

HOMAGE TO LANCASHIRE: THE COTTON INDUSTRY, 1945-65.

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ABSTRACT.

HOMAGE TO LANCASHIRE: THE COTTON INDUSTRY, 1945-65.

This thesis analyzes the fortunes of the U.K. cotton industry during two sharply contrasting periods: 1945-51 and 1951-65. Chapters are devoted to government policy, investment, labour practices, collusive agreements, and changes in the structure of the industry.

During World War Two British cotton textile production was concentrated in a nucleus of mills. After the war output and exports expanded within the constraints set by a chronic shortage of labour. In the late 1940s the Attlee government regarded cotton as a spearhead of the national export drive, and the temporary elimination of Japanese competition ensured that cloth woven in Lancashire was in high demand throughout the world.

By the early 1950s Japan's cotton industry was fully recovered from its wartime depredations, while India, Hong Kong, and Pakistan were rapidly emerging as major exporters of cotton textiles. Lancashire's fate was sealed. Decline continued unabated until the remnants of the industry were absorbed by the man-made fibre producers during the 1960s.

'Homage to Lancashire' places the decline of the cotton industry within the context of British de-industrialization. Britain was the technological leader in textiles when the industry was established in

the late eighteenth century. By the mid twentieth century most countries had access to the same technology as Britain. Consequently the centre of gravity of the cotton industry passed to Asia with its lower labour costs.

The tragedy is that this did not happen earlier. 200,000 workers were employed in Lancashire's mills during the 1950s, representing a serious misallocation of resources, and illustrating Britain's failure to secure an expeditious transfer of factors of production from declining industries to those with a long-term future.

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Abbreviations.

- A.E.R. : American Economic Review.
- A.W.A. : Amalgamated Weavers' Association.
- B.S.D.A. : British Spinners' and Doublers' Association
- Cardroom Workers: National Association of Card, Blowing,
and Ring Room Operatives.
- C.B.C. : Cotton Board Conference Papers.
- C.B.Q.S.R. : Cotton Board Quarterly Statistical Review.
- C.J.E. : Cambridge Journal of Economics.
- C.M.C. : Cotton Manufacturing Commission.
- C.S.M.A. : Cotton Spinners' and Manufacturers'
Association.
- C.S.O. : Central Statistical Office.
- Ec.H.R. : Economic History Review.
- E.J. : Economic Journal.
- F.M.C.S.A. : Federation of Master Cotton Spinners' and
Manufacturers' Associations.
- G.A.T.T. : General Agreement on Tariffs and Trade.
- G.M.R.O. : Greater Manchester Record Office.
- I.F.M.C.S.A. : International Federation of Master Cotton
Spinners' and Manufacturers'
Associations.
- J.C.C.T.O. : Joint Committee of Cotton Trade
Organisations.
- J.E.H. : Journal of Economic History.
- J.P.K.E. : Journal of Post Keynesian Economics.
- J.R.S.S. : Journal of the Royal Statistical Society.
- L.R.O. : Lancashire Record Office.
- Manchester School: Manchester School of Social and
Economic Studies.
- O.E.C.D. : Organisation for Economic Co-operation and
Development.
- O.E.P. : Oxford Economic Papers.

Operative Spinners: Amalgamated Association of Operative Cotton Spinners and Twiners.

P.R.O.: Public Record Office.

Q.J.E.: Quarterly Journal of Economics.

R.W.A.: Rayon Weaving Association.

U.T.F.W.A.: United Textile Factory Workers' Association.

Chapter 1.

COTTON AND THE DE-INDUSTRIALIZATION OF BRITAIN.

The mills of Lancashire are silent. Little remains of an industry which once dominated Britain's overseas trade, and inspired a mixture of horror and admiration among foreign visitors. Recently, the Bolton steeplejack Fred Dibnah has become a television celebrity as a result of his skilful demolition of mill chimneys. It is a far cry from the days when Britain's bread hung by Lancashire's thread.

Although many mills have been demolished and others stand deserted, a substantial number have been converted to new uses. In Preston, for instance, former cotton mills have been transformed into warehouses, engineering works, a supermarket, a laundry, a carpet and furniture showroom, a sports centre, housing, and a depot for a large security firm. One mill has been converted into industrial units for printing and clothing firms, while the offices of the former Horrockses cotton empire are now a branch of a major bank. Today few children in Lancashire know anything about the cotton industry unless they are taking a C.S.E. or G.C.E. course in economic history. As a boy, I remember walking past the huge Horrockses mill on New Hall Lane in Preston each time I went to see the dentist. It was an awe-inspiring and slightly menacing structure, but I had no idea what went on inside. For many people in Lancashire it is almost as though there had never been a cotton industry.

The purpose of this dissertation is twofold.

Firstly, I intend to look at the performance of a major industry during the period of the 1945-51 Labour government. This is a particularly fascinating epoch of British economic history, for during the 1940s Britain made its closest approximation to date to a planned socialist economy. Secondly, I want to account for the collapse of the Lancashire cotton industry during the 1950s and 1960s, and to relate this episode to the wider theme of British de-industrialization. Between 1945 and 1970 the cotton industry was reduced from a cornerstone of Britain's manufacturing sector to a fairly insignificant outpost of the man-made fibres industry. Cotton was the first of the great staple industries to be liquidated; its demise preceded the crises in steel, shipbuilding, and coal by several decades. As the inexorable decline of the British manufacturing sector continues, it is instructive to draw parallels between the problems of the cotton industry and those of the economy as a whole.

In making the Lancashire cotton industry the focus for a wider discussion of economic change, this study can claim some important antecedents. Much of the raw material for Marx's analysis of the laws of motion of capitalism was drawn from observations of Lancashire, the most highly developed capitalist economy of the mid nineteenth century.(1) More recently, W.W. Rostow has accorded cotton the role of a 'leading sector' in the 'take-off' of British industrialization in the late eighteenth and early nineteenth centuries.(2) In the

early 1970s Lars Sandberg employed the Lancashire cotton industry as a case study in his attempt to rebut the critics of Victorian entrepreneurship (3), while William Lazonick has used material from the spinning section to suggest that the structure of authority in the workplace is an important factor influencing decisions about the installation of new technology.(4) Moreover, social historians such as John Foster, Patrick Joyce, and Neville Kirk have based their respective analyses of class consciousness, deference, and working class reformism on studies of Lancashire textile towns.(5)

Despite this enormous interest in Lancashire and its role in the economic and social development of modern Britain, remarkably little has been written on the fortunes of the cotton industry between 1918 and the present day. H.A. Turner's account of the cotton textile trade unions is invaluable for studies of the nineteenth and early twentieth centuries, but does not say much about the 1940s and 1950s.(6) J.H. Bamberg's recent doctoral thesis has enhanced our knowledge of the industry between the wars, while Caroline Miles's monograph on the 1959 Cotton Industry Act is a fine introduction to the post World War Two scene in Lancashire, but Robert Robson's survey of the cotton industry during the mid 1950s remains the crucial point of reference for the postwar researcher.(7) In view of such a paucity of serious research into the final stage of cotton's decline, there is no need to seek elaborate justifications for the present study.

I

This brief section outlines the general plan of the dissertation. The remainder of Chapter I advances an embryonic model of economic decline, which might help to explain Britain's current predicament. It includes an attempt to place cotton within the overall context of British de-industrialization. The rest of the thesis falls into two parts. Chapters 2 to 5 deal with the period from 1945 to 1951, while Chapters 6 to 10 consider the 1950s and 1960s.

Chapter II combines an overview of the cotton industry during the 1940s, with a detailed consideration of postwar planning and the relationship between Lancashire and the Labour government. The labour shortage, which was the main constraint on the industry's output during the period of the Labour government, will be analyzed in Chapter 3. Chapter 4 deals with the complex issues surrounding attempts to secure a more efficient utilization of the workforce through the introduction of new staffing arrangements. Chapter 5 looks at the reasons for the slow progress in re-equipment in Lancashire between 1945 and 1951.

Chapter 6 comprises a general account of the industry's decline in the 1950s and 1960s, and employs an 'accounting technique' to identify the immediate causes of the decline in employment. In Chapter 7 the course of investment between 1950 and 1965 will be examined. This chapter also considers the crucial problem of surplus capacity. Chapter 8 examines the role

of labour during the 1950s and 1960s, concentrating upon the growth of shift-working and the increasing use of time and motion techniques. Attempts by the employers to arrest cotton's decline, by entering into price-fixing agreements and campaigning for import controls, will be analyzed in Chapter 9. Chapter 10 examines the merger movement in textiles during the 1960s, while Chapter 11 provides the occasion for some concluding comments about Lancashire and the British economy.

II

Some of the most interesting questions falling within the province of economics concern the factors determining the growth and decline of national economies. All the important classical economists, from Smith to Marx, were anxious to derive a theory which would explain this process. Both Smith and Ricardo believed that economies gravitated towards a point where the growth of industrial production would cease. Marx went beyond the concept of a stationary economy to predict that, under a regime of private enterprise, economic growth would be followed by deepening recession and inevitable collapse.

Popular and journalistic accounts of the current crisis present economic decline as a punishment for the inherent laziness of the British, or else focus their attention on other, equally vaporous, failings. In view of this confusion in popular discourse, it is instructive to recall that as long ago as the eighteenth century economists were predicting that British economic

superiority would be ephemeral. Both David Hume and Sir James Steuart regarded international trade as the motor of economic development. Hume argued that the desire to consume imported luxuries constituted the initial impetus for a nation to produce an economic surplus. Once this process had commenced, the acquisitive side of human nature would be fuelled, and the desire for increased production would become insatiable. Initially, the availability of cheap labour would enable a rapid increase in exports, ensuring a steady rate of economic growth. But in the long run economic development would lead to rising wages, while the inflows of bullion arising from regular trade surpluses would generate inflation. British exports would become uncompetitive in relation to the products of newly industrializing nations, and de-industrialization, unemployment, and renewed poverty would follow.(8)

The Jacobite economist, Sir James Steuart, made the relationship between trade and development into one of the central themes of his major work, An Inquiry into the Principles of Political Economy (1767). Steuart outlined a stages theory of development.(9) In the first stage of 'infant trade' the British manufacturing sector would be able to grow by drawing upon a reservoir of underemployed agricultural labour. Once industry was firmly established in the domestic market; it would be possible to enter the stage of 'foreign trade', in which the economy would experience export-led growth. Low labour costs would result in a rapid increase in

exports, thereby facilitating a further extension in manufacturing production. However, during this stage, the preconditions would be laid for de-industrialization. Despite a rising population, the labour supply would soon become fully absorbed in industry and agriculture. Increasing population would necessitate the cultivation of waste land, resulting in a rise in the price of bread. Wages would have to be increased to compensate for the higher cost of living, pushing up the price of manufactured goods for export.

Meanwhile other countries, which had formerly exported only primary products, would be starting to industrialize. Foreign governments would soon realise that their long-term interests were not served by specializing in primary products. As the quantity and price of imported manufactures increased, it would become steadily more difficult for them to obtain a balance of trade by exporting food and raw materials alone. Moreover, under conditions of diminishing returns, a concentration on agricultural exports would bring about an increase in the domestic price level, harming both the poor and those in receipt of fixed incomes, and resulting in widespread social conflict. The foreign statesmen, Steuart argued, would attempt to avoid these dire consequences by stimulating manufacturing industry and placing restrictions on imported manufactures.

British producers would find it difficult to contend with such competition. High labour costs due to

rising food prices would hamper British exporters. In addition, employers would be reluctant to reduce the large profit mark-ups to which they had grown accustomed during the period of expansion. As the British balance of trade degenerated into secular deficit, bullion would continually drain abroad, the money supply would progressively diminish, and the nation would be reduced to penury. "We perceive in history", Stuart asserted, "the rise, progress, grandeur, and decline of Sydon, Tyre, Carthage, Alexandria, and Venice, not to come near home [sic]".(10) He argued that only a policy of state assisted re-equipment behind a rigid protective wall, similar to that advocated in the 1970s and 1980s by the Cambridge Economic Policy Group, could prevent de-industrialization and restore prosperity. This regeneration of British industry would take place against a background of severe austerity, of which even Sir Stafford Cripps, the Labour Chancellor during the 1940s, would have been proud. If the state grasped this initiative, a new stage of domestically generated growth, or 'inland trade', would be ushered in. At a later date the reopening of the domestic market to foreign goods might be possible; indeed Stuart envisaged a situation in which the economically advanced nations oscillated between the stages of 'foreign trade' and 'inland trade'.

Stuart's contribution to the theory of de-industrialization is of great relevance for understanding the predicament of Britain in the 1980s,

not least because his recommendations for government policy are so clear. Perhaps the most important aspect of Stuart's analysis is the contention that international trade can, at different stages in an economy's development, be both the engine of growth and a harbinger of de-industrialization. These themes have been taken up again in recent years, notably by Nicholas Kaldor and the Cambridge Economic Policy Group. (11)

In his inaugural lecture at the University of Cambridge in 1966, Professor Kaldor advanced the hypothesis that the rate of economic growth is a function of the growth rate of manufacturing production. (12) This was a restatement of Verdoorn's 'Law', i.e. that the rate of growth of productivity in an economy is a function of the rate of growth of output. Kaldor suggested that the growth rate of manufacturing output influenced the rate of change in output per capita in the following ways:

(i) A faster increase in the rate of growth of manufacturing output encourages greater specialization and the extension of the division of labour, resulting in reductions in unit costs. It would be possible further to subdivide operations within an individual factory, and for firms increasingly to specialize in a small range of products or processes. This follows from Adam Smith's fundamental postulate that the division of labour is determined by the extent of the market. (13)

(ii) A greater division of labour would foster specialist skills and learning-by-doing, which would lead to a faster rate of innovation and productivity growth. (14)

(iii) A higher growth rate of manufacturing output would induce increases in productivity in agriculture and the service trades, sectors usually characterised by surplus labour and low levels of per capita output. As more labour was drawn into manufacturing industry, underemployment in agriculture and the service sector would be reduced and output per worker would be increased.

Having established these principles, Kaldor attempted to explain the factors determining the rate of increase in manufacturing output. Changes in consumption and investment were obviously of great importance, but Kaldor emphasised the role of exports. Unconsciously following in the footsteps of Sir James Steuart, he outlined a stages theory of development. In the first stage, the growth of the manufacturing sector would be based upon import substitution in light industries such as textiles. Export-led growth, also concentrating on the products of light industry, would be the primary dynamic factor in the second stage. The third stage would be marked by import substitution in the capital goods industries, and the fourth by exports of capital goods. The fifth stage would be characterised by a reduction in the rate of economic growth. Deceleration would arise from the absorption of the reservoir of

surplus agricultural labour, and would be accompanied by rising labour costs. Kaldor described the fifth stage as one of 'maturity' and suggested that it accorded with the position of the British economy in the second half of the twentieth century. (15)

In 1971 Kaldor expanded upon the crucial role of exports in the process of economic growth. (16) He argued that since 1950 the policy of the U.K. government had been to stimulate the growth rate by increasing the level of domestic demand. But this was essentially a 'second best' strategy, as a high proportion of domestic expenditure leaked abroad as a result of the high marginal propensity to import. Moreover, personal consumption expenditure was being increasingly channelled towards the service industries, which offered little scope for economies of scale. Export-led growth would have been preferable, because of its concentration on the manufacturing sector and its encouragement of a high rate of investment. Manufacturing industry, Kaldor claimed, experienced increasing returns and had the potential for unlimited technological progress. (17)

In a further major article in 1972 Kaldor paid tribute to the work of Allyn Young on increasing returns in the manufacturing sector. (18) Increasing returns predominated in manufacturing as a result of:

(i) The three-dimensional nature of space, which ensured that productive capacity always increased faster than construction costs.

(ii) The unlimited opportunities for the division

of labour. Young used the example of the mass production of cars by Ford to illustrate the principle that the division of labour was a function of the size of the market.

(iii) Learning-by-doing: Young stressed the stimulus to innovation following from an expansion in production.

(iv) Young postulated that an increase in the output of one manufactured good constituted an increase in demand for other manufactures. Consequently increasing returns in different industries were mutually reinforcing. When commodities:

"[A]re produced competitively under conditions of increasing returns and when the demand for each commodity is elastic, in the special sense that a small increase in its supply will be attended by an increase in the amounts of other commodities which can be had in exchange for it...an increase in the supply of one commodity is an increase in the demand for other commodities, and it must be supposed that every increase in demand will evoke an increase in supply".(19)

A number of attempts have been made to provide statistical support for Kaldor's theories. Cripps and Tarling attempted to substantiate the hypothesis that labour shortages were the major constraint on economic growth and productivity in industrialized countries, but their method has been criticized by Rowthorn.(20) Kaldor accepted Rowthorn's dismissal of the labour supply thesis, but reiterated his belief that the growth rate of productivity is a function of the growth rate of manufacturing output, and that the latter is a function of the rate of increase of exports.(21) Cornwall

provides a useful summary of the results of several studies suggesting a strong statistical relationship between the growth rate of manufacturing output and the growth rate of productivity.(22) However, regression exercises, although useful for indicating the probable existence of a functional relationship, are incapable of providing an explanation of it.

Mowery and Rosenberg show that there is no reliable empirical evidence to indicate that innovation is a function of the level of demand for manufactured products.(23) Therefore the Kaldor-Verdoorn thesis appears to be thrown back upon increasing returns, the division of labour, and reciprocal demand, at least until better evidence is available on rates of innovation.

