations structure was the 1944 legislation which encouraged firms to accept many unions in their factories.


101. Since the home market was more profitable, firms tended to redirect export production to satisfy the home market.
CHAPTER 5 - FOOTNOTES

1. HCD, 26/7/61, 220-221.


3. These included two Economic Development Committees on the motor industry, in October 1966 Sir John Toothill was appointed to head the Motor Vehicle Distribution and Repairs Committee and in June 1967 Sir Hugh Tett headed the committee on the Motor Manufacturing Industry.

4. The main theme of the National Plan was that it would enable a better matching of supply and demand.


6. Approximately three per cent of the gross national product in 1967.

7. Over the same time period, Japanese production increased ten-fold. French, Italian and German output all, at least, doubled.

8. In addition to the fall in exports to the United States and restrictions on the home market, taxes had been increased on cars in Australia.


12. Boom conditions were experienced in the United States, South America and Europe. In addition EEC entry was anticipated which encouraged export efforts.

13. The Times, 24/1/62,

15. At that time, the sales tax on cars in France was 28 per cent, in Germany, 15 per cent, and in Italy, 11 per cent.

16. The main direct effect on the motor industry was an increase in hire purchase charges. This decreased second-hand demand particularly, and hence trade-in prices.


19. Ibid.

20. The Times, 20/1/67. This was approximately equivalent to a two per cent price increase.


23. The squeeze tended to affect consumer durables, and in particular cars more than other goods.


25. The previous largest cut in a single stroke had been less than four hundred million pounds.

26. HCD, 16/11/68, 1796.

27. Reports in the Economist, 16/12/67, suggested that BMC believed the elasticity of demand for their cars in Europe was of the order of five, whereas Ford, more cautiously, thought it was about two.


29. Economist, 12/7/69, p. 69.


32. Investment fell both in absolute terms and as a proportion of total new investment. The late sixties were also a period of low profits and European overexpansion.

33. See Labour Relations section, this chapter, p. 148.

34. See Export Policy section, this chapter, p. 131.
35. For the effects on profits, see table 11.

36. See Merger Policy section, this chapter, p. 135.

37. This was reflected in that after devaluation prices were not raised by the full amount of devaluation, for example, in the competitive European market, BMC reduced prices by twelve per cent.


39. A European Economic Commission in 1962 estimated that in Europe, by 1965, productive capacity would be seven million vehicles and demand five and one half million vehicles.

40. In 1968 output was seventeen per cent above 1967 output. However, 1967 production was three per cent below 1966 levels. This was seven per cent below 1965 levels. This was a further seven per cent below 1964 levels. The cutbacks in 1969 meant the motor industry operated at fifty per cent of capacity.

41. See table 11.


43. The French truck producer Berliet was not internationally competitive, particularly against the British. The general engine capacity ceiling was mainly to protect Berliet.

44. Business Week, 27/1/68.

45. This was considerably less than in the EEC countries.

46. In Japan, the Ministry of Industry, Trade and Investment had been instrumental in encouraging mergers in the sixties and the tenfold increase in production achieved over the decade. In Europe, VW and Auto-Union had merged, Fiat and Citroen had joined together and Peugeot and Volvo had agreed to cooperate. Fiat and Renault had negotiated to build motor plants in the USSR and Roumania. BMC had aspired to build the plant in Roumania but had achieved inadequate government support.

47. See Competition Policy section, this chapter, p. 135.
48. In comparison, Valetta of Fiat, but also VW and Renault had wanted to create some sort of protective cartel in 1963. They were concerned about the likely effects of over-capacity in Europe on all manufacturers.

49. Evidently the front wheel drive Morris 1100 greatly impressed VW. The first Cortina was an acknowledged triumph of product planning. It is interesting to note that the successful models of the seventies such as the VW Rabbit (Golf) and Honda Civic use essentially BMC's innovative designs of the sixties. BMC failed to exploit the market for their space saving designs.

50. For example, in 1965, the Secretary of State of Foreign Relations, Mr. Anthony Bottomley, returned from Nigeria with serious criticisms of U.K. exports. Whilst the Nigerian market had doubled between 1959 and 1964, British sales had actually fallen by volume. Mr. Bottomley stated three reasons which had repeatedly been heard since 1945; unavailability of cars, unsuitability of cars, and, especially, a weak after sales service. *Economist*, 4/5/65, p. 810.

The Government's harangues to the industry were supported in the media. In 1962 the Consumers' Affairs magazine *Which* (January 1962) found the VW technically superior to British small cars and *Motor Sport* (March 1962) reported that whereas 64 per cent would buy another BMC Mini, 85 per cent would buy another VW. Amongst larger cars, *Which* (April 1969) found the quality of Volvo exceeded that of all the British offerings. In 1967 the Consumers' Affairs Institute found matters little improved. In an examination of fifty new cars it noted, on average, twenty-seven defects per car (*Which*, July 1967). Reporting on its readers findings the Automobile Association recorded an average 2.12 defects on each car examined. (*AA Drive*, September 1967).

51. It might have existed in any case. Footnote 47, above, suggests such fears at the time were widespread.

52. Ironically, tariffs on cars over 2800 cubic capacity were not lowered, under French pressure. It was in the field of fast luxury cars such as the Jaguar that Britain had a competitive edge. In the late sixties and early seventies there were always long waiting lists for these cars worldwide.