As regards the effect of export demand on the growth of the manufacturing sector, the results of an investigation by Cornwall offer substantial support for Kaldor's position. Cornwall found that the success of the export sector, the propensity of manufacturers to invest, and the extent of the technological gap between the country in question and the most highly developed country, jointly governed the rate of growth of manufacturing output in advanced industrial nations during the 1950s and 1960s. Further empirical support has been forthcoming from research by Parikh.(24)

The dispute over Kaldor's Laws continues unabated.(25) But several points seem to have been established. Firstly, exports are a major determinant of

the rate of growth of manufacturing production. Secondly, the faster the growth of the manufacturing sector, the faster the increase in productivity in the economy as a whole. The implications of this argument are quite obvious: much of the deceleration of the British economy in the twentieth century can be attributed to a poor export performance. (26)

It remains to explain Britain's failure to increase exports at a sufficient rate, either to support an expanding manufacturing sector, or to stimulate rapid improvements in productivity. But at the outset it is worthwhile disposing of the objection that Kaldor has merely put forward a circular argument. Kaldor explains that exports determine the rate of expansion of manufacturing output, which in turn determines the rate of advance in productivity. However, it should be obvious that the rate of growth in productivity is crucial to the competitiveness of exports. A degree of circularity is perhaps unavoidable in economics, or indeed in any discipline which considers the interaction of factors. The economy is a system, within which each element reacts upon all other elements. While these interactions can usually be ignored at the level of the individual firm or consumer, at the level of the economy as a whole they are of enormous importance. Perhaps it would be helpful to look at matters in the following way: the rates of growth of productivity, exports, and output form an inter-related system, on the same lines as the circular flow of income of elementary macro-

-economics. The mutually re-inforcing tendencies of this system can be interrupted by forces which intrude from outside. For instance, the rate of growth of productivity is not exclusively a function of the rate of growth of output; it could also be affected by such factors as the willingness of trade unions to accept new technology, the ability of entrepreneurs to select the most efficient technique, and so on. In the present context overseas development is the crucial exogenous factor creating an undesirable imbalance in the system.

During the late nineteenth century the industrialization of Europe and the United States led to increasing competition in many important markets for British exports, attesting to the remarkable accuracy of Sir James Steuart's predictions. In Germany and Russia, industrialization was carried out at a forced pace, as the result of government intervention. Steuart's contention that other countries would not be satisfied to remain suppliers of primary products to Britain was echoed in the 1860s by Georg von Siemens, a future director of the German Bank:

"We want to preserve our position vis-a-vis [Britain and France]...who are ahead of us in capital and power, and not let ourselves be relegated to the status of a colony, such as Portugal, Turkey and Jamaica...we don't want to become a purely agricultural nation, with our products replaced by English goods, and we ourselves subject to direct plunder.'"(27)

Bismarck's policy of encouraging industrial development was emulated by the government of Russia. During the 1890s the Witte ministry embarked upon an ambitious programme of state investment in industry, particularly

in infrastructure projects such as railway construction. (28) European and North American industrialization was accompanied by a gradual increase in import controls, which further restricted the market for British exports. Stringent tariff barriers were imposed in Germany in 1879-80 and 1902, France in 1892 and 1910, the United States in 1890 and 1897, Italy in 1878-9 and 1887, and Switzerland in 1891 and 1906. (29)

Exporters responded to these developments by concentrating on more easily accessible markets in the colonies and other less developed regions, but this redirection of effort did not prevent a decline in the overall dynamism of the British economy. The rate of growth of U.K. exports fell from 3.8 per cent per annum between 1851 and 1880 to 2.7 per cent per annum between 1881 and 1911; and the rate of increase in industrial production per decade declined from 33.2 per cent between 1860-9 and 1870-9 to 12.2 per cent between 1900-9 and 1910-9. (30) These trends are consistent with Kaldor's thesis concerning the connection between the performance of the export sector and the rate of growth of manufacturing production.

Indeed, once overseas industrialization was underway, it was inevitable that the rate of growth of British exports should have declined. It was equally inevitable that this should have had a deleterious effect on the rate of growth of manufacturing output. Although there was some improvement in the growth rate of industrial production during the interwar period, in

recent years the failure of the British manufacturing sector has again become the subject of deep concern. According to Thirlwall, a fall in employment in the manufacturing sector is probably the least ambiguous definition of de-industrialization. Official figures show that this has been happening in the U.K. since the mid 1960s.(31) Writers of the New Cambridge school have identified the failure of the British export sector as the immediate cause of this state of affairs. Singh stressed that manufactured exports have become insufficient to pay for the full employment level of imports.(32) He followed the approach of R.S. Sayers in discriminating between 'complementary' and 'competitive' phases in world development.(33) The period from 1945 to 1960 was dominated by postwar reconstruction in the industrialized world, and consequently a large demand was generated for the products of British industry. But since 1960 the further development of the European, Japanese, and North American economies, not to mention those of the newly industrializing third world countries, has resulted in direct competition with British manufacturers. In this increasingly harsh international climate, the poor design and quality of British products have been exposed.(34)

A number of explanations have been advanced for Britain's inability to supply the products which are in high demand abroad. Most can be classified as forms of institutional rigidity. These rigidities have distorted the structure of the British economy and have weakened

the connection between the growth of manufacturing output and industrial productivity.

Veblen was the first to argue that Britain's 'early start' hampered the assimilation of new technology later on. This problem arose from the inter-relatedness of technology. Let us assume an industry in which there are two successive processes, A and B, which are carried out by different firms. Let us also assume that for each process, entrepreneurs have a choice between two types of machine: A1, A2, B1, B2. Initially the techniques A1 and B1 are employed. Technical change leads to the development of techniques A2 and B2. The cost of the final product would fall, and the profits of both the A firms and the B firms increase, if A1 and B1 were simultaneously replaced by A2 and B2. But if the A firms installed the new technique, while the B firms continued to use the original technique, the A firms would be worse off, and vice-versa, due to the problems associated with combining new and old techniques. An identical argument could be applied to technical change in the economy as a whole; the implication is that piece-meal change is very difficult. On the other hand, in a free market economy, it is impossible to co-ordinate the re-equipment of firms in different industries or those in different sections of the same industry. (35)

Technical inter-relatedness and the early start retarded the adaptation of established industries to the challenge of new technology. However, it is essential

that an expanding economy should continually diversify into new industries. Vernon's product cycle thesis contends that comparative advantage is always changing.(36) New products are usually developed in the most advanced countries, because in their early stages they are highly knowledge-intensive. As techniques for producing the commodity become more commonplace, the cost of labour becomes the predominant factor in determining the industry's location. Production gradually shifts to countries possessing ample supplies of cheap labour. The moral is that it is foolish for the advanced countries to resist this process. Everything possible should be done to secure a speedy and smooth transfer of resources to new knowledge-intensive industries, thus maintaining the momentum of growth.(36)

The current income-inelasticity of demand for British exports suggests that the United Kingdom has signally failed to diversify. Svernison recognised this problem of structural rigidity in his masterly survey, Growth and Stagnation in the European Economy:

"In an economy with a slow long-term growth, there is a comparatively large number of stagnating industries which lag behind in modernization and efficiency. They tend to store up labour, which could otherwise have been transferred to other growing industries. In this way the transformation of an economy as a whole is held back and the general economic growth slowed down".(37)

Svernison accused entrepreneurs of taking up entrenched positions and of refusing to diversify, but this is a rather simplistic approach. Entrepreneurs and managers do not have perfect knowledge and may be unaware of the

opportunities open to them; it is not easy for a businessman to predict changes in comparative advantage. If adequate profits can still be accumulated in an 'old staple' industry, the average entrepreneur will see little advantage in experimenting in a new, and seemingly more risky, venture. Moreover the skills needed by a manufacturer in one industry, say cotton spinning, may not be of much use in another industry, such as the production of electrical goods.

Mancur Olson maintains that structural rigidity will be intensified by the development of collusive groups in society. The objective of these combinations of employers, workers, consumers, and state officials is to protect the interests of their own members, irrespective of the consequences for the overall health of the economy. For instance, trade unions will resist new technology which threatens unemployment in the short-term, while producers in a declining industry will combine to preserve their power by lobbying for import controls and state assistance, or by entering into restrictive agreements. Collusive groups of this nature create distortions in the market and preserve industries and technologies which would not otherwise be viable. In countries which have undergone violent political upheavals, such as Germany and Japan, the influence of special interest groups has been reduced. But Britain has experienced centuries of relative tranquility, during which time collusive groupings have been allowed to develop unchallenged. (38) Olson's basic argument

is highly persuasive and is consistent with the general structural rigidity thesis. Instead of merely criticizing entrepreneurs and trade unions, he attempts to provide a rational explanation for their behaviour.

In conclusion, the relative decline of the British economy can be accounted for by two sets of inter-related factors:

(i) A loss of overseas markets, which reduced the rate of growth of manufacturing output, and consequently restricted opportunities for further specialization, mass production, innovation, and productivity growth. The loss of markets was partly the result of foreign industrialization, and partly the result of weaknesses within the British economy itself.

(ii) Structural rigidities, arising from Britain's early start and its plethora of collusive organizations. These rigidities served to intensify the reduction in the rate of growth of exports, by encouraging inefficiency in the manufacturing sector.

III

The cotton industry has been suffering from declining export markets, stagnating production, and slow productivity growth, since the late nineteenth century. These problems are identical to those confronting the bulk of the British manufacturing sector; consequently cotton can be regarded as a microcosm of the wider economy.

The plight of the cotton industry has attracted the interest of a number of leading economists, but until quite recently few have recognized the similarities between cotton's decline and the overall demise of the British economy. G.T. Jones was the first authority to provide detailed estimates of the course of productivity change in the cotton industries of Lancashire and New England. He concluded that between 1885 and 1913 there was little improvement in productivity in Lancashire, in sharp contrast with the large advances made in the U.S. cotton industry.(39) In 1927 G.W. Daniels and John Jewkes identified increasing competition from Japan and Italy, together with import substitution in India, as the prime causes of the rapidly deepening crisis in the industry's affairs, but offered little in the way of analysis to explain these trends.(40)

J.M. Keynes took an active interest in cotton, and vigorously campaigned for the rationalization of the industry.(41) Keynes thought that Lancashire's problems were confined to the coarse spinning section, where low wages in Japan more than negated the superior skill of British workers. The spinning employers' response to the crisis had revealed their inability to understand the gravity of the problems facing the industry. Believing that the fall in demand was only temporary, the British spinners had instituted a regime of short time working: "The less Lancashire sells, the shorter the time she works, the higher therefore her [unit fixed] costs - a cumulative progress towards perdition only limited by

the rate at which other countries can erect new spindles".(42) The real problem, Keynes argued, was surplus capacity. Mills which were not viable in the long run were driving down prices and reducing the profits made by efficient factories. The solution was equally simple: cotton firms should abandon their traditional mistrust of one another and amalgamate into large groups, which would then scrap the inefficient units and return stability to the market. Once sound finance had been restored to the industry, the banks would be prepared to recommence their lending to Lancashire for re-equipment. Keynes was correct to emphasize the need for contraction, but failed to discern that even this would constitute no more than a holding operation.

The industrial economist, Henry Clay, produced a secret report on Lancashire for the Securities Management Trust Ltd. in 1931. Clay criticized high hourly wages, and inflexible labour practices for contributing to the industry's problems, and concluded that the industry's survival depended upon a shift towards higher quality skill-intensive products. He suggested that, in the short-term, pressures on the more efficient firms could be relieved by instituting a scheme for scrapping surplus capacity, and by establishing a large merchanting and marketing combine which would guarantee them large orders.(43) G.C. Allen entered the debate on the cotton industry in 1933. He thought that falling prices of primary products relative

to manufactures had encouraged less developed countries to diversify into cotton textiles. Moreover it was unfair to place all the blame on cheap foreign labour: "it is likely that recent improvements in machinery have lessened the advantages of highly-skilled labour and have made it more difficult for labour of this type to maintain its accustomed superiority in wage rates over the less skilled workers in competitive industries".(44) The increasing availability of automatic looms and ring frames enabled foreign producers to substitute semi-skilled for skilled labour. Lancashire was now beginning to lose trade in the high quality segment of the market. Although improvements in marketing arrangements to secure longer production runs could have assisted Lancashire, "no reorganisation of the cotton industry could have prevented the post-war decline, for this has been brought about mainly by a complex of external factors".(45) Allen's comparatively fatalistic analysis provided the most accurate prewar estimation of Lancashire's prospects.

In view of the continuing difficulties of the cotton industry after World War Two, it is surprising that relatively little serious consideration has been given to the causes of the industry's decline. In the mid 1940s Rostas contributed another comparison of trends in labour productivity in U.K. and U.S cotton textiles during the 1930s (46), while Gibson produced a further condemnation of the supposedly restrictive labour practices and lavish wage payments prevailing in

Lancashire.(47) Vitkovitch attributed the continuing failure of British cotton textile exports during the early 1950s to a combination of high prices, poor delivery dates, and the manufacturers' preference for home orders.(48) In the late fifties and early sixties S.R. Dennison and G.C. Allen expressed their lack of confidence in the industry's ability to combat the growing menace of foreign competition.(49) But no comprehensive analysis was offered of the demise of the industry. Indeed some quite peculiar statements were, from time to time, made about the industry. For instance in 1946 Professor Jewkes made the somewhat eccentric assertion that labour productivity in the U.K. cotton industry was fully comparable with that in most U.S. mills, and that in consequence Lancashire had very little to worry about.(50)

Several postwar contributions to the study of the cotton industry analyze Lancashire's difficulties within the context of the decline of the British economy as a whole. The debate about the inter-relatedness of technology and Britain's early start employed examples from the cotton industry. Frankel postulated that the slow rate of adoption of automatic looms in Lancashire was the result of the problems associated with technological inter-relatedness. The successful operation of automatic looms required the simultaneous installation of advanced spinning and preparatory machinery. Unfortunately weaving firms were unable to influence the re-equipment programmes of firms in the

spinning section.(51) What is more, the slow growth in demand for British cotton textiles, must in itself have reduced the speed of re-equipment. As Svennilson observed: "The proportion of modern equipment in an industry will... increase in proportion to the rapidity of the industry's growth. This leads to the conclusion that, *ceteris paribus*, the efficiency of an industry increases according to the rapidity of its expansion".(52)

William Lazonick amplified upon Frankel's analysis, arguing that, although British cotton textile producers behaved rationally within the constraints set by the market and the structure of the industry, these constraints were so severe that they prevented any significant improvements in technique or organization.(53) The atomistic and horizontal structure of the industry resulted in each firm being a price-taker. Under these circumstances, a concerted response by the industry to secular changes in demand or in the structure of the market would be impossible. For instance, let us consider the example of the emergence of a major foreign competitor, whose exports depress the world price for yarn and cloth. It is unlikely that each individual firm will have sufficient information to form a correct analysis of the situation. Some firms, observing a fall in their profit margins, may increase their output in the belief that they can still reach their target profits. This response would intensify the downward pressure on prices. Other firms, forced into a

loss-making position by the original fall in prices, may decide to continue in business in the false expectation that demand will recover. Others may follow a policy of competitive price cutting or 'weak selling' in the hope that they will be able to secure a share of the trade that remains. Small firms may find it more convenient to reduce costs by cutting wages and offering less acceptable conditions of employment, than to do so by installing new machinery and modernizing their management procedures. Contrast this situation with one in which the industry is subject to a considerable degree of central direction. The industry's response to the emergence of the competitor could be planned in detail. Inefficient units would be closed to relieve pressure on the rest of the industry. A disciplined pricing policy could be instituted to prevent the emergence of 'weak selling'; while a carefully planned programme of re-equipment would sidestep the problems associated with technical inter-relatedness.

Lazonick's analysis is not only relevant to cotton; it could be applied to the examination of many other major British industries. He is commendably vigorous in his condemnation of neoclassical economics and its contribution to the debate about Britain's decline:

"In dealing with the real world, neoclassical economists remain every bit as trapped by their theoretical vision of economic activity in which firms are subordinate to markets as were the British cotton capitalists for whom such subordination was a reality. The era of competitive capitalism has long since past. It is time that orthodox economists began to learn some lessons from history. Perhaps then they could begin to illuminate rather than

obscure our understanding of the dynamics of the corporate capitalist economy that exists today". (54)

While it is clear that a more centralized structure of control would have moderated the rate of contraction of the cotton industry, it would by no means have arrested Lancashire's decline altogether. Indeed, from the wider national perspective, the preservation of the cotton industry for a further twenty or thirty years would have been positively undesirable. By the early 1950s it should have been apparent that Britain no longer had a comparative advantage in cotton textiles. The ideal solution would have been a speedy run down of the cotton industry and a rapid transfer of labour to expanding industries, of which there were many in the North West, notably engineering. During the 1950s the Lancashire cotton industry hoarded 200,000 workers who ought to have been employed elsewhere. In view of the labour shortage in the British economy at this time, there can be little justification for such a misallocation of resources. Cotton's survival during the 1950s and early 1960s is the supreme example of the structural rigidity of the U.K. economy - of the failure to secure an efficient transfer of factors of production from a doomed industry to expanding sectors.

IV.

This chapter has attempted to incorporate the analysis of the decline of the cotton industry into a more general model of the failure of the British economy. The rapid growth of demand for cotton textiles

during the early nineteenth century encouraged a high degree of specialization by process in Lancashire. Although specialization enabled the industry to reap the benefits of the division of labour, it also had drawbacks, notably the enhancement of the difficulties caused by the inter-relatedness of technology. But these problems were not important as long as the market continued to expand. However when overseas producers entered the industry in the late nineteenth century, the rate of growth of demand for Lancashire textiles declined, and consequently the rate of growth of productivity in the industry was reduced. The disadvantages of specialization came increasingly to the forefront and Lancashire found itself ill-equipped for survival.

Supporters of the product cycle thesis would be unimpressed by cotton's demise. They would claim that the rise and decline of industries is to be expected. 'Old' industries are relocated in low wage countries, while 'new' industries are established in the technologically advanced countries. Consequently, after 1950 resources should have been transferred out of cotton textiles as quickly as possible. Sadly for Britain, this did not happen. In fact the absence of a speedy reduction and reallocation of the cotton industry's labour force was typical of the general structural rigidity of the British economy.

Cotton exemplified the British economy in decline. It exhibited all the symptoms of the 'hardening' of the

arteries' which has afflicted Britain so severely in recent years. The obvious conclusion is that markets do not work very well, at least in Britain. This would appear to leave Britain with no option but to implement the policies of Sir James Steuart and enter, at least for the time being, the regime of 'inland trade'.

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Chapter 2.

PLANNING FOR COTTON, 1945-1951. (1)

In consequence of chronic shortages of raw cotton and labour, over one-third of the capacity of the British cotton industry was closed by government order during World War Two. As the war progressed attention turned to postwar reconstruction and the avoidance of the problems of high unemployment, low productivity, and instability which had bedeviled the Lancashire in the 1920s and 1930s. But when peace returned it became clear that there was an even more urgent consideration. Britain was unable to pay for essential imports, and cotton, traditionally a major export earner, was thrown into the breach.

In the late 1940s government propaganda stressed that 'Britain's bread hangs by Lancashire's thread'. The immediate priority was to increase production as quickly as possible. Although it proved impossible to attract sufficient labour into the industry to attain the level of output achieved before the war, cotton was still able to make a significant contribution to the easing of Britain's balance of payments difficulties. Unfortunately, less progress was made towards the long term revitalization of the industry, and at the close of the 1940s doubts were emerging as to the viability of a major cotton industry in Lancashire.

This chapter provides an overview of the cotton industry during the 1940s, with particular emphasis on government policy and on planning at the industry level.

Section I examines the position of the industry during World War Two and considers the various plans for the revitalization of Lancashire textiles which were put forward in 1943 and 1944. Section II deals with the policies of the Labour government for the long term development of cotton textile production. Section III is concerned with the problems peculiar to the latter half of the 1940s, when the short term need to mobilize the industry to meet the requirements of the balance of payments crisis overrode the issue of long-term development.

I

The 1920s and 1930s had been decades of almost unmitigated disaster for Lancashire. Employment in cotton fell from 786,000 in 1912 to 485,000 in 1937, while exports of cotton cloth declined from 7075 million linear yards in 1913 to 1448 million in 1938.(2)

World War One hastened the transfer of the centre of the world's cotton textile industry from Britain to Asia. Shipping shortages led to the isolation of Lancashire from its main markets in India and China, giving encouragement to Japanese textile manufacturers and to the indigenous cotton industries of these regions. After the armistice Lancashire experienced a brief boom, as consumers at home and abroad compensated for the austerity they had suffered during the war. In the false expectation that the prevailing prosperity would usher in a return to normality, Lancashire experienced an unprecedented degree of speculation and

firms vied with one another to obtain large bank loans with which to launch take-over bids. Sadly the bubble burst in 1920 and firms were left with a crippling debt problem for the succeeding twenty years. In a period of general world recession and falling incomes for primary producing nations the demand for British cotton textiles declined. This problem was aggravated by the protectionist policies of India, Egypt, and China, all of which were anxious to aid the development of their own cotton industries. Moreover the Japanese textile industry continued to forge ahead, undercutting Lancashire in all markets, even those where Imperial Preference was in force.

Lancashire appeared to have no answer. Prices of yarn and cloth fell, profits were eliminated, excess capacity was rife, and operatives were made redundant or put on short-time. Attempts were made to institute minimum-price schemes, but these soon collapsed. The Bank of England assisted in the formation of large combines such as the Lancashire Cotton Corporation, but they did not succeed in rationalizing the industry or in re-equipping. A Spindles Board was established in 1936 to purchase and scrap redundant machinery, but its achievements did not live up to expectations. The only piece of good fortune experienced by the industry during the interwar year was the emergence of rayon. Cotton firms which were able to spin or weave some rayon managed to offset a portion of the losses incurred from using cotton.

Lancashire placed great hopes in the 1939 Cotton Industry (Reorganisation) Act to rid it of its difficulties. This legislation made provision for the establishment of a Cotton Industry Board. Plans for price control, quota agreements, and schemes for disposing of redundant plant would be put to the Board by each section of the industry. Representatives of the employers and the unions would have seats on the Board, and if they and the Board of Trade approved of a scheme, it would be accorded statutory force.(3) War intervened to prevent the implementation of the 1939 Act, and in the event provided a more effective guarantor of stable prices and profits than any statutory peacetime scheme. A Cotton Control was established in November 1939 to regulate the industry's war effort. Over the following three years the Cotton Controller Frank Platt, formerly chairman of the Lancashire Cotton Corporation, gradually extended official jurisdiction over the industry.(4) Many mills were not working to full capacity during the early phases of the war, due to shortages of raw cotton and shipping and the drift of labour into armaments factories. In 1941 production was concentrated in a smaller number of fully employed mills, resulting in a reduction in overheads and the temporary closure of 38 per cent of spinning mills and an equivalent proportion of weaving sheds. Operatives would be subject to the Essential Work Order, which prevented them from leaving their jobs without permission. By 1942 the Cotton Control fixed raw cotton prices, and spinning, weaving,

and finishing margins, It also practised detailed production planning: every order for raw cotton, yarn, or cloth came before the Control for approval. Naturally priority was granted to military requirements. One firm at Bury began to produce specially prepared felts to cover aircraft fuel tanks and seal them when pierced by a bullet. The Fine Spinners and Doublers combine made inflatable decoy tanks and 20 million yards of floating rope for use by the navy and the R.A.F.(5)

A major problem confronting Lancashire during the early 1940s was that of preparing the cotton industry for a return to peacetime conditions. In July 1942 Hugh Dalton, the President of the Board of Trade, having secured the transfer of responsibility for the coal industry to the new Ministry of Fuel and Power, began to concentrate his thoughts on the future of the cotton industry.(6) Dalton worked very closely with Frank Platt, who was a staunch advocate of rationalization. Platt's views were outlined in a confidential paper: 'Whither the Cotton Industry'. According to Platt, spinning was the key to the industry's future and ought to be the first section to be reorganized. A central agency would be established by legislation. This authority would attempt to reorganize the section by persuasion, but would have powers of compulsion in reserve. All firms involved in cotton spinning (including vertically integrated concerns) would be grouped into units of at least two million spindles. Each combine would close one third of its mills to

assist in the elimination of excess capacity. The central agency would have powers to raise a levy on the industry to finance the scrapping of redundant machinery and the operation of a price maintenance scheme. Funds would also be made available to subsidize re-equipment. The new spinning combines would exert an informal control over the more atomistic weaving section. Long runs of production would be encouraged, enabling lower prices to be quoted for export. Platt's objective was the creation of a highly concentrated industry controlled by a handful of managing directors.(7)

Dalton was very impressed by Platt's approach to Lancashire's problems, and in September 1943 advocated the establishment of a powerful Spinning Board in a paper for his ministerial colleagues. Dalton hoped that this authority, which would consist of representatives of the unions and the employers, would be chaired by Platt. The Board would be the sole purchaser of raw cotton from the Cotton Control and the sole supplier of yarn to the weaving section. Consequently it would possess de facto control over the spinning industry. The Spinning Board would administer a fund to assist re-equipment and have the power to force amalgamations. Although Dalton was supported by Ernest Bevin, the Minister of Labour, he could not persuade the government to adopt his plan.(8)

While Dalton and Platt were drawing up their own personal schemes for the industry, discussion was progressing on a wider front. In 1943 the United Textile

Factory Workers Association (U.T.F.W.A.), a body representing all the cotton unions, produced a comprehensive programme for the reorganization and modernization of the industry.(9) Mr. A.C.C. Robertson of the Oldham Cardroom Workers, who later became notorious as one of the most obstructive union officials in the industry, chaired the committee which produced the report. The trade unions maintained "that the way to meet foreign competition, satisfy the aspirations of the workers to a better life, and make the industry a national asset, is by the Socialisation of the Industry".(10) A General Board would be appointed by the President of the Board of Trade, in consultation with the unions and the administrative staff, to exercise overall control of the industry. Cotton would continue to be run on sectional lines, with 'Sub Controls' for the spinning, weaving, finishing, marketing, and raw cotton sections. The General Board would close inefficient mills, re-equip the industry, provide security of employment, and institute efficient marketing procedures. But little urgency was attached to socialisation, and the U.T.F.W.A. was content to advocate the continuation of wartime controls for a substantial period after the end of the war. The cotton unions' commitment to public control of the industry had never been particularly strong even during the 1920s and 1930s.(11) The most novel aspect of the U.T.F.W.A.'s programme was its advocacy of an International Board of Control for Textiles. This organization would share out

the world market between the various cotton textile producing nations, preventing the re-emergence of the cut-throat competition of the prewar decades. Prices would also be controlled by the International Board. As the Allies were in command of the major cotton growing regions of the world, the Japanese could be denied raw material supplies if they refused to conduct their trading along fair lines.(12) This was certainly an imaginative, if not a particularly practicable, proposal.

Greater significance should be attached to the findings of the 1943 Cotton Board Committee to Enquire into Post-war Problems.(13) The Cotton Board, which comprised employers and operatives, had been established in 1940 to co-ordinate the export drive and engage in discussion and research which would assist the long term development of the industry. Dalton asked the Cotton Board to produce a report dealing with investment requirements, the introduction of new products, and the attainment of full employment. Sir Raymond Streat, chairman of the Cotton Board, worked tirelessly to secure a unanimous report. It was agreed that cotton would remain a vital sector of the British economy in the immediate postwar period. The nation would be too poor "to accept any avoidable contraction of an industry capable of sustaining many hundreds of thousands of workers and contributing most substantially to the export trade".(14) Lancashire's long-term prospects were less certain. The Committee believed that excess

capacity would reappear if countries with low labour costs were allowed a free rein in the industry's major export markets. British cotton textile producers did not seek special investment subsidies from the state and had plans to re-equip their mills to the value of £43 million (at 1939 prices), but they would not implement their modernization schemes without assurances from the government that prewar conditions would not be allowed to return. In short, the Committee called upon the government to restore confidence in the cotton industry by safeguarding Lancashire's remaining export markets in Africa and Australasia from Japanese competition. This would have involved further manipulation of the Imperial Preference system to Lancashire's advantage, and action by the Allies to restrict the postwar development of the Japanese cotton industry. As will be seen, the British government was reluctant to take action on either front. The Committee also recommended an international agreement to stabilize raw cotton prices; a tripartite arrangement between the cotton industry, the government, and the textile machinery industry to secure adequate supplies of new looms and ring frames; and the continuation of price management in the cotton and rayon industries, under the auspices of a strengthened Cotton Board, to prevent a return to weak selling. The report was quite comprehensive and clear in its emphasis on the need for speedy government action to guarantee the industry's future.

The Cotton Board report drew a very cautious

response from the Board of Trade. In February 1944 Streat met Dalton for an unofficial discussion of the document, which the latter claimed to have read seven times. Dalton and his officials, including Sir Arnold Overton, were unsympathetic towards any form of postwar price maintenance, which they claimed would be difficult to supervise, a disincentive to efficiency, and an encouragement to other industries to seek similar provisions. The Board of Trade was strongly in favour of amalgamations as an alternative method of ensuring stability in the industry, but would not say whether these were to be compulsory. Mention of amalgamations was omitted from the Cotton Board report in deference to the employers, who regarded amalgamation drives, whether voluntary or compulsory, as a prelude to nationalization.(15) Dalton was also unwilling to commit the government to trade negotiations to regulate the future world market for textiles.(16) A few days later Streat saw Keynes who, although more sympathetic to the idea of price maintenance than Dalton, regarded amalgamations as essential to "'push the bone-heads out'".(17) Bevin had little respect for Lancashire's capitalists and strongly urged Dalton to adopt a policy of compulsory amalgamations.(18) In view of the government's hostile response, Streat advised the Cotton Board to drop the issue of price maintenance.(19)

Cotton's future did not evoke universal interest among the government, and in July 1944 Dalton informed Streat that several ministers thought that "'the best

thing would be to let Lancashire stew in her own juice'".(20) Throughout the summer of 1944 conflict raged between Dalton, Bevin, and Platt on the one hand, and Streat and the employers on the other hand. Talks between the cotton industry and the textile machinery manufacturers were one of the few positive moves taken towards the implementation of the Cotton Board's recommendations. Dalton's main concession was a promise to weaving manufacturers that the government would attempt to secure the reduction of foreign import restrictions against British cloth.(21) Although Cabinet rejected a proposal from the Dalton camp to institute a scheme for compulsory spinning amalgamations in September 1944, this issue reappeared under the following Labour administration.(22) Dalton's anger with Lancashire's opposition to his amalgamation schemes steadily increased, and in May 1945 he taunted Streat with the following gibe: "'There, at the bottom of the class sit those two loutish dunces, Cotton and Coal'".(23)

A Labour government was returned at the general election in July 1945, but the cotton industry was no closer to having a clear strategy for the future than it had been in 1943. Virtually no progress had been made towards the articulation of workable policies to deal with re-equipment, the recruitment of an adequate supply of labour, the adjustment of the industry's structure, or the stabilization of markets at home and abroad. Eighteen months had been wasted in arguments about

whether the government should force the industry, against its will, to amalgamate into larger units. This was clearly a significant issue, but not one which justified the neglect of other important considerations.

II

Sir Stafford Cripps replaced Oliver Lyttleton (the caretaker President of the Board of Trade) and immediately set to work on a strategy for the cotton industry. Cripps, unlike Dalton, was eager to reassure the employers that he had no intention of nationalizing the cotton industry during Labour's first term of office. He believed that without such an assurance the employers would be reluctant to invest or to reform their labour policies. However, his Cabinet colleagues disagreed with this conciliatory approach. They concluded that the government should reserve the right to nationalize the spinning section if the employers proved unwilling to co-operate with the Board of Trade's plans. In essence, the difference between Cripps and other Cabinet members was largely over the best tactics to employ to reap the maximum return from the employers. (24)

Without further delay Cripps travelled to Manchester to meet representatives of the unions, the employers, and the Cotton Board. It was stressed that: "The Government are prepared to assist the industry to the best of their ability, provided that it is clear that the national interest of producing as great a volume of goods as possible at a reasonable price, and

with good working conditions for the operatives, takes precedence over all other considerations." (25) Radical reforms would be necessary, including re-equipment, amalgamation, shift-working, and the extension of procedures for joint consultation. Government help for the industry depended on both sides accepting the need for changes and their participation in a commission (the Evershed Commission) to modernize the spinning section's archaic staffing arrangements and wage structure. The wages commission was readily agreed to and its recommendations, which involved a general increase in earnings and workloads, were implemented in the late 1940s. (26)

During 1945 and 1946 Cripps commissioned Tripartite Working Parties to make recommendations for the development of seventeen industries including cotton. These Working Parties were appointed by the President of the Board of Trade and consisted of independent members plus representatives of the employers and the operatives. Cripps envisaged that a tripartite Development Council would be created in each industry to oversee the implementation of the relevant Working Party's recommendations, and to conduct joint consultations at a national level. In the case of cotton this would involve expanding the role and authority of the wartime Cotton Board. (27) Cripps put his proposals for a Cotton Working Party to the various sections of the industry in September 1945. The response, at least from the employers, was decidedly frosty. Sir John Grey

leader of the Cotton Spinners' and Manufacturers' Association (C.S.M.A.), the major weaving employers' federation, thought that a Cotton Working Party was unnecessary. Cotton had done more than any other industry to institute procedures for involving the unions in joint decision making, through the Joint Committee of Cotton Trade Organizations and the existing Cotton Board. A Working Party would be positively damaging to the industry's morale, as its creation would imply a lack of confidence in Lancashire by the Government. (28) The spinning employers were even more reluctant to co-operate with the Working Party. (29) There was a widespread fear in employers' circles that the Working Party would be the first step in a gradual tightening of government powers over the industry, possibly as a prelude to nationalization. Sir Raymond Streat summed up many peoples' thoughts when he remarked that: "As to Cotton, I said we had had committees ad nauseam, and all that could be said had been said...a new 'Commission' would appal the Cotton folk. They wanted decisions, not new machinery for reaching decisions". (30) Such criticisms were probably justified. No formal reply had been received from the government to the report of the Cotton Board Committee to Enquire into Post-War Problems. It must have appeared to Streat as though the government was merely toying with the industry. He must have wondered whether the government was genuinely concerned about Lancashire, or whether it merely wanted to use the Working Party as a delaying

tactic to mask its indifference.

Eventually the employers gave their reluctant assent to the establishment of a Working Party. Cripps wished to appoint a trade unionist to the chair of the Working Party, but he conceded ground to the employers by appointing Sir George Schuster, an independent with no financial interest in cotton. The Working Party reported in May 1946 and, hardly surprisingly, concluded that cotton still had a major role to play in the economy. Private enterprise would continue to run the industry, but:

"There must be a concerted programme [for reviving the industry] and a recognition that the national interest is involved in a manner which, while it may justify a claim for special action by the Government, also puts upon all individual interests in the industry an obligation to collaborate in a joint effort to secure the maximum benefit for the industry as a whole". (31)

Unanimous agreement was reached on a number of points: a survey of existing plant to estimate the industry's requirements for new machinery, an orderly programme for the supply of textile machinery, experimentation with new methods of labour utilization, the introduction of uniform costing procedures, the establishment of a co-operative marketing enterprise, the extension of technical research, the improvement of managerial quality, and the institution of a 'Cotton Council' (i.e. an enlarged Cotton Board) to co-ordinate these policies. The government was pleased to learn that there was little support in the Working Party for price maintenance.