53. See figure 4, p. 85.

55. An excellent account of this merger is given in G. Turner, The Leyland Papers, (London: Eyre and Spottiswoode, 1969). He notes that the merger only occurred because an English gentleman had given his word! Even though nothing was signed, Leyland felt it could not back out when it had second thoughts about STI.

56. Leyland put in larger engines, better finish and so on, and raised prices. As a result, they avoided direct competition with the larger mass producers.

57. To some extent therefore the aims of NEDO and the National Plan backfired. The matching of supply and demand was aggravated rather than improved.


59. Ibid., p. 103.

60. Ibid., p. 119.

61. Economist, 20/1/68.

62. These dated back to the old Nuffield collection of firms, as well as the diversifications of the early sixties.

63. Many of the models, for example, the Mini and 1100 series, dated back to the early sixties expansion. So did many of the sports car designs.

64. For example, B-L had three times as many dealers as Ford.

65. Business Week, 21/6/69.

66. Ibid., 27/1/68.

67. Ibid.

68. Ibid.

69. This was the Maxi. BMH had followed a disastrous design policy which had emphasised the most efficient use of a given space with minimal emphasis on appearance. Whilst such a policy could work on a small car like a Mini, on larger models the sacrifice in terms of appearance was considerable. Stokes immediately had a new front end designed for the Maxi to overcome its boxy appearance.
70. After the merger the prospects for BMC's contribution to the new company looked increasingly bleak. Before the merger BMC's market share and stock price had been declining and it can be argued that IRC pressure persuaded Leyland to pay too high a price for BMC. If it had waited BMC might have been worth much less.

71. He was removed by the government in 1974. The effects of the 1969 restraint; lowered tariffs in 1972, and labour relations friction had been insurmountable.

72. HCD, 8/6/64, 884.

73. Ibid.

74. In fact, a large corporate staff was built up and many jobs were duplicated. This is discussed in, A. E. Salmon, "Inside British-Leyland", Management Today, 114, November 1975), 59-61.

75. See regional policy, chapter 4, p. 100.

76. See table 11.

77. In 1964 the vice-president of Chrysler (U.S.) had sent a letter to the British Chancellor in which he said,

"Chrysler undertakes that should circumstances arise in which it wished to take steps to acquire a majority holding of voting shares in Rootes Motors, neither Chrysler nor any of its subsidiaries would take action either directly or indirectly to this end without consulting with the British government nor over their objections."

(Economist, 1/8/64, p. 87).

78. See Rootes, Annual Reports and Accounts, 1964-75.


80. See table 11.

81. The Times, 31/8/65.

82. Ibid.


84. This was the 1969 Avenger. It was a very conventional design and incorporated no new visible technology.


87. For example, they agreed to pay for labour charges on warranty work.


89. See competitions policy section, chapter 4.

90. All the equipment examined, for example, wire harnesses, was original equipment on the cars and usually lasted the cars' lifetime.

91. The trade unions opposed complete abandonment of piecework.

92. Reliant survived successfully by exploiting a small sub-market. It produced three wheel cars and very small economy cars with plastic bodies. These cars were very simple to maintain and had low running costs.

93. See regional policy, chapter 4, p.100.

94. It failed for a number of reasons. Firstly, its rear engine design was expensive and outdated. Secondly, BMC sold the Mini at a price which did not cover full cost, so poor was their finance organisation. Thirdly, by 1962 there had been a general movement up market away from the very small cars to cars such as the Cortina.

95. The cost to the government to create these jobs was about ten million pounds.

96. The Pressed Steel Plant at Linwood was devoted to manufacturing Imp bodies.

97. It is not the purpose of this thesis to analyse the success of regional policy. Nevertheless, if Linwood was to be a growth centre, it would have had greater success if the government had minimised the risk of failure by attracting other industries in addition to the motor industry to the region. If so, the failure of the Imp would have been less calamitous.


99. Dismissals and trade union rights were the main reasons for stoppage at Ford between 1959 and 1962. 1962 was no
differently. It began in January when there was a sizable strike over a speed-up in the line at the foundry. A second major strike occurred in the repair garage in August. Management claimed that because of a quality drive and tighter inspection standards there would be fewer repairs and therefore less labour needed in the repair shop. The stewards argued that this would increase the work load in the garage. According to a customary agreement the 'status quo' should have been maintained pending negotiations. However, the official agreement gave management the right to transfer labour as it deemed fit, and Ford, following the recommendation of the government inspired joint talks, decided to exert that right and refused to negotiate. It appeared that outside the garage sympathy for the strike was limited and when Ford threatened dismissals the strike broke. Then in October, a third major strike occurred. A shop steward, Bill Francis, of the A.E.U. called a lunchtime meeting without the required management permission. Following the strong line of the previous year's joint talks Ford decided to dismiss Francis. The dismissal provoked considerable sympathy among the workers because a new disputes procedure had already been approved which would have prevented the need for dismissal. Ford's action appeared high handed, protest stoppages occurred, and before the day's end assembly operations had come to a stop.

The 1963 Court of Inquiry was set up in February because of the threat of an official stoppage. Following the unofficial strike emanating from the Francis incident Ford had decided not to re-employ some of the strikers. Some redundancies were necessary in any case and Ford decided to use the unofficial stoppage to get rid of troublemakers. The union saw this as a vital question of victimization, a matter of principle, and decided upon official action.