However, the Working Party was split on several important issues, including amalgamations, the scrapping of redundant machinery, and the provision of re-equipment subsidies. Schuster, the trade unionists, and a lone employer were in favour of a substantial degree of centralization. They agreed with Frank Platt's recommendations of 1943-4, namely that mills should combine into larger groupings, putting control of the industry into fewer hands, and facilitating the pursuance of concerted policies. Larger combines, unlike small family firms, would have no incentive to preserve marginal units in production. To assist the spinning section to replace its mules with ring frames, a re-equipment subsidy would be offered, financed by a levy on all spinning mills. New investment would raise the possibility of the re-emergence of excess capacity. Consequently a scheme, partly financed by the exchequer, would be devised for the purchase and scrapping of old mills and spindles.(32)

John Jewkes of Manchester University, two other independents, and three employers appended a 'Dissenting Memorandum' to the report. Jewkes was a firm believer in the efficacy of the market and saw no need for redundancy schemes or re-equipment subsidies. The market would ensure that the industry remained at the optimum size and that an optimum level of investment would be generated. Unwanted combinations of mills would only encourage the abuses attendant upon an oligopolistic market structure. "In a socialised industry there is one

form of incentive; under free enterprise there is another. But there is little incentive to be found either in monopolistic capitalism or in free enterprise fustily fettered by the state".(33)

While the Cotton Working Party was squabbling over these issues, Sir Stafford Cripps was in India taking part in the negotiations leading up to independence. Cripps received a series of frantic telegrams from the Board of Trade: "Dissension on the Schuster Working Party has created an exceedingly awkward situation in Lancashire and unless matters are carefully handled suspicion and mistrust between the employers and operatives will spread over all sections of the industry to hamper progress in the next two or three years".(34). The affair was complicated by Schuster's lack of clarity over amalgamation. Compulsion was implied rather than explicitly recommended. In view of Streat's hostility to the principle of compulsory amalgamation, the Board of Trade was uncertain whether it would be wise to proceed along compulsory lines.(35)

G.C. Allen provided the most favourable assessment of the Working Party's achievements. He stressed the Working Party's successes, and was not too dismayed at its failure to agree in the impossible task of identifying the most beneficial division of functions between private and collective action.(36) A more jaundiced analysis might conclude that the Labour Party had wasted a further year in idle debate. No radically new ideas had emerged from the Working Party, indeed

none had been expected. The main accomplishment of the Working Party had been to reopen old divisions between the employers and the operatives.

Cripps left it to Streat to secure the industry's assent to the broad principles of the Working Party Report. A restless meeting of the industry's leaders at Manchester on 5 June agreed that the Working Party Report should be the basis of future negotiations with the government; that the Cotton Board should begin to frame detailed proposals for the implementation of the non-controversial aspects of the report; that surveys of existing plant and the state of the textile machinery industry should immediately commence; and that all trade organizations should begin talks on the more contentious parts of the report.(37) Work soon began on the surveys of existing machinery and the investigation into the condition of the textile engineering industry.(38) In November 1946 George Isaacs, the Minister of Labour, persuaded the employers and operatives in the weaving section to co-operate in a commission to devise a new wage structure, based on work study techniques, which eventually led to increased earnings and larger loom complements.(39) Steps were taken to implement the Working Party's recommendation that a central factory should be chosen to conduct experiments into new methods of labour utilization, and between January and July 1947 extensive tests were carried out at a spinning mill in Bolton.(40)

However, the government was more concerned about

the wider issues of reorganization and re-equipment. In September 1946 Cripps told Streat that he intended to introduce legislation directly to subsidize investment in the spinning section. He hoped that this would arouse less controversy among the spinning employers than a scheme financed by a levy on the industry. Firms requiring a re-equipment subsidy would make their application through the Cotton Board, which would advise the Board of Trade on the distribution of the grants. Streat feared that Cripps intended to place the Cotton Board in a position where it, rather than the Government, would receive all the blame if the scheme was unsuccessful.(41) Details of the scheme leaked out over the following couple of months. Firms wishing to take advantage of the 25 per cent re-equipment subsidy would have to combine into groups of 500,000 spindles (this was later reduced to 250,000, although even this was not a rigid figure); the unions would have to agree to the principle of shift working in re-equipped mills; and the employers would have to show that they were willing to scrap some of their older mills. There was a considerable degree of suspicion towards the proposed subsidy among the employers, who vehemently opposed the clause forcing firms to amalgamate or form close groupings before they could qualify for assistance, and from certain sections of the unions (especially the Cardroom Workers) who were reluctant to agree to shift-working.(42) Cripps was dismayed by the industry's initial response to his plans. Having resolved not to

impose compulsory amalgamations upon the spinning industry, and not to force firms to pay a re-equipment levy, he believed that the government had produced an attractive scheme. He blamed the conservatism of many employers' leaders and the difficulty of obtaining agreement among the multitude of small unions for the industry's failure to respond more positively to the government's offer.(43) Eventually Cripps's proposals were reluctantly accepted and came into operation under the 1948 Cotton Industry (Re-equipment Subsidy) Act. But due to a combination of factors, including continuing hostility to the grouping regulations, and the complacency accompanying a period of high world demand for cotton textiles, only eight new groupings were formed and only £2.6 million of the total of £12 million available in subsidies was claimed.(44)

The abject failure of the Labour's plans for the re-organization and revitalization of the cotton industry during the mid 1940s can hardly be denied. Cripps was unable to construct a generally acceptable policy for reforming the industry. Platt's ambitious plans for the concentration of power into the hands of a dozen or so public-spirited directors, and the Board of Trade Working Party's proposals for a large-scale modernization programme, had been reduced to the rather modest proportions of the 1948 re-equipment subsidy. In a moment of despondency Cripps mused that nationalization might have been a better solution to the industry's problems after all, but that it was too late

(March 1947) to change course. He could not hide his contempt for "ridiculous fools" like A.C.C. Robertson of the Cardroom Workers and H.S. Butterworth of the Federation of Master Cotton Spinners Associations (F.M.C.S.A.), who jointly and religiously opposed any attempt to bring the industry up to date. He concluded that: "Lancashire must take the consequences of putting such men in office".(45)

III

The question of the long term regeneration and development of the cotton industry was not the only pressing problem facing the cotton industry in 1945. Lancashire's short-term contribution to national recovery, and in particular the balance of payments, was possibly of even greater immediate significance.

World War Two had left Britain heavily indebted. The termination of the Lend-Lease scheme in August 1945 further increased the pressure on sterling. A rapid recovery in exports of manufactured goods was essential to permit Britain to pay for vital imports of food and raw materials, meet overseas military obligations, and service its mountainous debts. Cotton's potential role in this struggle had long been recognised, both in the report of the Cotton Board Committee to Enquire into Post-War Problems and also in government circles. In February 1944 Keynes was beginning to regard cotton as the spearhead of postwar export drive. Wartime losses had crippled Lancashire's overseas competitors: "'Who will export cotton goods if Britain does not?'" , Keynes

told Streat, "'Who [sic] are you supposing will do the export trade - Japan, America, who?'".(46) The supply of labour was expected to be the main constraint on the expansion of British cotton textile production. Speaking at an exhibition of textiles in Manchester in January 1944 Ernest Bevin, Minister of Labour, confronted the industry's leaders with this crucial problem:

"'I realise that you have lost from the cotton industry during the war 175,000 operatives, and the more I think of it the more it gives me a headache as to how I am going to get them back. Well, it is quite clear that the younger generation and the people coming back from the modern [munitions] factory won't be content with the cotton mill they left'".(47)

Table 2.1 illustrates Lancashire's position at the end of World War Two. Between 1937 and 1945 the production of yarn and cloth in the cotton and allied textiles industry had halved. Exports had collapsed to an even greater extent. Employment was significantly reduced and the proportion of the industry's productive capacity that was active fallen from 89 per cent in 1937 to 44 per cent in 1945 (in the case of spinning). If the problem of attracting labour back into cotton could be overcome, there was great scope for a rapid increase in production and in exports from Lancashire, and for cotton to play a crucial role in the government's plans for recovery.

Deconcentration, i.e. the reopening of mills closed under wartime regulations, commenced in March 1945. By the end of October 1946 the Cotton Control had given permission for the reopening of 129 of the 189 closed

Table 2.1.

The British cotton and allied textiles industry,
1937-50.

(1) Spinning section (excluding waste spinning and doubling)

	(a)	(b)	(c)	(d)	(e)
	YARN OUTPUT (M lbs)	EMPLOY- -MENT	SPINDLES IN PLACE (ALL MILLS) (M mule equivalent sp.)	RUNNING SPINDLES	(d) as % of (c)
1937	1253	176,000	44.1	39.3	89
1945	625	71,700	39.0	17.0	44
1946	697	82,610	38.2	20.4	53
1947	704	87,380	37.3	21.8	58
1948	863	99,110	36.1	25.1	70
1949	887	103,420	35.0	26.8	77
1950	944	106,990	34.5	27.5	80

(2) Weaving section

	(a)	(b)	(c)	(d)	(e)	(f)
	CLOTH OUTPUT (M yd)	CLOTH EXPORTS (M yd)	EMPLO- -YMENT	LOOMS IN PLACE IN RUNNING MILLS (thousands)	RUNNING LOOMS	(e) as % (d)
1937	4124	1429*	187,000	..	..	..
1945	1847	517	96,020	300.0	215.9	72
1946	1974	626	101,000	324.6	208.4	64
1947	2012	643	108,600	363.6	224.0	62
1948	2440	916	121,270	363.5	252.4	69
1949	2592	1084	129,800	356.9	268.3	75
1950	2971	1020	137,080	357.7	281.4	79

*1938.

N.B. Yarn production and exports include spun rayon and mixtures yarn; cloth production and exports include mixtures and man-made fibres cloth. One ring spindle is equivalent to approximately 1.5 mule spindles.

Sources: Annual Abstract of Statistics; Board of Trade Journal, 152 (1946), p. 28; E. Hopwood, A History of the Lancashire Cotton Industry and the Amalgamated Weavers' Association (Manchester: A.W.A., 1969), pp. 191, 6; R.W. Lacey, 'Cotton's War Effort', Manchester School, XV (1947), pp. 56-7; C.B.Q.S.R..

spinning mills.(48) However the process of deconcentration was not accomplished as smoothly as the government had hoped. In January 1946 the management of Asia Mill complained that they were only producing at 68 per cent of capacity because their operatives were leaving to enter mills reopening under the deconcentration scheme.(49) The case of Asia Mill was not untypical: in practice deconcentration meant little more than reshuffling the existing labour force, as it was proving extremely difficult to persuade youngsters and munitions workers to enter the mills. A shortage of labour persisted throughout the 1940s, despite attempts by the government to initiate reforms of the cotton industry's wage structure, through the Evershed and Cotton Manufacturing Commissions, and to shame firms into improving working conditions in their mills. The industry's particular concern was the shortage of women operatives. This was not surprising in view of the fact that the wages of female textile workers had fallen from 96 per cent of average female industrial earnings in 1938 to 79 per cent in 1944.(50) Although women textile workers improved their relative position in the later 1940s, surpassing the average for female industrial workers in 1948, many women munitions workers had been permanently dissuaded from returning to their old jobs.

The state retained a fairly tight control over the activities of cotton textile producers during the latter half of the 1940s. Although detailed production planning was abolished in December 1945, most of the other

controls continued in force. The allocation of raw cotton to firms remained in the hands of the Cotton Control and its successor the Raw Cotton Commission. Export licensing persisted, enabling the government to control the destination of cloth and yarn produced for export. The regulation of prices and margins at each stage of production continued for some considerable time. Clothes rationing remained in force and the Utility Clothing scheme attempted to ensure that sufficient quantities of standard cloths for home consumption were supplied.(51) These controls were defended by the government on several grounds. Prices were regulated to limit increases in the cost of living. Export licensing and the maintenance of controls over raw cotton allocations enabled the government to determine the proportion of the industry's output destined for overseas markets. A delicate balance had to be struck between the exigencies of the dollar crisis and the government's need to preserve its domestic popularity by maintaining the clothing ration. A final objective of policy was "salvage work abroad - to supply cotton goods to the colonial territories where they were desperately needed to give people something to work for, to check inflation and to hold the social system together."(52)

Regulation of the supply of raw cotton was central to the government's short-term strategy. Each quarter the government Raw Materials Committee decided how the output of yarn should be shared between cloth for home

use, cloth for export, and supplies for the hosiery trade. Firms would tell the government what orders they hoped to produce, then apply to the Cotton Control for an allocation of raw cotton. A supply of raw cotton would be forthcoming if the firm's plans accorded with the state's overall priorities for the quarter. Raw cotton prices were fixed by the Cotton Control to provide spinning and weaving firms with a certain amount of stability in their costs.(53) During the war there was little opposition to this system, but once peace returned the question of the propriety of reopening the Liverpool raw cotton market emerged. The trade unions and the Labour Party were adamant that there must be no return to the unregulated speculation of the Liverpool Exchange. Cripps added that the balance of payments situation necessitated the rationing of dollars and made it impracticable to have a free market in raw cotton. He moved a bill for the establishment of a Raw Cotton Commission (R.C.C.) to take over the monopoly powers of the Cotton Control in relation to the supply of raw cotton.(54) Despite the vigorous opposition of the Liverpool interest and its allies among the spinning employers (55), the R.C.C. came into being on 1 Jan. 1948. It attempted, with varying degrees of success, to conclude long-term agreements for the supply of raw cotton with colonial governments in Nigeria, Uganda, the Sudan, and the West Indies, with the ultimate objective of reducing Lancashire's reliance on the United States.(56) But the R.C.C. was judged by its ability to

supply the spinning mills of south Lancashire with good quality cotton at a reasonable price. Accusations of incompetence on the part of the Commission's officials filled the press. The Manchester Guardian reported that although the R.C.C. insulated Lancashire from short-term fluctuations in raw cotton prices, its policies led to disconcertingly large jumps in prices from time to time.(57) Mr. R.H. Smith of Manchester Mill, Preston complained that it was impossible to obtain yarn of a consistent quality under the new regime and that: "the present system of bulk cotton buying imposes on Lancashire a handicap which, onerous now, may become fatal to its competitive position as soon as the sellers' market has entirely passed away".(58) Even Hugh Dalton questioned, in retrospect, the decision to establish a Raw Cotton Commission: "It lost money and failed to bring the steady prices we had promised. If Platt had still been in charge, and in his prime, it would, I am sure, have been a very different story. But as things were, the Tories scrapped it later and I could hardly blame them".(59) Most of these criticisms were unfair. The difficulties of the R.C.C. primarily stemmed from the shortage of dollars, which prevented it from obtaining the quality and quantity of cotton demanded in Lancashire. It is doubtful whether any method of raw cotton dealing, whether private or public, could have been a success under such a constraint.

Export licensing formed the second strand of the government's policy. Markets were divided into three

categories. Group 'A' consisted of hard currency areas, notably the United States, Canada, Argentina, Belgium, Switzerland, Sweden, Iran, and Portugal. Canada was in the unique position of being the only major country for which an actual export target was specified. This reflected Canada's importance as a supplier of dollars and the significance that the government attached to regaining the Canadian market from U.S. competition. Priority, in raw cotton and yarn supplies, would be given to firms wanting to export to these markets. Group 'B' consisted of the Commonwealth (excluding Canada). Group 'C' comprised the rest of the world.(60) The small colonies, including East Africa, Malta, Cyprus, etc. received specially guaranteed allocations of cloth to fulfil the government's objective of maintaining stability in those regions.(61)

In 1949 three quarters of cotton and rayon cloth woven in British mills for domestic consumption was produced under the Utility clothing scheme.(62) This scheme had been introduced in September 1941 to ensure adequate supplies of cheap standard textiles for domestic consumption during the war. As a weapon in the campaign to keep down the cost of living, the prices of Utility cloths were strictly controlled. Moreover Utility fabrics had to be woven to precise specifications to guarantee the maintenance of a product of reliable quality. Production of Utility cloth was encouraged by its exemption from Purchase Tax. When the war ended it was deemed beneficial to continue the

Utility scheme, as the public had welcomed its guarantee of quality, and the manufacture of standard Utility cloths had enabled textile firms to reap the economies of long runs of production. However it did not prove possible to preserve all the advantages of the scheme. Originally there had been only 40 official Utility cloths, including Utility woollen cloths, but firms soon petitioned for the number of designated cloths to be increased, so that they could exploit the exemption of Utility products from Purchase Tax. By 1951 there were over 1000 non-woollen cloths included in the Utility scheme. With so many different varieties of fabric it became impossible to police the Utility scheme. Firms were able to debase the quality of their cloth without detection, while charging the price for a higher quality product. Consequently the Utility scheme lost a good deal of public credibility. In 1952 the Conservative government decided that it would be scrapped, having come to regard Utility specifications as little more than a license to avoid Purchase Tax.(63)

Price controls on cotton textiles were only gradually relaxed after the end of World War Two. In a situation of excess demand in the British economy it was considered wise to use any expedient to prevent prices rising. It was the constant complaint of the employers that the government allowed prices to lag behind increases in production costs. For instance during 1947, in an attempt to strengthen the employers' resolve against wage claims, the government permitted prices to

rise by only 80 per cent of any increase in costs.(64) There were widespread claims that the government's pricing regime distorted production plans. Initially, a situation prevailed in which strict control was exercised over the prices of non-Utility cloth for home consumption and of cloth for export, while the production of Utility cloth was made attractive by its exemption from Purchase Tax. This encouraged firms to concentrate on Utility production, to the detriment of the weaving of export cloths and of experimentation with new types of product in the home market. Price controls and the Utility scheme worked to thwart the government's measures designed to increase the quantity of exports. Fortunately the folly of this position was eventually realised, and in June 1948 the price of grey cloth for export was freed from control, ensuring a rise in export prices relative to Utility prices.(65) In February 1949 the price of cloth destined for industrial and governmental use was released from control, and in April 1949 the Board of Trade announced the abolition of all controls over spinning, weaving, and finishing prices in the non-Utility section of the cotton industry.(66)

Controls over the cotton industry were very much of a mixed blessing during the latter half of the 1940s. The bulk buying of raw cotton was not as successful as its proponents had anticipated, while the government's Utility and export programmes were plainly contradictory. It is against this background that the export drive of 1947-9 will be considered.

Throughout 1945, 1946, and 1947 the balance of payments crisis deepened. Between 30 June 1946 and 30 June 1947 the total amount of credit available to Britain in the U.S. and Canada, together with the gold and dollar reserves, declined from \$7080 million to \$4660 million.(67) During 1946 the coal industry had borne the main burden of the nation's export drive, but in 1947 and 1948 the government turned to cotton for even greater exertions. In Sep. 1947 Cripps outlined cotton's role in the: "front line of a battle for the balance of payments" to a special meeting of textile representatives in Manchester.(68) It was essential, Cripps thought, that cotton textile production should immediately increase by ten per cent, and by a further ten per cent by Easter 1948. These targets would require a speedy improvement in the utilization of the labour force, overtime working, and an increase in the workforce. The first target of a ten per cent increase in production was achieved in November 1947, largely as a result of an improvement in recruitment and the influx of a small group of European Volunteer Workers.(69) It proved far more difficult to meet the second target, although this was eventually achieved. Operatives in both spinning and weaving were highly reluctant to work overtime and consequently disrupted the government's plans. Cripps blamed Isaacs, the Minister of Labour, for this problem. Isaacs had not given serious attention to the overtime question, and left negotiations with the operatives to junior and regional officials, instead of

using his personal influence over old friends in the cotton trade unions. (70)

The new year brought a fresh crisis. Shortages of steel and overseas import controls were threatening to prevent the attainment of the government's export targets for engineering and related products. A Cabinet Production Committee Working Party on Textile Exports suggested that increased targets for exports of cotton textiles would enable the government to achieve its overall target for 1948. The Working Party maintained that the present world demand for cotton textiles was insatiable. Moreover Canada had decided to help Lancashire by restricting its imports of U.S. textiles. Cotton textile exports could be increased by reducing the domestic clothing ration (from four coupons to three, which would free 22,000 tons of cloth for export), by further overtime, and by measures to restrict employment in industries, such as local government, chemicals and clothing, which competed with cotton for labour. (71) Cripps successfully advocated an increase in cotton textile export targets in Cabinet. The monthly target for piece goods exports, to be achieved by December 1948, was increased from 69 per cent of the 1938 level to 79 per cent. It was resolved to step up the production campaign, and a committee of junior ministers was established to consider means of overcoming the labour shortage. However the more extravagant proposals of the Working Party were not implemented: there was no attempt to restrict

alternative employment in Lancashire and the clothing ration remained at four coupons. In 1947 the ration had been cut from four and a half coupons to three and it was deemed undesirable to recreate the ensuing ill-feeling.(72)

At a press conference in March 1948 Harold Wilson, the new President of the Board of Trade, said that 35 per cent of cloth production would be exported. Firms applying for export licenses were being told to concentrate on hard currency areas, particularly Canada. Wilson stressed that two thirds of the bread ration, over half of the bacon ration, and one quarter of the cheese ration was Canadian produce. These purchases could not be maintained unless exports to Canada increased.(73) Much progress was made towards fulfilling these targets. Cloth exports to Canada increased sevenfold between 1947 and mid 1948, and the spinning section fell short of its 1948 production target of 900 million pounds of yarn by a mere half a week's output.(74) But despite these achievements 30 per cent of the industry's spindleage remained idle and output of both yarn and cloth was far below the prewar level. Targets for exports and production may well have been met but, as it was proving impossible to attract labour into the industry, the government could set only fairly modest targets.(75)

Once a target had been established the government proceeded to make the necessary raw cotton available, assisted the industry to recruit more labour, and

attempted to secure agreement between the operatives and employers on overtime and evening-shift working. The government was not in a position to force its targets upon the employers, but this made no difference. In an industry with plenty of idle capacity it was in firms' interests to increase their production and thereby reap higher profits. Some critics said that people were being expected to do too much. Sir Raymond Streat complained about the diversion of textiles from the home market, while Andrew Naesmith, general secretary of the Amalgamated Weavers, thought that cotton workers should receive increased clothing rations if they were to be expected to lead the export drive.(76) Undaunted, the government persisted through 1948 and 1949 with its production and austerity campaign. Cinema programmes in Lancashire were interrupted by films exhorting the operatives to greater efforts. Workers were lectured during their mealbreaks on the need for increased exports. In Darwen, Nelson, Heywood, and Eccles the operatives were specially privileged, being chosen to participate in local production drives. Slogans were plastered on factory walls. Each mill had its own production target and at Nelson a 'Nelson's Column' was erected in the town centre. This edifice was floodlit at night and indicated the progress made towards reaching the town's target.(77) People soon tired of these techniques and they only succeeded in securing temporary increases in production.

Table 2.1 shows that the production and export of

cotton textiles increased substantially between 1945 and 1950, although the prewar levels of output and exports were not regained. Modest targets were set and attained. Home consumption of cotton textiles was restricted to make more available for export. Raw cotton allocations and export licensing ensured that exporters concentrated on hard currency markets. Cotton made a significant contribution to the export drive in the 1940s, and could have done more, had enough people been willing to work in the mills.

IV

Lancashire's cotton industry, having negotiated the 1940s, approached the 1950s with trepidation. Little progress had been made during the late 1940s towards equipping the industry to meet the renewed rigours of overseas competition; indeed the cotton industry's capital stock in 1950 was much the same as it had been in 1939. In 1949 the mule spinners' union warned that although a return to the pre-1939 state of affairs in the industry would be "intolerable...the signs and portents at present indicate that such a situation is not impossible".(78)

The revival of Japanese competition in particular, had long been feared. After the war the Japanese textile industry was controlled by the Allied administration in Tokyo, which was led by General MacArthur. The policy of the Allies was to restrict the development of Japan's heavy industries. Consequently, if Japan was to cease being an economic burden on the Allies, it would be

necessary to revitalize its light industries, the most important of which was cotton textiles. The British government was reluctant to pressurise the Americans to restrain the growth of Japanese cotton textile production. In July 1948 Foreign Secretary Ernest Bevin refused to receive a Cotton Board deputation, which was to ask him to approach the U.S. State Department along these lines.(79) Bevin and the Foreign Office were far more concerned about relations with the United States than they were with the future of the British textile industry. In 1949 the Cotton Board complained that the sterling area was scheduled to receive a disproportionate share of Japanese cotton textile exports.(80) Once more this warning was unheeded by the British government. The following year Streat visited Japan, with an Anglo-American textile delegation, to see MacArthur for himself. Although he found the General conciliatory, Streat did not believe his assurances that the Allies had increased wages in Japan to a level which would preclude low-wage competition. He told MacArthur that strong pressures were building up for action against Japanese cotton textile exports.(81) The Lancashire lobby also requested that Japanese exports to the African colonies should be restricted, to give British mills a safe export trade. Although these moves had the support of the Board of Trade, they were resoundingly defeated in Cabinet by the Colonial Office and Ernie Bevin, who thought it would be "wise to let Lancashire become gradually acclimatised to such

competition".(82)

In July 1950 the Cotton Board reported that the Allied administration in Tokyo had removed the final post-war restrictions on the spindleage of the Japanese cotton industry.(83) The cut-throat competition in export markets which had been the norm before 1939 was about to return. Lancashire had few friends left in the government. In the light of the industry's failure to respond to the government's initiatives on re-equipment and amalgamations during the mid 1940s, it was unlikely that cotton would be considered worthy of protection. A memorandum written in 1948 by Sir Henry Tizard, chairman of the Cabinet Committee on Industrial Productivity, sums up the changing official attitude towards the cotton textile industry:

"Clearly we cannot re-equip all the older industries of this country within a period of five years. Hence, it appears to me that we should strive to form a clear judgement about those industries that are most likely to hold their place or increase their importance in the export trade...In my view the Cotton textile Industry will not".(84)

Tizard argued that the industry's dependence on U.S. raw cotton imposed a permanent drain on the nation's dollar reserves, while Japan would probably still be able to undercut the prices of even the most modern British mills. Only mills using man-made fibres, which were based on raw materials produced in the sterling bloc, had a future. The tide had turned once more and Lancashire was destined to experience a further - and this time final - period of decline.

Notes to Chapter 2.

(1) I would like to thank Marguerite Dupree of the Faculty of History, Cambridge University, for permission to consult the Streat Diaries.

(2) Board of Trade, Working Party Reports: Cotton (London: H.M.S.O., 1946), p. 52; R. Robson, The Cotton Industry in Britain (London: Macmillan, 1957), p. 333.

(3) For useful analyses of the interwar cotton and allied textiles industry see: J.H. Bamberg, 'The Government, the Banks, and the Lancashire Cotton Industry, 1918-39' (unpublished Ph.D. thesis, University of Cambridge, 1984); H. Clay, Report on the Position of the English Cotton Industry (London: Securities Management Trust, 1931); Economic Advisory Council, Report of the Committee on the Cotton Industry (London: H.M.S.O., 1930); J. Harrop, 'The Growth of the Rayon Industry in the Inter War Years', Yorkshire Bulletin of Economic and Social Research, 20 (1968), pp. 71-84; M. Kirby, 'The Lancashire Cotton Industry in the Inter-war Years: A Study in Organizational Change', Business History, XVI (1974), pp. 145-59; Political and Economic Planning, Report on the British Cotton Industry (London: Political and Economic Planning, 1934).

(4) R.W. Lacey, 'Cotton's War Effort', Manchester School, XV (1947), pp. 26-74. On Platt's career see: J.H. Bamberg, 'Platt, Sir Frank', in D.J. Jeremy (ed.), Dictionary of Business Biography: A Biographical Dictionary of Business Leaders Active in Britain in the Period 1860-1980, Vol. 4 (London: Butterworths, 1985),

pp. 716-22.

(5) A. Muir, The Kenyon Tradition: The History of James Kenyon and Son Ltd. (Cambridge: W. Heffer and Sons, 1964), p. 93; Fine Spinners and Doublers Association Ltd, Behind the Distaff (Manchester: Fine Spinners and Doublers Association, 1946), pp. 36, 59.

(6) The Diaries of Sir E. Raymond Streat, X (1941-3), Aug. 31- Sep. 4, 1942.

(7) L.R.O., Barber-Lomax Collection, F. Platt, 'Whither the Cotton Industry' (1943), pp. 30-4.

(8) H. Dalton, The Fateful Years: Memoirs, 1931-1945 (London: Muller, 1957), p. 428.

(9) U.T.F.W.A., Report of the Legislative Council on Ways and Means of Improving the Economic Stability of the Cotton Textile Industry (Rochdale: U.T.F.W.A., 1943).

(10) Ibid, p. 88.

(11) E.E. Barry, Nationalisation in British Politics: The Historical Background (London: Jonathon Cape, 1965), pp. 337-52, 371.

(12) U.T.F.W.A., Economic Stability, p. 95.

(13) Cotton Board, Report of the Cotton Board Committee to Enquire Into Post-War Problems (Manchester, Cotton Board, 1944).

(14) Ibid, p. 5. On Streat's character and career see: M. Dupree, 'Streat, Sir Edward Raymond', in Jeremy, Dictionary of Business Biography, Vol. 4 (1986), pp. 378-90.

(15) P.R.O. BT175/3, Cotton Board Minutes, 115th

meeting, 6 June 1944.

(16) Streat Diaries, XI (1944-5), 8 Feb. 1944, 9 Mar. 1944.

(17) Ibid, 10 Feb. 1944.

(18) A. Bullock, The Life and Times of Ernest Bevin, II, Minister of Labour, 1941-1945 (London: Heinemann, 1962), p. 311.

(19) P.R.O. BT175/3, Cotton Board Minutes, 112th meeting, 25 Apr. 1944.

(20) Streat Diaries, XI, 12 July 1944.

(21) G.M.R.O., C.S.M.A., Chairmens' Committee Minutes, 26 Sep. 1944.

(22) Streat Diaries, XI, 14 Sep. 1944.

(23) Ibid, 25 May, 1945.

(24) P.R.O. CAB128/1, C.M.(45)18, Cabinet Conclusions, Minute 7, pp. 9-10, 7 Aug. 1945; CAB128/1, C.P.(45)92.

(25) L.R.O., Operative Spinners, Minutes of a Meeting with Sir Stafford Cripps, 11 Aug. 1945.

(26) See below, Ch. 3, pp. 100-4; Ch. 4, pp. 137-8.

(27) C. Cooke, The Life of Richard Stafford Cripps (London: Hodder and Stoughton, 1957), pp. 338, 351.

(28) G.M.R.O, C.S.M.A., Central Committee Minutes, 2 Oct. 1945.

(29) L.R.O., F.M.C.S.A., Annual Report, 1945, p. 31.

(30) Streat Diaries, XI, 3 Sep. 1945.

(31) Board of Trade, Working Party Report, p. 164.

(32) Ibid, pp. 172-83.

(33) Ibid, p. 218. Jewkes's entertaining views on the industrial policies of the 1945 Labour Government may be perused in J. Jewkes, Ordeal by Planning (London: Macmillan, 1948), which contains several bitter references to the Cotton Working Party.

(34) P.R.O. CAB127/103, Trees 55, Woods to Cripps, 2 May 1946.

(35) Ibid, Trees 76, Woods to Cripps, 17 May 1946.

(36) G.C. Allen, 'The Report of the Working Party on the Cotton Industry', Manchester School, XIV (1946), pp. 60-73.

(37) P.R.O. BT175/4, Cotton Board Minutes, 164th meeting, 4 June 1946; P.R.O. CAB127/103, Trees 89, Woods to Blaker, 6 June 1946.

(38) Cotton Board, Modernisation in the Cotton Spinning Industry (Manchester: Cotton Board, 1947); Cotton Board, Survey of Machinery in the Weaving Section (Manchester: Cotton Board, 1949), Ministry of Supply, Interim [and Final] Reports of the Committee of Investigation into the Cotton Textile Machinery Industry (London: H.M.S.O., 1947).

(39) See below, Ch. 4, pp. 149-61.

(40) Cotton Board Labour Department, Modernisation in the Cotton Spinning Industry: Report on Labour Redeployment in the Musgrave Mill Cardroom, Bolton (Manchester: Cotton Board, 1947).

(41) Streat Diaries, XII (1946-7), 26 Sep. 1946.

(42) L.R.O., F.M.C.S.A., Annual Report, 1947, p.

16; P.R.O. BT175/4, Cotton Board Minutes, 185th meeting, 22 Apr. 1947.

(43) P.R.O. CAB128/6, C.M.(46)106, Cabinet Conclusions, Minute 2, p. 204, 16 Dec. 1946.

(44) Robson, The Cotton Industry, p. 160; Hansard (Commons), 5th ser. 448, 12 Mar. 1948, col.1640.

(45) Streat Diaries, XII, 31 Mar. 1947.

(46) Ibid, 11, 8 Feb. 1944, 10 Feb. 1944.

(47) E. Bevin, Speech of the Rt. Hon. Ernest Bevin at a Conference of Cotton Industry Representatives (Manchester: Cotton Board, 1944), p. 8.

(48) L.R.O., F.M.C.S.A., Annual Report, 1946, p. 12.

(49) P.R.O. BT175/3, Cotton Board Minutes, 155th meeting, 29 Jan. 1945.

(50) Annual Abstract of Statistics, 1938-1950, No. 88 (London: H.M.S.O., 1952), p. 131.

(51) Manchester Guardian, A Manchester Guardian Survey: The Government and the Cotton Trade (Manchester: Manchester Guardian, 1949).

(52) Ibid, p. 5.

(53) This was a significant factor as the cost of raw cotton could constitute 50 per cent or more of the total cost of producing some types of cloth. Board of Trade, Working Party Report, p. 73.

(54) Cooke, Richard Stafford Cripps, p. 347.

(55) L.R.O., F.M.C.S.A., Annual Report, 1946, p. 18.

(56) J. Wiseman and B.S. Yamey, 'The Raw Cotton

Commission, 1948-52', Q.E.P., VIII (1956), pp. 1-34.

(57) Manchester Guardian, Cotton Trade, pp. 16-24.

(58) Ibid, p. 29.

(59) H. Dalton, High Tide and After, Memoirs: 1945-1960 (London: Muller, 1962), p. 107.

(60) Board of Trade Journal, 154 (1948), pp. 426, 899.

(61) P.R.O. CAB134/303, G.E.(47)28, Working Party on the Guidance of Exports Conclusions, 4 July 1947.

(62) Manchester Guardian, Cotton Trade, p. 7; H.E. Wadsworth, 'Utility Cloth and Clothing Scheme', Review of Economic Studies, XVI (1949-50), pp. 82-101; G.D.N. Worswick, 'Direct Controls', in G.D.N. Worswick and P.H. Ady (eds.), The British Economy, 1945-1950 (Oxford: Oxford University Press, 1952), pp. 300-5.

(63) P.R.O. CAB134/842, E.A.(52)3, Economic Policy Committee Conclusions, Minute 1, 30 Jan. 1952.

(64) G.M.R.O., C.S.M.A., Central Committee Minutes, 13 Dec. 1946.

(65) Manchester Guardian, Cotton Trade, p. 15.

(66) Board of Trade Journal, 156 (1949), pp. 828, 880.

(67) C.C.S. Newton, 'The Sterling Crisis of 1947 and the British Response to the Marshall Plan', Ec.H.R., XXXVII (1984), p. 397. There are several excellent analyses of the economic crisis of the latter half of the 1940s: A. Cairncross, Years of Recovery: British Economic Policy, 1945-51 (London: Methuen, 1985); J.C.R. Dow, The Management of the British Economy, 1945-60

(Cambridge: Cambridge University Press, 1964); Worswick and Ady, The British Economy, 1945-1950.