The conclusion of Professor Jack's committee was that the company could discharge labour but that it had to be 'fair'. It suggested that those made redundant should have their cases re-examined. Implicitly, it criticised the strong stand approach, given that Ford had overlooked similar breaches of the rules for some time. In the circumstances, Ford's action had been excessive.

100. Labour Gazette, February, 1966.
101. In 1966 a Motor Industry Joint Labour Council chaired by Mr. Jack Scamp investigated a number of labour disputes. His reports blamed the piecework structure and the reliance of the industry on shop stewards to estimate the vast number of calculations necessary. The reports found the trade unions to be totally incompetent. The Council noted the remarkable day at Morris when most of the workers walked out in protest of the frequent stoppages caused by strikes by the internal workers. (Economist, 28/5/66; 6/8/66; 24/12/66).


103. The extent to which shop stewards attracted the loyalty of workers at the shopfloor level was reflected in an event at Rootes in December 1964. The plant affected was the Linwood plant in Scotland; a part of the early sixties expansion already criticised as unnecessary in this study. At Linwood, the end of the 1964 boom meant short time, since it had at no time operated even close to capacity. By December, all workers had been on a four day week for five months and the management decided that redundancies were necessary. At this point the shop stewards came up with an ingenious scheme which was adopted by the management. The scheme allowed two-thirds of the workforce to go back to a five day week but necessitated that the other third be laid off for one week in every five. During that fifth week financial loss would be mitigated by government unemployment benefits. Apart from revealing a possible management talent among the shop stewards it also revealed a very great trust, among the one-third prepared to face the regular lay-offs, of their shop stewards. (New Statesman, 4/12/64, p. 873.)


108. Evidently, by 1968, labour relations were so bad that some leaders of the major unions, Les Cannon of the AEU, Clive Jenkins of AST&CE and Jack Jones of the TGWU, sympathised with the idea of American style fixed term labour contracts. (Economist, 28/9/63, p. 71.)


111. Ibid., Section 16, p. 9.

112. The trade unions in Britain are the largest contributors of party funds. The trade unions also have the power to nominate Labour candidates for members of parliament.

113. The strike began in February when the shop stewards' conveners from all twenty-three Ford plants voted to reject an officially agreed pay package deal. At Halewood there was a strike vote in support of the conveners' position, although Ford management made it clear that they were determined not to improve their offer. The management refused to discuss things with the Halewood stewards' because their actions were unofficial and therefore outside proper procedure.

By March, twenty-seven thousand were on strike and the cost to Ford was around two million pounds each day, and to the country one million pounds daily on the balance of payments. At issue was a part of the pay package which invoked what were stupidly called 'penalties'. Ford agreed to a substantial pay increase and wage guarantee if part of the pay increase came in the form of an accumulating bonus in return for freedom from unofficial strikes. If an unofficial strike took place there were money penalties to be paid out of the bonus. It was this incentive to increased productivity which justified the wage increase, but which annoyed the unions. (The Times, 20/2/69; 6/3/69.)

114. For a fuller discussion of the background to this strike see, P. Dunnett, "Analysis of a Motor Strike," (unpublished masters paper, Simon Fraser University, 1972).


117. Speaking of 1969, one company chairman said, "I can count on the fingers of one hand the number of days during the past twelve months that our factories have not lacked supplies of at least one part of a car." (Economist, "Survey of the Motor Industry", October 17, 1970.)

118. The clearest indicator of this was in the consumer reports of Which magazine during the sixties. For examples, see footnote 50.
119. Resources were wasted as plants worked slow or were shut down, and as production was disorganised.

120. For example, during the 1965 Ford strike, it was estimated that one million pounds of exports per day were lost.

121. For example, E. J. Mishan argued that, "the invention of the private automobile is one of the great disasters to have befallen the human race," and that the externalities involved in its use outweighed the benefits. The Costs of Economic Growth, (New York: Praeger, 1967).


123. These were carried out for the government by the Road Research Laboratory and by Sir Harold Roxbee Cox.

124. HCD, 10/2/64, 514.


127. Small cars defined as cars with engines under one thousand cubic capacity.

128. In particular, the work of Ralph Nader and the United States Senate's Ribicoff Committee, in the early sixties provoked United States action on these matters.

129. For example, fifty-five thousand pounds was awarded to the H. Ferguson Research Company to install four wheel drive anti-lock brake devices on a sample of police cars in 1968. In the same year, the Ministry of Technology awarded Joseph Lucas Ltd. one hundred and eighty thousand pounds to produce a rechargeable zinc-air battery for electric cars.


131. In the United States, by the sixties, most automobile demand was replacement demand.


133. Speed limits may have affected motor industry investment. BMH was criticised for inadequate investment in the production of expensive luxury cars, such as Jaguar.
134. Possibly this explains, in part, why sales of the German BMW and Mercedes-Benz and BMW cars increased much faster than those of the British Rover and Jaguar cars.