(68) L.R.O., Operative Spinners, Minutes of a Meeting of Textile Representatives at Houldsworth Hall, 16 Sep. 1947.

(69) L.R.O., Operative Spinners, Annual Report, 1947, p. 5.

(70) P.R.O. BT195/4, Office for Economic Affairs, The Cotton Industry: File on the 1947-8 Overtime Crisis.

(71) P.R.O. CAB134/637, P.C.(48)9, Cabinet Production Committee Memorandum, Report by the Working Party on the Increase of Textile Exports, Dec. 1947, 12 Jan. 1948.

(72) P.R.O. CAB128/12, C.M.(48)7, Cabinet Conclusions, Minute 2, p. 50, 26 Jan. 1948; Board of Trade Journal, 154 (1948), p. 570.

(73) Board of Trade Journal, 154 (1948), p. 570.

(74) L.R.O., Operative Spinners, Annual Report, 1948, pp. 3-4.

(75) For example, in Stockport only 32 of 699 school leavers in 1948 entered the cotton industry. Board of Trade Journal, 155 (1948), p. 734.

(76) P.R.O. BT175/5, Cotton Board Minutes, 14th meeting, 2 Nov. 1948; P.R.O. CAB134/210, E.P.B.(48)1, Cabinet Economic Planning Board Conclusions, Minute 2, 22 Jan. 1948.

(77) F. Zweig, Productivity and Trade Unions (Oxford: Basil Blackwell, 1951), p. 157.

(78) L.R.O., Operative Spinners, Quarterly Report,

31 Jan. 1949, p. 6.

(79) Street Diaries, XIII (1948-50), 29 July 1948.

(80) P.R.O., BT175//5, Cotton Board Minutes, 25th meeting, 5 Apr. 1949.

(81) Street Diaries, XIII, 8 May, 1950.

(82) P.R.O., CAB134/224, E.P.C.(50)20, Cabinet Economic Policy Committee Conclusions, Minute 3, p. 3, 28 July 1950.

(83) P.R.O., BT175/5, Cotton Board Minutes, 52nd meeting, 11 July 1950.

(84) P.R.O., BT195/4, Office for Economic Affairs, Memorandum by Sir H. Tizard, 1948.

Chapter 3.

LABOUR SUPPLY IN THE COTTON INDUSTRY, 1945-51.

At the end of World War Two the British cotton industry was confronted by a major labour shortage. In January 1946 the Board of Trade Working Party on the cotton industry estimated that employment in spinning, doubling, and weaving was 42 per cent below the number required for Lancashire to restore prewar levels of production. It would therefore be necessary to recruit a further 72,750 spinning and doubling operatives, and a further 91,250 weaving operatives to achieve this target.(1) Tables 3.1 and 3.2 give additional information regarding the extent of the labour shortage at the end of the war: in 1945 61 per cent of the mule spindles and 50 per cent of the ring spindles in place in all mills were idle, primarily due to the shortage of operatives. Almost 30 per cent of looms in place in running weaving mills were also idle as a result of the absence of an adequate supply of labour.(2) The purpose of this chapter is to analyze the ways in which the industry and the government attempted to overcome the shortage of operatives, while the following chapter concentrates on the closely related problem of inefficiency in the utilization of the labour force.

Section I traces the development of industrial relations and labour issues in the cotton industry up to World War Two. Many of the difficulties facing the industry, as it vainly attempted to step up recruitment, were rooted in long-standing problems and uncertainties.

Table 3.1.

Employment and machine activity in cotton spinning,
1945-51.

(i) Employment, recruitment, and quits.

	EMPLOYMENT (thousands)			RECRUITMENT (weekly averages)		QUITS	
	TOTAL	MALE	FEMALE	MALE	FEM.	MALE	FEM.
1945	71.70	25.95	45.75	..	..	..	..
1946	82.61	33.77	48.84	450	608	284	547
1947	87.38	36.57	50.81	347	665	321	598
1948	99.11	39.99	59.12	344	701	289	601
1949	103.42	41.69	61.73	326	656	294	619
1950	106.99	42.79	64.20	347	691	336	645
1951	109.66	43.00	66.66	331	662	320	596

(ii) Running spindles as a percentage of all spindles in place.

	SPINDLES IN PLACE*		RUNNING SPINDLES		RUNNING SPINDLES AS % OF ALL SPS.	
	MULE	RING	MULE	RING	MULE	RING
	(millions)		(millions)			
1937	(44.10)**		(39.30)**		(89)	
1945	23.41	10.36	9.19	5.20	39	50
1946	22.60	10.41	11.91	5.64	53	54
1947	21.93	10.26	12.93	5.88	59	57
1948	21.00	10.09	14.56	7.04	69	70
1949	19.71	10.19	15.23	7.70	77	76
1950	18.98	10.33	15.22	8.16	80	79
1951	18.24	10.57	15.01	8.55	82	81

N.B. All figures exclude doubling and waste spinning.

* Including both closed and running mills.

** Mule-equivalent spindles.

Sources: Board of Trade Journal, 152 (1946), p. 28; R.W. Lacey, 'Cotton's War Effort', Manchester School, XV (1947), pp. 56-7; C.B.Q.S.R.

Table 3.2.

Employment and machine activity in cotton weaving,
1945-51.

	EMPLOYMENT			LOOMS		RUNNING LOOMS AS % OF LOOMS IN PLACE
	TOTAL	MALE	FEMALE	IN PLACE*	RUNNING LOOMS	
	(thousands)			(thousands)		
1945	96.02	29.25	66.77	300	216	72
1946	101.00	34.20	66.80	325	208	64
1947	108.60	38.40	70.20	364	224	62
1948	121.27	43.32	77.95	364	252	69
1949	129.80	47.11	82.68	357	268	75
1950	137.08	50.34	86.74	358	281	79
1951	140.32	51.54	88.78	358	287	80

N.B. Loomage figures apply to North West England only.

* Looms in running mills only.

Sources: R.W. Lacey, 'Cotton's War Effort', Manchester School, XV (1947), p. 57; C.B.Q.S.R..

Section II attends to the ways in which the government and industry tried to coax more labour into the mills: improvements in working conditions, better training programmes, the introduction of part-time and evening-shifts, and improvements in the pay and promotion prospects of the lower grades of worker. Consideration is also given to less popular measures for increasing the amount of work done in the industry, such as bouts of compulsory overtime working, and production drives. Finally abortive plans are revealed for the virtual direction of labour into the mills. Section III looks in some detail at the most imaginative scheme for increasing the labour supply to Lancashire's mills: the employment of European Volunteer Workers and other immigrants from the continent. Section IV summarises the reasons for the failure of the recruitment drive to restore output to prewar levels.

I

Cotton spinning was the first industry to adopt the factory system. The pioneering mills depended on water power and were situated in the foothills of the Pennines, but by the early nineteenth century the application of steam power to textile machinery had brought about a concentration of the industry within close proximity to the Lancashire coalfield.(3)

Before the introduction of the self-acting mule in the 1830s, spinning was an occupation requiring brute force as well as dexterity. Labour was in short supply in the Pennine valleys and each spinner was expected to

bring up to five piecers with him, to assist in the tying together of broken threads, the removal of the finished cops of yarn, and the sweeping and cleaning of the mules. Initially it was the custom for the spinner to employ members of his own family as piecers. The spinner received a piece-rate and paid his assistants a fixed wage out of this sum. This system of subcontracting was to remain in force until the implementation of the Evershed proposals in the late 1940s. Even though labour was more readily available when the industry became concentrated in the towns, it benefitted the employers to retain the subcontracting system. Responsibility for disciplining junior workers was given to the skilled spinner. This was an ingenious means of dividing the workforce, for discontented piecers would vent their anger against their immediate employers, the spinners, rather than against the company itself. The spinner-piecer system also constituted a cheap method of on-the-job training for future spinners and a means for governing promotion in the mill.(4)

Trade union organization was particularly strong among the skilled mule spinners. The earliest record of union activity is in the 1790s. From that time the spinners' unions went from strength to strength, regularly defying the Combination Laws to strike for higher wages. In 1830 the mule spinners' militancy led to their involvement in John Doherty's ill-fated scheme of general unionism, the National Association for the Protection of Labour (5), while John Foster has

suggested that during the 1820s and 1830s spinning operatives in Oldham played an important role in the furtherance of a revolutionary class consciousness.(6)

However such radicalism did not persist. Less skill was required to operate the automatic or 'self-acting' mules, introduced in the 1830s and 1840s, than to work the earlier machines. This was an excellent opportunity for the employers to humiliate the spinners, but in the event they adopted a far more devious policy. Through the maintenance of the subcontracting system they gave the spinners privileges and authority which their bargaining power no longer justified. The spinners could not afford to be militant for fear of losing these privileges, and as time went on they became incorporated into the managerial hierarchy of the mill. Moderation became a by-word of mule spinning trade unionism, and major disputes such as the Preston strike of 1853-4 were conducted in an orderly fashion, while the Cotton Famine of the 1860s failed to lead to a revival in radical agitation.(7)

In weaving the factory system was comparatively underdeveloped, and handloom-weaving predominated, until well after the Napoleonic Wars. The power-loom spread slowly, due to technical difficulties and the low wages of handloom-weavers, but by 1850 it had gained the upper hand. Power-loom factories tended to concentrate in the north east of the county. Weavers did not achieve the high status of the mule spinners for several reasons. Firstly, power-loom weaving had never been a highly

skilled occupation. Secondly, the infant power-loom weaving section did not experience a shortage of labour, since population was rapidly growing and there was a large reserve army of unemployed or underemployed handloom weavers to draw upon. Indeed unions of power-loom weavers did not come to the fore until the 1850s.(8) Although subcontracting did not prevail in weaving, there was still a rigid hierarchy of control, with overlookers (i.e. foremen) performing many of the disciplinary functions of the mule spinners. The overlookers were invariably male, and in sheds with a high proportion of female weavers this could lead to an extremely oppressive and intimidatory regime.

After 1850 industrial relations in the cotton industry began to settle into a fairly stable routine. Permanent federations of trade unions in spinning and weaving were formed in the 1850s and 1880s respectively (9), and employers became increasingly prepared to conform to common lists of piece rates. These wage lists played a crucial role in the controversies of the 1930s and 1940s. Patrick Joyce portrays the period from the 1850s to the 1880s as one of growing paternalism on the part of the masters and deference on the part of the operatives. Joyce's examination of the polling records suggests that, even after the introduction of the secret ballot in 1872, cotton workers still tended to vote for the party supported by their employer.(10) Dutton and King question whether the examples selected by Joyce are representative, and contend that conflict remained the

basic feature of industrial relations in the mill.(11) But the fact remains that in later years the cotton operatives' amalgamations became stalwarts of the right-wing in the T.U.C.. In 1899 James Mawdesley, the leader of the mule spinners, stood as a Conservative parliamentary candidate for Oldham.(12)

During the late nineteenth century conflict began to emerge within the cotton labour force. As competition increased from foreign firms and from mills equipped with the more efficient ring-spinning system, the employers and the mule spinners co-operated to speed up production by increasing the workloads of the piecers. The latter group were paid a time rate, and consequently gained no financial compensation for their extra effort.(13) This was the beginning of a deep-rooted conflict within the spinning unions. Piecers were paid appalling wages, denied full membership of the unions, and, since there were two or three piecers to each spinner, had little chance of promotion once the rapid growth of the industry had come to an end. Meanwhile in the weaving industry conflict between weavers and overlookers was never far from the surface.(14)

Rising prices and falling real wages, together with the re-emergence of socialist and radical ideas within the textile unions, contributed to the unrest between 1905 and 1914. The famous Brooklands Agreement of 1893, which instituted a formal system of collective bargaining in the spinning section, limited the amount by which wages could vary in any one year to five per

cent. In the inflationary Edwardian era such a restriction was unacceptable to the operatives. The number of serious disputes rose and in 1913 the unions withdrew from the agreement. Dissatisfaction spread to the weaving section, where attempts to eliminate non-union labour, in order to strengthen the unions in preparation for a major assault on the wages issue, resulted in a bitter series of strikes and lock-outs. (15)

After the collapse of the brief postwar boom in 1920 the position of the cotton operatives became increasingly desperate. It was during these years that the seeds were sown for the later reluctance of Lancastrians to enter the mill. Between 1926 and 1939 the rate of unemployment of cotton operatives never fell below 10 per cent, and reached a maximum of 43.2 per cent in 1931, a figure of the same order as unemployment levels in coal, steel, and shipbuilding. (16)

The initial response of the industry to the fall in demand in 1920 was to introduce short-time working. But in 1921-2 it became apparent that trade was not recovering, and the employers were able to enforce large reductions in the wages of spinning and weaving operatives following a three week strike of 375,000 workers. Mule spinners were able partially to insulate themselves from this cut in wages by reducing the pay of the piecers: Roger Penn has shown that the differential between the earnings of mule spinners and piecers increased by five per cent between 1920 and 1932. The

Communist Party took advantage of the unskilled operatives' grievances and attempted to form a breakaway piecers' union in 1932, although this soon collapsed. (17) Recession resulted in recurrent breaches of wages agreements by firms, while the fining of operatives for poor work and insubordination was re-introduced on a large scale. The number of dismissals increased, with the Blackburn Masters claiming "the right as employers to employ whom we think fit, and also the right to make a change without being compelled to give a reason" (18).

Between 1928 and 1933 the major bone of contention in the weaving section was the 'More Looms System', which involved increasing the looms per operative from four to six or eight and reducing earnings per loom. This obviously threatened a large number of weavers with unemployment and speed-up, and was vigorously opposed by most of the operatives. (19) In 1932 the employers attempted to force the issue by demanding a general reduction in weavers' wages. The weavers were beaten into submission after a disastrous strike, and were compelled to sign the Midland Agreement, which involved a reduction in wages and acceptance of the 'More Looms System'. Industrial relations in the weaving industry continued to drift towards complete chaos, and in 1935 the government stepped in to stabilize matters by giving statutory backing to the wage lists. Events in spinning followed a similar pattern of confrontation and ultimately defeat for the operatives during the early

1930s. If these problems were not enough, the unions also had to contend with underemployment. In the mid thirties 20 per cent of weavers were operating less than their full complement of looms. As they were paid by the piece, this resulted in significantly reduced levels of earnings. (20)

Taking the cotton industry as a whole, male workers in 1931 had average weekly earnings of 45/3d. This put male cotton operatives in 39th place in the Ministry of Labour's earnings league table covering 40 manufacturing groups. Female operatives earned an average of 27/3d, putting them 12th out of 28 industries in the women's league table for 1931. (21) Thus cotton was an extremely unattractive occupation for men, but a quite well-paid one for women. Men were concentrated in the mule-spinning section (from which the unions completely excluded women), weaving, and highly-skilled preparatory work. Women predominated in ring-spinning, which was relatively unskilled, and also constituted a large part of the weaving workforce.

During the 1930s serious fears were being expressed about the long term consequences for recruitment of low wages, poor and authoritarian working conditions, high unemployment and underemployment. Jewkes and Gray highlighted the problems of the piecers in mule-spinning mills. Senior piecers had little prospect of promotion and had to leave the industry when they married because their wages were so low. Junior piecers, entering the mill straight from school, had less than a one in five

chance of a permanent job in the industry. The ensuing despair resulted in a 75 per cent fall in the number of piecers taking evening courses in spinning at their local colleges between 1926 and 1934. In Oldham the proportion of male school-leavers opting for a job in cotton fell from 58.2 per cent in 1920-1 to 14.7 per cent in 1932-3, while the proportion of girls entering the industry fell from 80.8 per cent to 38.4 per cent over the same period.(22) Parents were clearly becoming increasingly reluctant to send their children to the mill. Although this did not matter when labour was in excess supply, prejudice against working in cotton would become extremely damaging to the industry when full employment returned. Jewkes and Gray recognized this possibility and advocated the reorganization of the mule room to replace the spinner and senior piecer by two joiner-minders. This system was already in operation in a few mills and improved promotion prospects for junior piecers. There were also calls for the introduction of formal apprenticeship systems in both spinning and weaving, but neither operatives nor employers appeared interested in such a departure from traditional practice.(23)

When war broke out in 1939 cotton was in large measure held in contempt by workers and potential workers. Many operatives were eager to join the armed forces or to enter the new munitions factories, while in 1941 the government took steps to concentrate essential cotton textile production into a core of mills. In

consequence of these trends the industry's labour-force was drastically curtailed. Employment in spinning and doubling fell from 68,000 men and 108,000 women in 1937 to 36,000 men and 72,000 women in the first quarter of 1942, while employment in weaving was reduced from 62,000 men and 125,000 women in 1937 to 31,000 men and 72,000 women in early 1942. Major spinning centres such as Preston, Chorley, Leigh, and Warrington suffered particularly badly from concentration, due to the transfer of labour to the large shell-filling factories at Euxton and Risley.(24) By early 1943 acute shortages of spinning labour, especially among cardroom [i.e. preparatory] workers, were causing serious problems in Oldham. Bolton employers thought that their operatives were being stretched to the limit; absenteeism was rising, and strikes were only avoided by a reduction in machine speeds.(25) The Ministry of Labour tried to encourage some workers to return to the mills but their efforts met with little success, and employment in spinning and doubling fell a further 6,000 between the first quarters of 1942 and 1945. Henceforward enticing workers back into the textile factories would be a prime objective of the industry.

II

As the end of the war approached, Lancashire was united in the clear recognition that an enormous effort would be needed to regain the industry's 175,000 lost workers. The shortage of labour was expected to be particularly acute in spinning. This section will

recount the steps taken to increase the supply of labour in cotton textiles between 1945 and 1951: overtime working, improvements in working conditions, the adoption of more effective training procedures, advances in the status and prospects of the lower grades of operative, the introduction of part-time and evening-shift working, and the consideration of plans for the direction of labour into the mills.

Both the U.T.F.W.A. and the Cotton Board, in their respective reports on the postwar prospects for the industry, feared that it would be extremely difficult to attract labour into cotton textiles unless major changes were made in working conditions. Many mills had disgraceful toilets, inadequate first-aid facilities, and nowhere suitable for operatives to eat their meals. But the crucial determinant of the supply of labour to the cotton industry would be potential workers' expectations of the long-term state of demand for British textiles. The government would have to convince the public that there would be no recurrence of the prewar scourges of unemployment, underemployment, and short-time working.(26) This was a very tall order. In the light of Lancashire's inability to regain its prewar labour force between 1945 and 1951, it must be concluded that the government failed to persuade people that cotton offered them a secure and prosperous future.

During the final phases of the war in Europe, the Churchill government began to draw up plans for the demobilization of textile workers and the transfer of

operatives from the munitions factories to the mills. The Ministry of Supply created alarm by calculating that the cotton industry faced a shortfall of 47,000 'key-men': loom overlookers, maintenance men, strippers and grinders, and other skilled preparatory workers, etc. However only 4000 of these 'key-men' were in the armed forces, and nobody knew where to find the remaining 43,000. (27) In February 1945 a working party of civil servants was established in Manchester to supervise the transfer of operatives from the munitions works to the mills. Four mills were reopened to accomodate the expected rush of volunteers, but it proved difficult to fill these vacancies, as pay was considerably higher in munitions than in cotton textiles. The government responded by authorising the compulsory direction of labour into the mills, but, as on subsequent occasions, they thought better of implementing such extreme measures. (28)

If the majority of mills closed under the concentration scheme were to be reopened, the industry would have to attract and retain operatives who had never worked in cotton before. It was generally agreed that this would necessitate the introduction of new training programmes. Prior to World War Two there had been little systematic training of cotton operatives. New entrants were assigned to an older operative who trained them on the job. A good example of this approach was the gradual progression of a young recruit, from little piecer, to big piecer, and ultimately (if he was

lucky) full spinner. This method of training was thought to be excessively lengthy and unreliable, as it depended upon the competence and goodwill of the senior operatives. In 1945 the Cotton Board initiated a series of courses in training techniques for managers and foremen. The method taught was the American 'Training Within Industry' programme. New entrants would be given full-time supervision in a special section of the mill. Jobs would be split into a number of simple tasks which could easily be mastered and remembered. For example, under the new system, weavers could be trained to a reasonable degree of efficiency in three months instead of eighteen months. (29) A Ministry of Labour Training Centre was established in the summer of 1945 at the disused Belgrave Mill, Oldham, where new entrants were trained according to the latest principles. When fully operational this centre was able to train 500 workers per year. (30) However neither of the schemes had much impact in relieving the short-term labour shortage. The spinning employers remarked that much of the recruitment that took place in the second half of 1945 was offset by the withdrawal from the labour market of married women and old age pensioners, groups which had formed the backbone of the wartime workforce. (31)

The new Labour government in 1945 continued to attach a very high priority to the resolution of the labour shortage in cotton textiles. Exports of cotton textiles were crucial to the defence of Britain's balance of payments. Between 1945 and 1948 the

government supplemented its financial budget with a manpower budget. This assisted ministers to identify mining, agriculture, and textiles as the industries encountering the most serious shortages of labour. Government policy was directed towards closing the gap between labour supply and labour requirements in these industries.(32)

Sir Stafford Cripps, the incoming President of the Board of Trade, rapidly set to work to solve the labour impasse. His plan was to institute a commission to reform the wage structure and organization of work in the spinning section, and to persuade the industry to proceed with implementation of the Chief Inspector of Factories' recommendations on the improvement of working conditions in cotton textiles.(33) Ministers regarded the supply of labour to the spinning section as the crucial issue, for the output of yarn determined the amount of work at later stages in the production process. After consultation with both sides of the industry, Cripps appointed Mr. Justice Evershed to chair the investigation into labour problems in the spinning section. He was assisted by four representatives of the F.M.C.S.A., and two each from the Operative Spinners and the Cardroom Workers.

In October 1945, the Evershed Commission produced a wide ranging report calling for a number of measures to increase the attractiveness of work in the industry. Section I described the historical development of labour practices in mule-spinning. Mule spinners were in

receipt of a piece-rate, while piecers were paid a time-rate. A subcontracting system was in use, whereby the piecer was employed by the mule spinner. The Evershed Commission advocated abolition of the pernicious subcontracting system, so that all grades would be paid directly by the company. Moreover the report recommended changes in the staffing of mules. Since the mid-nineteenth century, each pair of mules had enjoyed a complement of three workers: a spinner, a big piecer, and a little piecer. The Evershed Commission suggested that each pair of mules should be operated by a spinner, and, depending on the length of mule, one or more assistant spinners (equivalent to a big piecer). Alternatively the spinner and big piecer would be replaced by two joiner-minders. A new grade of ancillary worker would be employed to do menial tasks such as sweeping and cleaning. Thus the post of little piecer would disappear. The existing Bolton and Oldham piece-rate lists for mule spinners would be replaced by a new universal list for mule-spinning, taking the form of a piece-rate with a fall-back minimum wage, while the assistant spinners and ancillary workers would receive a time-rate. (34)

Evershed also considered arrangements in the ring-spinning and preparatory sections. Ring-spinning had always been thought of as 'women's work'. The ring spinner received a time-rate which fluctuated according to the number of spindles tended. Their assistants, the doffers, were poorly treated and did not have even the

protection of a wage list; they depended on a time-rate negotiated at mill level. Although Evershed suggested little change in the wage system for ring spinners, he aimed to revolutionize the position of the doffer. In future, doffers would be paid according to a list of piece prices, so that their earnings would become a function of the number of bobbins changed; they would also have the benefit of a minimum fall-back wage. Moreover differentials between the wages of ring spinners and doffers would be reduced. This would represent a major improvement in the status of the doffer, encouraging higher levels of recruitment in the ring-spinning section.(35) In the long-term the Evershed Commission wanted to attract more men into ring-spinning. Indeed the Commission advocated a gradual increase in the ratio of men to women in the industry as a whole, arguing that: "Generally speaking male operatives are likely to remain more permanently in industry than women".(36) There were numerous grades of preparatory worker, including gassers, slubbers, jack-frame tenters, crossballers, and strippers and grinders. Evershed proposed the rationalization of wage lists in this section, the introduction of minimum fall-back wages, and the revision of staffing arrangements.(37)

The Evershed Commission hoped that its recommendations would lead to improvements in the relative status, earnings, and promotion prospects of the lower grades of operative, thereby facilitating

increased recruitment. But their wishes were only partially fulfilled. Negotiations between the employers and the unions on the detailed implementation of the report were conducted at a leisurely pace. This infuriated and dismayed the government. In September 1946, eleven months after the report's completion, the F.M.C.S.A. and the Operative Spinners agreed to implement the Commission's recommendations on the staffing of mule rooms and the abolition of sub-contracting.(38) However it took them a further two years to complete the revision of the wage list for mule spinners.(39) In the ring-spinning and preparatory sections, negotiations between the Cardroom Workers and the F.M.C.S.A. were conducted with a similar lack of haste. The Aronson Agreement, which applied the Evershed proposals to these sections, finally came into force in January 1948.(40) Even so, it had not been possible to satisfy everyone. Female jack-frame tenters in Bolton and the surrounding district went on strike against the new agreement, claiming it had resulted in them being paid less than the slubbers, a less skilled grade.(41)

It can hardly be denied that the Evershed proposals contributed to the narrowing of differentials between the wages of skilled and unskilled operatives in mule-spinning. Between 1946 and 1951, the weekly wages of mule spinners increased by 29 per cent, while those of assistant spinners increased by 46 per cent. But in the ring room there was little change: between 1946 and 1951 ring spinners' wages rose by 36 per cent, only

slightly less than the 38 per cent gain for doffers.(42) The Evershed Commission cannot even claim sole responsibility for the narrowing of differentials in mule-spinning, for during the 1940s there was a movement in favour of flat-rate rather than percentage wage demands. One must conclude that the dilatory attitude of the employers and the unions towards implementation of the Evershed Report both delayed and substantially reduced its impact upon the labour shortage.

Between 1945 and 1946 capacity utilization in the spinning industry increased from 44 per cent to 53 per cent. Nearly half of the industry's spindleage remained idle, largely in consequence of the scarcity of labour. By October 1946 the Cotton Board had given permission for two-thirds of the spinning mills closed under the concentration scheme to reopen, but few of these factories were able to attract a full complement of labour.(43) In December 1946 the Government's Economic Survey Working Party reported that:

"The problem of manning the textile industries, where the ruling bottleneck is in the spinning sections...makes increase in the clothing ration difficult...Moreover, the resulting shortage of textile supplies for export is holding back the production of needed food-stuffs and raw materials in those countries (especially in Africa and the Far East) where an adequate supply of imported textiles is the only effective incentive to output."(44)

The Steering Committee on Economic Development, chaired by the head of the Treasury Sir Edward Bridges, responded to this report by recommending a drastic solution to the cotton industry's labour problem:

Lancashire women aged 20 would be called up for two years national service in the Womens Auxiliary Forces, the Womens Land Army, or the hospitals, unless they volunteered for work in the mills.(45) This was but a short step from industrial conscription and was quietly disregarded by the Cabinet. However as the balance of payments situation continued to deteriorate during 1947, the pressure to find an answer to the labour shortage in cotton textiles was intensified. Cairncross attributes nearly three-quarters of the reduction in gold and dollar reserves during 1947 to the Sterling Area's current account deficit with the dollar area.(46) Increased cotton textile exports were a crucially important source of foreign exchange, without which draconian cuts in imports would have been necessary.

One of the government's first expedients was the reintroduction of overtime working. The supply of labour could be increased by two methods: firstly by recruiting more operatives, and secondly by making existing employees do more work. As recruitment was not proceeding as quickly as the government would have liked, it decided to try the second of these approaches. During the war there had been several rounds of compulsory overtime working in cotton. On each occasion output rose for a short period, but soon fell again, as increasing fatigue led to a reduction in effort.(47) When the Cotton Controller suggested a further dose of overtime during the summer of 1945, the spinning Amalgamations balloted their members, who decisively

rejected the proposal.(48) In 1946 the U.T.F.W.A. negotiated a reduction in the normal working week from 48 hours to 45 hours.(49) When, in August 1947, the Prime Minister pleaded for an emergency increase in working time by half an hour per day, his exhortations fell on deaf ears. Although the spinning and weaving unions advised their members to comply with Mr. Attlee's request, two-thirds of the operatives simply refused to work the extra time.(50) Cripps, who had recently been promoted to the post of Minister of Economic Affairs, was particularly worried by the situation in Oldham, where the operatives had decisively balloted against overtime. He wrote frantic letters to Isaacs, the Minister of Labour, urging him to intervene personally to win over the workers, but Isaacs appeared to lack the will to act.(51) Barbara Castle, the left-wing M.P. for Blackburn, wrote to Cripps setting out the feelings of the weaving operatives in North East Lancashire: "The call for overtime reduces the workers' confidence in the Government's handling of the cotton industry. So far they see no evidence of any basic reorganisation or re-equipping of the industry and the call for overtime to get us out of a mess seems to them to be an old Tory expedient."(52) Overtime was clearly no solution to the shortage of labour and only served to poison relationships between the government and the operatives. In fact it was positively counter-productive. Overtime bred resentment and resulted in absenteeism and fatigue. The reduction in the working week during 1946 had made

cotton a slightly more attractive industry to work in. but the overtime crisis of the winter of 1947-8 cancelled out this effect. In short, the Stakhanovite spirit was never very strong in Lancashire and the government's overtime policy limped along from disaster to disaster. Most operatives felt that they were already doing their share and in 1948 the overtime scheme was dropped.

After the war a large number of married women had quit the industry to return to their homes. Ministers were particularly anxious to find a way of enticing this type of labour back into the mills. During 1947 Cripps and Isaacs canvassed for the introduction of part-time evening-shifts in cotton mills, for the benefit of married women whose family responsibilities prevented them from working full-time. The co-operation of the trade unions was grudgingly given and by April 1948 civil servants could report that there were 4335 part-time and evening-shift workers in weaving and 4476 in spinning.(53)

In Lancashire it was widely believed that mothers would not return to full-time work unless there was someone to look after their children. Consequently there was a movement among the local authorities for the provision of nurseries for the children of mill-workers. Unfortunately this affair was completely mismanaged by central government. In March 1946, as part of a drive to restrict public expenditure, the government reduced grant support to local authority nurseries from 100 per

cent to 50 per cent. By the end of the year the number of council nurseries in the cotton districts had fallen from 174 to 155. This forced the Cotton Board to rely on the goodwill of private enterprise for the development of the nursery system. At the time only 73 spinning or weaving mills provided creches, and many firms were prevented from building their own nurseries by an inability to obtain certificates to acquire the necessary building materials and labour. More resources were made available during 1947 and 1948, but this recognition of the serious nature of the problem did little to dispel the bad impression which had already been created.(54) Fortunately some firms succeeding in providing a high standard of nursery facilities. By 1950 the Lancashire Cotton Corporation had nurseries at most of its 50 mills: for instance it opened a huge nursery at Shaw, run by two matrons and 15 other staff, to serve five mills in the area.(55) But this whole episode revealed a lack of co-ordination between different government policies. With a little more effort and foresight a great deal could have been done to make married women more welcome in the cotton industry.

In January 1948 the government realised that, after two and a half years in office, it was still nowhere near solving the labour shortage in cotton textiles. Between 1945 and 1947 employment in spinning had risen by a mere 15,680, while the number of operatives in weaving had increased by 29,510. The combined increase of 45,190 operatives was far short of the target of

175,000 set by the Board of Trade Working Party in 1946. As can be discerned from Table 3.1, one of the major reasons for this failure was the high rate of turnover of operatives.

The government's Economic Planning Board met on 22 Jan. 1948 to review the situation and consider the report of the Working Party on the Increase of Textile Exports. This report painted a desperate picture. Vital exports were being held back by a persistent shortage of operatives. Expedients such as overtime and part-time working were inadequate. Measures were needed to restrict employment in occupations which competed with cotton for female labour. In the cotton towns 3000 women were employed by the local authorities or in government industrial establishments. A further 20,000 were employed in the transport and service industries, while the number of women in other manufacturing industries such as engineering, chemicals and clothing had risen by 32,000 since 1939. Several possible solutions were floated by the Working Party. Firstly, when women left their existing employment they could be compulsorily directed into the mills. Secondly, non-cotton firms could be persuaded, or if necessary forced, to reduce their workforce in Lancashire. The Working Party pointed to the example of the clothing firm, Montague Burton, which had three factories in the Bolton district, drawing women away from work in the mills. Recalcitrant firms would be threatened with a withdrawal of their production licenses or a reduction in their raw material

allocations.(56) Finally the Working Party concluded that:

"If the political difficulties are accepted and the difficulties of administration can be overcome, there seems little doubt, however that the methods outlined...offer firmer hope of achieving quick results for cotton than any other method. It is a question, as during the war, whether the end justifies the means, and the end in this case is achieving nearly £1 million extra exports per annum, mainly dollar-earning or dollar-saving, from each extra thousand workers."(57)

Once again the government instinctively recoiled from the idea of industrial conscription, and resolved instead to appoint a committee of junior ministers under the chairmanship of Ness Edwards, the Parliamentary Secretary to the Board of Trade, to examine and implement a number of more modest schemes for dealing with the labour shortage. This committee was known as the Labour (Textile Industries) Committee, and it established an office in Manchester under a Regional Controller to maintain contact with the unions and employers.(58)

In April 1948 Edwards was able to report on the committee's activities. The Ministry of Labour had been persuaded to suspend the call-up of skilled men to the armed forces for a period of six months on application from the employer. All advertising for the Womens Auxiliary Forces in Lancashire had been suppressed and was being replaced by a publicity campaign for work in cotton textiles. Non-cotton firms had been asked to release volunteers for work in the mills. No attempt was made to issue threats of sanctions to these firms.

Unfortunately this plea to the employers' goodwill was counteracted by the use of the Control of Engagement Order to prevent such firms from replacing released operatives. A survey had been conducted of improvements to working conditions in spinning and doubling mills. In March 1948 465 mills were equipped with canteens or messrooms, at 13 work was in progress, three were awaiting materials, four were applying for a building license, and 83 had taken no action at all. It was clear that significant improvements were made to conditions in the mills during and after World War Two, to make them more attractive to the operatives.(59)

In retrospect it would appear that the government was now only interested in palliatives. It had effectively ignored the proposals of the Working Party on the Increase of Textile Exports, and was content to tinker with the problem of labour shortage. Calls for volunteers to work in the mills met with little response. In June 1948 representatives of the Ministry of Labour visited 958 non-cotton firms in Lancashire and wrote to 2943 others. As a result of these gargantuan efforts a grand total of 21 workers were placed in the cotton industry!(60) In 1948 and 1949 the government resorted to production drives in individual towns, as a means of attracting new labour and of encouraging greater enthusiasm for hard work amongst existing operatives, but these campaigns had little success.(61)

By 1950 employment in spinning was still 75,000 short of the 1937 level, while that in weaving was

50,000 below prewar levels. Approximately 80 per cent of looms and spindles were running, but in spinning this high rate of capacity utilization was partly a result of a reduction in spindleage since 1945. Government and industry had failed in their quest for a return to prewar levels of employment and output in the industry. Improvements in working conditions; the introduction of better training facilities, promotion prospects, and scales of remuneration for the lower grades of operative; and calls to patriotism, all proved inadequate to achieve the desired end. Even an increase in the average earnings of textile operatives compared with workers in other industries was not able to eliminate the shortage. Between 1945 and 1950 average earnings in textiles (including wool, etc.) rose by 52 per cent compared with 33 per cent in British industry as a whole.(62)

The direction of labour would have secured adequate employment in cotton textiles, but this would have been politically unpopular. One factor stands out in the explanation of the labour shortage in cotton textiles during the second half of the 1940s: a continuing, and fully justified, lack of confidence in the industry's long-term future among the industrial working class of Lancashire. Since alternative employment in thriving new electrical and service industries was easily obtained during the 1940s, few were prepared to risk a lengthy association with an industry such as cotton, in which the threat of a revival of foreign competition and

widespread unemployment was always present.