135. However, in Germany, where there were no speed limits, incomes were higher. Consequently, Germany had a better home market upon which to base the export of such cars.
CHAPTER 6 - FOOTNOTES

1. See chapter five, regulatory policy section, p. 116.
2. This government was elected in May 1970.
4. The second round of cuts was necessary because the first had had less effect on investment and unemployment than anticipated. No doubt the poor response of investment to the cuts was partly attributable to poor business confidence.
5. The Labour government was re-elected in April 1974.
6. Until the seventies, consumer loyalty to British makes, and tariffs had meant that if, in the short run, excess-demand was created, waiting lists for British cars developed. After 1970, excess-demand spilled over into import demand.
7. Imports had become more competitive for two reasons. Firstly, as motorways were completed in Britain, foreign makes became more suitable for British conditions. Secondly, since 1965, many European producers had experienced faster productivity growth than the British.
9. Economist, February 17, 1973, p. 80. [It was suggested that an additional 120,000 cars were sucked into the home market.]
10. Before 1971 there was considerable loyalty to the domestic product. Many new car buyers were repeat buyers. Having bought British before, there was a tendency to buy British again. In addition, before 1971 parts and service facilities were superior for British products, and resale values higher. Events of 1971 broke the habit of buying British, broke the loyalty to British products and made imports acceptable.

11. The Times, 31/1/74.

12. Financial Times, 20/2/74. B-L lost twelve per cent of production worth three million pounds per day.

13. See this chapter, export and import policy, p. 175.


16. Voluntary controls had been organised by the Confederation of British Industry.


18. By this time, the cost of developing a new model exceeded twenty million pounds. For example, the Ford Fiesta, introduced in Europe in 1976 cost five hundred million dollars to develop.


22. For example, Britain exported about one third of production in the early seventies, France and Germany one half.

23. See figures 4 and 6.


25. See chapter four, regional policy, p. 100.

26. In addition to rapid Japanese growth in motor vehicle production, countries such as Spain, Korea, Mexico, Brazil, Iran and the Eastern European countries planned expansion of their motor industries in the seventies.

27. The decline of B-L cannot be attributed only to government policy and hostile trade unions. There were also management weaknesses. An excellent discussion of these is to be found in E. A. Salmon, "Inside British Leyland," Management Today, 114, (November 1975), pp. 59-61.

28. Exports accounted for thirty-three per cent of production, imports accounted for thirty per cent of home registrations.

29. British roads and tariffs had kept out imports. In addition, the British product had been more competitive.
30. See regulatory policy, this chapter, p. 170.
32. The Times, October 1, 1975.
33. Britain's case for protection from the Japanese was weak.

Firstly, Britain's overall balance of trade with Japan in 1974 was in surplus. Secondly, British attempts to sell in Japan were poor. In 1974, Nissan offered B-L space in its ships and the use of its dealers in Japan for after sales service on B-L cars. B-L could not produce enough cars to justify the arrangement. In addition, the agent in Japan for B-L cars, Maniben, was said to buy up B-L cars in California and Hong Kong for reshipment to meet Japanese demand. Whilst it was claimed the Japanese used pollution control requirements to circumvent GATT agreements and hinder imports, Volkswagen managed to export many more cars to Japan than B-L.

35. Economist, January 11, 1975, p. 75.
39. Britain's exports continued at about thirty per cent of production. Comparisons of the multinationals showed how Britain had declined. In 1972, Chrysler (UK) exported five thousand cars to Europe, Chrysler (France) exported
two hundred thousand. Ford (UK) and Vauxhall exported about five per cent of Ford (Germany) and Opel exports to Europe. Worse still, Opel exported six times as many cars to EFTA, as Vauxhall did. At Opel, productivity had risen twenty-five per cent since 1965, at Vauxhall no improvement had occurred. Value added per worker at Ford and GM's German plants was approximately double the British plants.


41. See labour relations section, this chapter, p. 188.

42. The government played a major role in Chrysler's change of plans for Chrysler (UK), see mergers section, this chapter, p. 180.

43. This went against General Motor's traditional policy of encouraging each group in the company to act autonomously.

44. In 1975 the cheapest car available in Britain was the French Renault R4.

45. In 1975, in the United States, the Marina was one of several models which the United States manufacturers claimed was being dumped.


47. Ibid., p. 107.

48. By 1975, B-L had withdrawn its Marina saloon from many export markets including the United States, in the face of Japanese competition.
49. Previous chapters have shown that a variety of government policies played a role in the decline of British competitiveness.

50. For a discussion of the effects of this, see chapter 2, economies of scale section, p. 19.

51. Low productivity at B-L was partly the result of low investment. Ironically, low investment also explained B-L's high profit ranking in 1972 and 1973. B-L's outstanding debt was lower than VW, Renault or Fiat's, so that it tended to have a lower break even point.

52. The government guaranteed B-L's overdraft up to fifty million pounds.

53. According to the Financial Times Share Price Index, the average price of a B-L share between October 1974 and April 1975 was about seven pence. The majority of shareholders accepted the government's offer.

54. Economist, October 11, 1975, p. 79.

55. In 1952, BMC had been the world's fourth largest producer of motor vehicles. In 1975, it was the twelfth largest. It had been outranked by such companies as VW, Renault, Fiat, Toyota and Nissan.


57. Given Britain's relative decline since 1945, it seemed all
too likely that massive investment would simply keep Britain one step behind the Japanese and Europeans in the highly competitive mass produced car market.

58. Economist, December 20, 1975, p. 75.

59. The British government had been instrumental in persuading Iran to allow Chrysler (UK) to assemble cars there.

60. This justification was given to the writer in private talks with a foreign correspondent on the Middle East for the London Times.

61. Between 1964 and 1975 Ford had earned profits of over two hundred million pounds in Britain. Over the same period, Chrysler had lost over fifty million pounds. Ironically, the government had claimed that it intended to back winners.

62. By the seventies, Vauxhall needed financial support from the parent company. GM's frustration with Vauxhall was echoed by a statement by GM's European General Manager who told the company, "The oxygen is going out at such a rate you don't know how close to death you really are."

Source: Economist, February 23, 1974, p. 94.

63. The Times, 8/8/75.

64. The Times, 18/12/75.

65. Whilst the large investment in B-L will likely improve efficiency in the motor industry, it is undoubtedly a risky investment. By the mid-seventies there was worldwide
excess capacity in the motor industry. In addition, large expansions in Japan and third world countries such as Korea and Brazil were underway. Ryder's belief that Britain could regain lost market shares internationally in the face of such competition is questionable. Whilst the investment will improve progress in British industry, it is doubtful whether there will be sufficient progress. Long term employment depends upon Britain being internationally competitive. Trade union cooperation to this end is unlikely, given the history of the motor industry.

66. The decision to save Chrysler, which made B-L's task of becoming internationally competitive more difficult, was made on the grounds of its effect on employment. The government claimed that financial aid to Chrysler would save 25,000 jobs at Chrysler and a further 25,000 jobs in related industries. The claim was made on the assumption that no new jobs would become available for the released labour, and that all indirectly dependent jobs would be lost as well. This was despite the fact that less than one thousand Chrysler workers lived at Linwood. The majority commuted from Paisley and Johnstone where the unemployment rate of five per cent was less than the national average, and the Midlands rate. Even so, support for Chrysler could not save jobs overall. If
Britain was to become internationally competitive, the labour force in the motor industry had to decline. Maintaining Chrysler simply put more pressure on an already hard pressed B-L. Labour resources had to be squeezed out of the motor industry in the long run. This would occur either as uncompetitive firms closed their doors, or as increasingly efficient firms raised productivity to international levels.

67. If B-L had been allowed to decline the import share of the British market would have increased considerably. However, the effect on Britain's balance of payments would have been so great that Britain would have had to establish some sort of tariff rebate system similar to the Canadian–United States auto pact. Britain's components industry has proved to be internationally competitive. Therefore, if B-L had declined, it is possible that the components industry would have grown. The decision to save Chrysler saved imports in the short run. However, in the long run, it weakened B-L's home base and therefore B-L's export strength.

68. The effect on the balance of payments has to take account of the opportunity cost of the investment in B-L. It is possible that the funds allocated to B-L could have made an equal contribution to the balance of payments invested in other industries, for example, textiles, chemicals, armaments or commercial vehicles.

70. Economist, May 22, 1971, p. 79.

71. Instead, agency shops were proposed. These were equivalent to a union shop except that conscientious objectors to a union could give funds, equal to the union dues, to a charity.

72. The Times, 13/5/71.

73. Economist, October 2, 1973, p. 73.

74. Certain sections of the bill favourable to the trade unions were retained, for example, sections dealing with unfair dismissals and the picketing of individuals' homes.

75. The previous claim had been settled seven months earlier.

76. The Labour party was elected with a very small majority in May 1974 and called another election for later in the year.


78. Economist, September 21, 1974, p. 112.

79. See chapter five, labour relations policy section. p. 151.

80. It has been noted before that published profits are viewed with some scepticism in this thesis. For example, in
the seventies, it was rumoured that B-L made inadequate
depreciation in order to bolster profits. Ford is be-
lieved to have been the only profitable company left in
Britain in the sense that it was able to finance invest-
ment at internationally competitive levels from current
earnings.

81. No further benefits, when worked out on the basis of the dis-
counted value of any further increases in the settlement
that prolonged hold outs would bring.

82. The Times, 24/2/71.
84. Ibid.
86. The insecurity of the workers about strikes was reflected in
the desire to obtain financial support during a strike
over and above state aid. A laid-off worker received
over fifty per cent of his pay after three weeks from
the state. If working conditions had been more stable,
it seems reasonable to believe the unions would have
pressed for different benefits.
87. Men on unofficial strike received no strike pay from the union.
88. The development of events during the Ryton strike revealed
the poor state of British labour relations. Chrysler
had had forty-two strikes that year and there must have
been more clear issues than 'shoddy' parts with which
to challenge the unions. Nevertheless the managing director of Chrysler (UK), Mr. Geoffrey Hunt, threatened the workers that unless labour relations improved there would be no further investment in Britain. In response to this statement picket lines were strengthened. Management continued to pour salt on sore wounds. At the Stoke engine plant, which was picketed in sympathy with Ryton, the management decided to get an independent haulage company to take the engines out through a piece of fence purposely broken for that procedure. This was despite the fact that it would have been quite legal to have crossed the picket upon explanation of the purpose. In any event, the pickets discovered what was happening, fighting broke out, and a man on the pickets suffered a broken pelvis. Management then went against official procedure, had talks with the men on the unofficial strike, therefore acknowledging them, and agreed not to cross the picket lines. Finally, after five weeks and making headline news, the management decided it could not identify the workers responsible for the shoddy work. It therefore agreed to pay them for the lost ninety minutes of production.


90. *HCD*, 25/6/73, 1136.

91. Ironically the debate nearly did not occur. W. Price, MP,
who moved the motion had his British car blow up on the way to the debate. A truck driver gave him a lift.

92. HCD, 25/6/73, 1143.
93. The Times, 8/6/73.
94. "Modern Times" was a motion picture made in 1928 depicting the monotony of the production line. It starred Charlie Chaplin.
95. The Times, 22/2/73.
96. Ibid.
97. Daily Telegraph, 10/5/73.
98. Ibid.

100. The decline of the British motor industry has frequently been blamed on poor labour relations. Some alternative, if less popular, arguments can also be made about labour relations. Firstly, poor management may have had an important effect on labour relations. For example, the unions have criticised the competence of management in getting parts to the production line. In British industry as a whole, unions complain of long periods of idleness because necessary parts are not available. This is management's responsibility. Secondly, low productivity in Britain has been blamed on low investment. In turn, low investment has been blamed on labour friction. However, it may equally well be that poor management and
Low investment were a cause of low productivity. As worker expectations of higher wages comparable to those in Europe were frustrated, labour relations deteriorated. Finally, when things go wrong in the motor industry it is all too easy to blame labour relations for poor performance.


102. Dual sourcing probably led to increased competition and increased sources of supply in the components industry. There was also an increase in sourcing overseas. However, this thesis has limited discussion to the motor manufacturers. In any case, the majority of components came from competitive industries such as textiles, plastic, rubber, machine parts, forgings and so on.


104. Economist, April 21, 1973, p. 70.

105. Some indication of this was given in 1974 during the three day week. B-L claimed that a twelve per cent reduction in production cost them three million pounds per day. Also, for an analysis of break even points, see Great Britain, Parliament, Fourteenth Report from the Expenditure Committee, 1974-75, The Motor Vehicle Industry, p. 436.

1. Criticisms have been made about the nature of British labour and management. It has been argued that the work on a car production line is so monotonous as to be only tolerable if the operative has had experience of poverty. Then the line is seen as an escape from poverty, rather than a soul destroying experience. Labour in the car factories of Germany and France was mainly imported from Southern Europe and Northern Africa. In the United States labour came from the South. Similarly in Italy labour came from the poor South. Britain had no similar poverty group to draw on. However, the labour supply in Belgium is not imported, yet is not strike prone. British management has also been criticised. E. A. Salmon in his article "Inside British Leyland", Management Today, 114 (November, 1975), 59-61, illustrates poor British management. However, infusions of American management to Chrysler (UK) and Vauxhall were unable to achieve performances comparable to those achieved in Germany, France and the United States. Furthermore, British management and labour were able to achieve more satisfactory performances in other industries.

2. For example, chemicals, man made fibres, electronics, computers, aircraft and commercial vehicles were reasonably prosperous industries. The similarity of the commercial vehicle industry and the fact that it prospered, as compared to the motor industry, can partly be explained by the different impact of government policy on that industry. The state of the commercial vehicle industry is described in, Great Britain, Central Policy Review Staff, The Future of the British Car Industry, (London: HMSO, 1975), p. 2.

3. See chapter one, p. 9.

4. See chapter three, p. 42, for a discussion of the consequences of intra-British competition. A government Marketing Agency could have overcome this problem. It could have bought up all the export quotas, and then sold only the most suitable models in each market.

5. In contrast, Volkswagen overcame this problem. A complete discussion of Volkswagen's success is to be found in K. B. Hopfinger, The Volkswagen Story, (Henley-on-Thames: Foulis and Company, 1971). He notes that when Dr. I. H. Nordoff was appointed to head the company after World War II, by the British Occupation Forces, he concluded that the Volkswagen was an outdated undesirable design
and that there was strong anti-German sentiment overseas. Success could only be achieved by superior parts, service and quality.

6. Britain's balance of payments only became critical after 1947. If taxes on cars had been raised, excess demand would have been satisfied with a few tens of thousands of cars. Despite the usage of cars from 1947 to 1952 and the rise in incomes, excess demand was still only one hundred thousand.

7. This myth developed for reasons given on p. 52.

8. R. Jenkins, HCD, 17/4/52, 368.

9. Before the war only a minimal effort to export cars had been made.

10. Although the manufacturers had no data to show this, in fact capacity exceeded actual home demand between 1946 and 1952. If home demand had been allowed to be satisfied in 1945 and 1946, full use of capacity would have necessitated greater exports.

11. Having nationalised the industry, the government could have reduced the number of plants and the number of models produced to increase efficiency.

12. Such a policy was effective in Sweden. Volvo had to be an export orientated company because of stiff credit restrictions on new car sales in Sweden which were permanently imposed.

13. See chapter four, p. 106.

14. In terms of exports, value added, return on capital, productivity and so forth.

15. See chapter five, p. 142.

16. See chapter six, p. 171.

17. "Go" periods were prolonged into 1959 and 1964 because a general election was forthcoming.

18. It encouraged inefficient expansion by too many firms at a time of increasing international competition.
### TABLE XI

Pre-Tax Profits (Loss) (£m)
in the British Motor Industry, 1945-74

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Austin</th>
<th>Morris</th>
<th>Standard</th>
<th>Rootes</th>
<th>Vauxhall</th>
<th>Ford</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td>0.9</td>
<td>1.9</td>
<td>0.3</td>
<td>1.5</td>
<td>2.1</td>
<td>1.4</td>
</tr>
<tr>
<td>1946</td>
<td>1.0</td>
<td>3.0</td>
<td>0.3</td>
<td>(0.4)</td>
<td>1.5</td>
<td>3.2</td>
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<tr>
<td>1947</td>
<td>1.8</td>
<td>2.6</td>
<td>0.3</td>
<td>0.6</td>
<td>2.0</td>
<td>3.9</td>
</tr>
<tr>
<td>1948</td>
<td>1.1</td>
<td>1.5</td>
<td>0.9</td>
<td>1.2</td>
<td>2.0</td>
<td>5.5</td>
</tr>
<tr>
<td>1949</td>
<td>1.6</td>
<td>2.6</td>
<td>1.2</td>
<td>1.1</td>
<td>2.7</td>
<td>5.1</td>
</tr>
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### TABLE XII

Return on Capital Employed for Selected European Vehicle Manufacturing Countries, 1967-71

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<tr>
<th>Country</th>
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<td>W. Germany</td>
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</tr>
<tr>
<td>Italy</td>
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<td>U.K.</td>
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### TABLE XIII


<table>
<thead>
<tr>
<th>Car Make</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>G.M.C. (U.S.)</td>
<td>46%</td>
</tr>
<tr>
<td>Ford (U.S.)</td>
<td>61%</td>
</tr>
<tr>
<td>Toyota</td>
<td>59%</td>
</tr>
<tr>
<td>B.L.M.C.</td>
<td>65%</td>
</tr>
<tr>
<td>Ford (U.K.)</td>
<td>70%</td>
</tr>
<tr>
<td>Chrysler (U.K.)</td>
<td>71%</td>
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<tr>
<td>Vauxhall</td>
<td>85%</td>
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Total Direct Employment in the Motor Industry, selected years.

<table>
<thead>
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<th>Year</th>
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<tr>
<td>1948</td>
<td>284</td>
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<tr>
<td>1954</td>
<td>312</td>
</tr>
<tr>
<td>1960</td>
<td>435</td>
</tr>
<tr>
<td>1973</td>
<td>508</td>
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TABLE XV

International Comparison of Vehicles Produced per Employee on an Annual Basis in the Motor Industry (a)

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<thead>
<tr>
<th>Country</th>
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<th>1965</th>
<th>1973</th>
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<td>U.K.</td>
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<td>5.1</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>11.1</td>
<td>13.9</td>
<td>14.9</td>
</tr>
<tr>
<td>W. Germany</td>
<td>3.9</td>
<td>7.1</td>
<td>7.3</td>
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<td>France</td>
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<td>6.1</td>
<td>6.8</td>
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<td>6.8</td>
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<tr>
<td>Japan</td>
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(a) Data not directly comparable because of different import and exports of components, capital-labour ratios, etc. Data includes all components and parts suppliers.

## TABLE XVI

United Kingdom Motor Vehicle Production
As Share of Europe\(^{(a)}\) and Japan

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<td>1971</td>
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<tr>
<td>1973</td>
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</table>

\(^{(a)}\) France, Italy, Netherlands, Spain, Sweden, United Kingdom, West Germany.

<table>
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### TABLE XVIII

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<tr>
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<td>1/10½</td>
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<tr>
<td>March 1952</td>
<td>&quot;</td>
<td>2/6</td>
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<tr>
<td>December 1956</td>
<td>&quot;</td>
<td>3/6</td>
</tr>
<tr>
<td>April 1957</td>
<td>&quot;</td>
<td>2/6</td>
</tr>
<tr>
<td>July 1961</td>
<td>&quot;</td>
<td>2/9</td>
</tr>
<tr>
<td>November 1964</td>
<td>&quot;</td>
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<td>&quot;</td>
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<td>&quot;</td>
<td>4/4</td>
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<tr>
<td>April 1969</td>
<td>&quot;</td>
<td>4/6a</td>
</tr>
<tr>
<td>March 1974</td>
<td>&quot;</td>
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<td>July 1974</td>
<td>&quot;</td>
<td>8%</td>
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<tr>
<td>November 1974</td>
<td>&quot;</td>
<td>25%</td>
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</table>

a) 22½ new pence  
b) V.A.T. introduced

Source: SMMT. *The Motor Industry of Great Britain*, various years.
TABLE XIX

The Balance of Payments of the United Kingdom 1952-69 (£m)

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<tr>
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<td>+29</td>
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<td>+330</td>
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<td>+1031</td>
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<td>-461</td>
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</table>

APPENDIX A

Chronology of Major Policy Decisions and Effects on the British Motor Industry.

CODE

G = Government; MI = Motor Industry; x = exports; BP = balance of payments; AE = allocative efficiency; EG = economic growth; FE = full employment; PS = price stability; E = equity; PT = purchase tax; LR = labour relations; P = profit; Q = output; D_h = home demand; D_o = overseas demand; Δ = "change in"; SAC = short run average costs; LAC = long run average costs; +C = a rise in costs, with no change in short run average costs (i.e. a move away from optimal output).
<table>
<thead>
<tr>
<th>Year</th>
<th>Goal</th>
<th>Effect on M.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td><strong>Goal</strong></td>
<td><strong>Effect on M.I.</strong></td>
</tr>
<tr>
<td>- G sets x quotas = 50%</td>
<td>BP</td>
<td>+ P</td>
</tr>
<tr>
<td>- G sets up Nat. Advisory Council on M.I.</td>
<td>AE</td>
<td>+ G control</td>
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<td>- G cuts sheet metal supplies</td>
<td>BP</td>
<td>+ Q, + C</td>
</tr>
<tr>
<td>- Petrol ration raised</td>
<td>EG/AE</td>
<td>+ D_h</td>
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<tr>
<td>- New road building program</td>
<td>AG/AE/FE</td>
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<tr>
<td>- Voluntary wage restraint</td>
<td>PS/EG</td>
<td>+ SAC</td>
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<td>1947</td>
<td>- G cuts coal supplies</td>
<td>E</td>
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<tr>
<td>- G raises x quotas</td>
<td>BP</td>
<td>+ P</td>
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<td>- Imp. Pref. reduced</td>
<td>Int. Relations</td>
<td>+ D_o</td>
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<td>- £ made convertible</td>
<td>Int. Relations</td>
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<td>- £ convertibility ended</td>
<td>BP</td>
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<td>- G raises x quotas; steel allocations based on x</td>
<td>BP</td>
<td>+ P</td>
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<td>- New engine c.c. tax</td>
<td>BP/AE</td>
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<td>- Engine tax revised</td>
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<td>- PT raised on large cars</td>
<td>AE</td>
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<td>- Petrol ration ended</td>
<td>BP</td>
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<td>- Roads program cut</td>
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<td>Petrol ration raised</td>
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<td>- Monop.Comm. set up</td>
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<td>- x quotas cut</td>
<td>G reput.</td>
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<td>Petrol ration raised</td>
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<td>- x quotas cut</td>
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<td>- Steel allocation raised to help exports</td>
<td>BP</td>
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<td>1950</td>
<td>Steel quotas raised</td>
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<td>- New home quota system</td>
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<td>- Petrol ration ended, tax raised</td>
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<td>- Sales covenant extended</td>
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<td>- PT raised</td>
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<td>- G spreads defence orders</td>
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<td>1951</td>
<td>- G Inquiry into Austin LR</td>
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<td>1952</td>
<td>- G calls for x effort</td>
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<td>- Petrol rationing (Suez)</td>
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<td>1958</td>
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<td>1959</td>
<td>- G approves STI tractor sale to Canada</td>
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<td>- G approves Ford(US) purchase of Ford(UK) shares</td>
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<td>1959</td>
<td>Min. of Transport reorganized; first motorway</td>
<td>AE/EG, AE/EG, EG</td>
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<td>Investment allowances raised</td>
<td>+ D_h, + P, + Q, + C</td>
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<td>Direct taxes cut</td>
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<td>1960</td>
<td>HP restrictions raised</td>
<td>+ D_h, + P, + Q, + C</td>
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<td>G persuades MI to relocate</td>
<td>+ LAC</td>
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<td>1961</td>
<td>HP restrictions eased</td>
<td>+ D_h</td>
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<td>PT, HP and Bank rate raised</td>
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<td>Wage freeze imposed</td>
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<td>G approves STI-Leyland merger</td>
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<td>G makes &quot;follow procedure&quot; statement on LR</td>
<td>worsened LR, + C</td>
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<td>1962</td>
<td>PT cut</td>
<td>+ D_h</td>
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<td>PT cut further</td>
<td>+ D_h</td>
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<td>1963</td>
<td>UK fails to join EEC</td>
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<td>G Inquiry into Ford LR</td>
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<td>Political parties make commitment to private cars</td>
<td>+ D_h</td>
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<td>Private investment incentives</td>
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<td>Public investment increased</td>
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<td>1964</td>
<td>National Plan introduced</td>
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<td>Prices and Incomes Board</td>
<td>+ D_h</td>
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<td>Direct taxes raised</td>
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<td>Import surcharge imposed</td>
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<td>G approves Chrysler bid for Rootes</td>
<td>+ US ownership</td>
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<td>Repeal of RPM</td>
<td>+ D_h</td>
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<tr>
<td>1965</td>
<td>Car licence fee raised</td>
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<td>Business allowances raised</td>
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<td>G approves BMC takeover of Pressed Steel</td>
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<td>G approves BMC takeover of Jaguar</td>
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<td>G approves STI takeover of Rover</td>
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<td>G approves Chrysler takeover of Rootes</td>
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<td>Petrol tax and licence duties raised</td>
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<td>IRC encourages creation of BL</td>
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<td>'cards on the table'</td>
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<td>1968</td>
<td>LR talks</td>
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<td>1969</td>
<td>G 'In Place of Strife' LR reform proposals</td>
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<td>- Direct taxes cut</td>
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<td>1973</td>
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<td>- UK enters EEC</td>
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<td>1974</td>
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<td>- G makes social contract</td>
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<td>- 'Three day week'</td>
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<td>- G guarantees BL overdraft</td>
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<td>1975</td>
<td>- G buys out BL shares</td>
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<td>- G makes loan to Chrysler</td>
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<td>- G gets voluntary restraint on M by Japanese</td>
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<tr>
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