III

By far the most novel aspect of the industry's recruitment drive during the 1940s was the increasing use of European Volunteer Workers (E.V.W.s) and other immigrant and migrant labour. These workers were largely recruited from the millions of people, primarily from central and eastern Europe, who were made homeless at the end of World War Two.(63) In many respects these European workers were the precursors of the Asian immigrants who arrived in Lancashire in the 1960s. As such their case is worthy of separate consideration.

During 1945 and 1946 the Ministry of Labour failed in its attempt to recruit labour for the mills from the North East and the Republic of Ireland.(64) Consequently the Cotton Board and the government began to consider the use of foreign labour in the industry. On 10 Dec. 1946 the Cabinet Foreign Labour Committee resolved to proceed with the recruitment of displaced persons for employment in the cotton spinning industry.(65) European labour would also be recruited for other industries experiencing labour scarcity, notably the coal mines and agriculture. The government's Economic Survey Working Party concluded that:

"The advantage of these classes of workers is greater than the numerical addition which they provide to the working population, because, within the limits of housing them, they can more readily be directed or steered to particular jobs to help in overcoming industrial 'bottlenecks.'"(66)

This initiative was enthusiastically welcomed by

the F.M.C.S.A.: "In view of the prospective long-term shortage of labour...early and energetic action along these lines would be in the interest of our own industry and of the country as a whole"(67).

The first batch of 20 Polish women and 'girls' arrived in January 1947 for duty at spinning mills in Bolton, Rochdale, and Ashton.(68) Then, during February, a Cotton Board mission visited camps in Austria and Italy to see whether suitable displaced persons were available for work in the mills. It was planned to commence recruitment in May 1947, primarily of single women, for work in coarse spinning, preparatory work, and doubling. By the end of November 1947 2530 female E.V.W.s were at work in the spinning industry. As some of the women were married, 274 men were also employed.(69) Many E.V.W.s went to the Inskip holding camp near Preston on their arrival, where they were provided with an interpreter, who informed them of their 'duties and responsibilities' as workers. Spinning mills in Oldham took 800 E.V.W.s, 550 went to Bolton, and 400 to Rochdale; the remainder were spread among the smaller centres. Recruitment of foreign workers for the weaving section, where the shortage of labour was less severe, did not commence until May 1948. Since less than five per cent of the newcomers had experience of the cotton industry when they arrived in Britain, they required several months of training before they were of much use. By 1949 there were over 100 hostels for European workers in Lancashire. Most of these were provided by the

employers and were often situated in sections of disused mills. There were three larger hostels run by the Ministry of Labour: Glen Mill (Oldham), Chadwick House (Bolton), and Woodlands House (Chorley). Probably just over half of the European workers lived in these establishments; the rest were found private billets. Most E.V.W.s were employed on fixed-term contracts of up to five years, and they could not leave the mill to which they had been assigned without permission from their employer and the Ministry of Labour. (70)

In 1948 the Ministry of Labour decided that it was necessary for the industry to look further afield. A second mission, representing the employers and the unions, left for Germany and Austria in March 1948. They were interested in recruiting members of the 'Volksdeutsche' community. These people were of German descent, formerly living in areas such as the Sudetenland in Czechoslovakia. In 1945 they were no longer welcome in their homelands and had become refugees. Initially there was some resistance among the operatives and employers to the idea of employing Germans, but once they had been screened by the security services, 'Volksdeutsche' workers began to swell the ranks of the E.V.W.'s. They began arriving in Lancashire in 1949, although the Ministry of Labour's target of 10,000 Sudeten-Germans proved wildly optimistic. (71)

Several other schemes operated to the benefit of the cotton industry. At the end of the war 91,400 members of the Polish armed forces (the Polish

Resettlement Corps) were allowed to reside in Britain; 2150 of these found employment in cotton textiles.(72) More Poles, together with Latvians, Lithuanians, Ukrainians, Yugoslavs, and Czechs came to Lancashire under the 'Westward Ho' scheme. 770 Austrian women were given two year contracts to work in the mills under the 'Blue Danube' programme. In May 1950 there were 3981 male and 7982 female Europeans working in the spinning section, while 850 male and 1268 female Europeans were employed in the weaving section of the cotton industry. Many of these workers became British citizens during the 1950s.(73)

Lancashire's cotton unions had an ambivalent attitude towards the engagement of foreign workers. Their official policy was to co-operate with the Government in securing an increase in the supply of labour. But both the spinning and weaving operatives' Amalgamations negotiated agreements with the employers which restricted the proportion of immigrant workers in any mill (or sometimes in any section of a mill) to ten per cent. Under these agreements European workers would only be recruited if indigenous workers were unavailable, and they would be the first to become redundant in a recession.(74)

Sometimes there was conflict between the rank and file of the unions and the newcomers. In 1949 the Ministry of Labour wanted to introduce some unemployed Italian cotton workers into the mule-spinning section. The Executive Council of the Operative Spinners agreed

to this proposal, but opposition from the districts led to the Italians' exclusion. Further pressure from the rank and file forced the Operative Spinners to declare its implacable opposition to the promotion to full spinner of any foreign worker, except in the unlikely circumstance of no British operative being available.(75) The strike of jack-frame tenters against the Aronson List around Bolton in 1948 was aggravated by the fact that semi-skilled foreign slubbers were earning more than skilled British jack-tenters.(76)

Although the agreements between the unions and the employers on the engagement of E.V.W.s specified that they should always receive the full rate for the job, and that they should join the appropriate union as quickly as possible, the other clauses of the agreements restricted their employment and promotion prospects, and made it clear that they would be first to be released if the state of trade deteriorated. In other words the E.V.W.s, despite their formal membership of the trade unions, were treated as second-class citizens. The Poles, in particular, complained of segregation at work, and in hostels, and claimed to be the victims of Communist Party propaganda which portrayed them as fascists.(77) The hostels for European workers did not necessarily provide a healthy environment. Many of them were filled with young women with a limited knowledge of English, who had recently been plucked from an agricultural society and transported to a strange land. They had no freedom to find alternative employment, and

their lives revolved around the mill and the hostel.(78)

When recession returned to Lancashire in 1952-3 many of those E.V.W.s who had not yet obtained British citizenship were made redundant. They were often unable to obtain permission to look for work in other industries, and, like 26 Maltese girls who lost their jobs at a Royton mill, had to leave the country. Many Poles went to the United States and Canada. Those who were lucky enough to remain in work found themselves on short-time, sometimes facing the hostility of their fellow operatives. One young Austrian woman had only 3/- per week left after she had paid her bus fares and her board at the hostel.(79)

In 1950, foreign workers comprised between 10 and 12 per cent of the workforce in the spinning section of the cotton industry. Thus they made a significant contribution to the containment of the industry's labour shortage. Indeed this contribution might have been even greater had they arrived in 1946 instead of 1948 and 1949.

IV

To assist the national export drive and protect the balance of payments, it was necessary for the cotton industry to maximize production during the period 1945-51. The supply of labour was seen as the crucial determinant of output. Between 1945 and 1950 wages in the cotton industry increased relative to those in British industry as a whole; the status and prospects of the lower grades of operative were significantly

improved; better training facilities were created; working conditions were brought up to a more acceptable standard; evening-shifts were introduced for the benefit of part-time operatives; workers were encouraged to increase their efforts; and displaced persons were brought from Europe to swell the ranks of the labour-force. Yet none of these measures was sufficient to overcome the shortage of labour.

Only one explanation of the labour scarcity would appear to fit the facts, although it is one for which little direct evidence can be produced. People in Lancashire simply had no confidence that their jobs would be secure if they went into the mill. Memories of the twenties and thirties, and the poverty and despair to which cotton operatives had been reduced, militated against the decision to accept work in the mills.

Notes to Chapter 3.

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(2) Unfortunately the figures for idle capacity in weaving are not fully comparable with those for the spinning section, as there are no data on the number of looms in closed mills.

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(4) W. Lazonick, 'Industrial Relations and Technical Change: The Case of the Self-acting Mule', C.J.E., 3 (1979), pp. 231-62.

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(6) J. Foster, Class Struggle and the Industrial Revolution: Early Industrial Capitalism in Three English Towns (London: Methuen, 1977).

(7) H.I. Dutton and J.E. King, Ten Per Cent and No Surrender: The Preston Strike, 1853-1854 (Cambridge: Cambridge University Press, 1981); N. Longmate, The Hungry Mills: The Story of the Lancashire Cotton Famine, 1861-5 (London: Temple Smith, 1978).

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(9) The Operative Spinners' Amalgamation was formed in 1853 and gathered added strength with the accession of the Bolton and Oldham spinners' unions in 1869. The A.W.A. was constituted in 1884. The Cardroom Workers' Amalgamation was constituted in 1886. A useful discussion of cotton unionism in the Victorian era may be found in: K. Burgess, The Origins of British Industrial Relations: The Nineteenth Century Experience (London: Croom Helm, 1975), pp. 231-303.

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(13) W. Lazonick, 'Production Relations, Labour Productivity, and Choice of Technique: British and U.S. Cotton Spinning', J.E.H., XLI (1981), pp. 491-516.

(14) J. Lambertz, 'Sexual Harassment in the

Nineteenth Century English Cotton Industry', History Workshop, No. 19 (Spring 1985), pp. 29-61.

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(16) Department of Employment and Productivity, British Labour Statistics: Historical Abstract (London: H.M.S.O., 1971), Table 164, pp. 314-5.

(17) R. Penn, 'The Course of Wage Differentials between Skilled and Nonskilled Manual Workers in Britain between 1856 and 1914', British Journal of Industrial Relations, XXI (1983), p. 86; R. Penn, 'Trade Union Organization and Skill in the Cotton and Engineering Industries in Britain, 1850-1960', Social History, 8 (1983), p. 46.

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(28) P.R.O., BT175/3, Cotton Board Minutes, 135th meeting, 13 Mar. 1945; 136th meeting, 27 Mar. 1945; 140th meeting, 5 June 1945.

(29) C.H. Crabtree, 'New Facilities for Training and Education in the Cotton Industry', C.B.C. (Oct. 1956), pp. 3-9.

(30) L.R.O., Operative Spinners, Quarterly Report, 31 July 1945, p. 5.

(31) L.R.O., F.M.C.S.A., Annual Report, 1945, p. 12.

(32) A. Cairncross, Years of Recovery: British Economic Policy, 1945-51 (London: Methuen, 1985), pp. 385-99.

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(37) Ibid, pp. 20-5.

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(45) P.R.O., CAB129/16, C.P.(47)20, Cabinet Memorandum, Ministerial Committee on Economic Planning: Economic Survey for 1947, Governing Memorandum by the Steering Committee, Paragraph 20, p. 4, 7 Jan. 1947.

(46) Cairncross, Years of Recovery, p. 145.

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(55) Lancashire Cotton Corporation, The Mills and Organisation of the Lancashire Cotton Corporation, 1929-50 (Manchester: Lancashire Cotton Corporation, 1950), p. 50.

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(60) P.R.O., CAB134/638, P.C.(48)94, Cabinet Production Committee Memorandum, Labour for the Textile Industries: Second Interim Report of the Labour (Textile Industries) Committee, Minute 9, pp. 2-3.

(61) See above, Ch. 2, p. 72.

(62) Unfortunately the Ministry of Labour grouped all textile industries together. However, earnings censuses taken by the Lancashire employers suggest that the Ministry's figures capture the broad trends in earnings in cotton. Annual Abstract of Statistics, 1938-50 (London: H.M.S.O., 1952), Table 142, p. 131; A.W.A., Annual Report, 1965, p.28.

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(66) P.R.O., CAB134/503, M.E.P.(46)15, Economic Survey for 1947: Report by the Economic Survey Working Party, Minute 25, p. 8, 21 Dec. 1946.

(67) L.R.O., F.M.C.S.A., Annual Report, 1946, p. 14.

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(70) L.R.O., A.W.A., DDX1123/6/2/698, General File: Limitation of E.V.W.s, Memorandum by Cotton Board Labour Department, 1949; Hansard (Commons), 5th ser. 448, 25 Mar. 1948, cols. 359-61 (Written Answers).

(71) The Times, 31 Mar. 1949; Tannahill, E.V.W.s in

Britain, p. 29.

(72) Zubrzycki, Polish Immigrants, pp. 62, 6.

(73) L.R.O., A.W.A. General File, Limitation of E.V.W.s.

(74) Tannahill, E.V.W.s in Britain, p. 136; L.R.O., Operative Spinners, Executive Council Minutes, 13 Mar. 1947, 24 Feb. 1949; A.W.A., Central Committee Minutes, 17 Feb. 1950.

(75) L.R.O., Operative Spinners, Quarterly Report, 31 July 1949, p. 5; Operative Spinners, Minutes of a General Representative Meeting, 24 Sep. 1949; Operative Spinners, Executive Committee Minutes, 2 Feb. 1950.

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(77) Zubrzycki, Polish Immigrants, pp. 81-9, 169-71.

(78) There are shades here of the Japanese system, whereby young women were taken from the villages and apprenticed in textile mills, forced to reside in company hostels, and denied contact with the outside world. E.P. Tsurumi, 'Female Textile Workers and the Failure of Early Trade Unionism in Japan', History Workshop, No. 18 (Autumn 1984), pp. 3-27.

(79) Manchester Guardian, 20 Mar. 1952.

Chapter 4.

TIME AND MOTION: WORKLOADS AND WAGE LISTS IN THE
COTTON INDUSTRY, 1945-50.

"The prosperity of Lancashire is in itself a vital part of the well-being of our whole country...both sides of industry...must put aside selfish interests and come together with a determination to make use of all the available knowledge to get the very most out of all their resources, whether it be manpower, scarce materials, fuel or whatever it is...the needs of production efficiency demand the introduction of new methods and the abandonment of old customs and habits."(1)

Sir Stafford Cripps, Oct. 1947.

The shortage of labour in the cotton industry during the 1940s stimulated increasing interest in techniques for improving the efficiency of utilization of the workforce. Ministers, employers, and even many trade union leaders argued that it should be possible to increase the machine complements of operatives without causing them to be overworked. In Lancashire this issue was known as 'redeployment'.

This chapter considers the movement for the intensification of work in Lancashire during the 1940s. Section I outlines the background to redeployment and traces its development within the cotton industry before 1945. Section II examines the redeployment movement in the spinning section, while section III concentrates on the weaving section.

I

In Capital Marx postulated that competition between firms would produce the intensification of labour, as each firm struggled to reduce its costs to a minimum. Within the constraints of a fixed working day, employers

would be forced to increase the speed of machinery and the number of machines per operative. Moreover this process would be accompanied by a reduction in piece-rates, so that although operatives' earnings might rise, there would be a cut in labour costs per unit of output.(2)

Harry Braverman took up Marx's theme and traced the history of the intensification of work from the nineteenth century to the 1970s in Labor and Monopoly Capital. The introduction of Taylorism or 'scientific management' towards the end of the nineteenth century was the most significant development during this period. Taylorism was the precursor of modern methods of scientific workload assessment.(3)

The principles of workload assessment are quite straightforward. Tests, known as work studies, are carried out in factories to determine the 'full' workload for an average operative. Each task (e.g. tying together a broken thread) is timed. The frequency with which an average worker, given a suitable allowance for rest, can perform this task in a given period is calculated. This constitutes the 'full' workload for the job. If workers in the factory consistently fail to meet this target, it is usually because they have too few machines to tend, and therefore do not have the opportunity to perform the requisite number of actions per hour. Such workers are 'underloaded'; their machinery should be speeded up, or else they should be assigned more machines, bringing them up to a full

workload. Managers, possibly in consultation with the unions, specify a 'target wage'. Piece-rates are set at a level enabling the average operative with a full workload to achieve the target wage.

Braverman also discussed Marx's thesis that the intensification of work would be accompanied by the substitution of unskilled for skilled workers. Complex operations would be split into simple tasks to eliminate the bargaining power of the skilled worker. Lazonick and Penn have shown that 'deskilling' was of little consequence in the cotton industry, where job descriptions remained virtually unchanged between 1840 and 1940. Skilled workers were useful allies of the employers because they could be given responsibility for discipline in the mills.(4)

In Lancashire the intensification of work proceeded by ad hoc methods before World War One. Taylorism was virtually unknown in Lancashire at that time. In Oldham between 1896-7 and 1906-7 the average number of spindles per mule increased by 12.1 per cent, while the speed of mules rose by 4.7 per cent.(5) Agreements between the A.W.A. and C.S.M.A. restricted the number of Lancashire looms per weaver to four. But automatic loom complements were not subject to central regulation, and depended on negotiations at mill level. For instance, between 1902 and 1908 operatives at Ashton Bros., Hyde, accepted a system of 20 automatic looms per weaver, although they struck when the company proposed to increase this to 24 per weaver.(6)

In the late 1920s employers in North East Lancashire attempted to undermine the four-loom weaving system by forcing operatives to accept complements of up to eight Lancashire looms. After several years of bitter conflict the A.W.A. signed the Midland Agreement in 1933, recognising the right of employers to introduce a 'More Looms System' in Lancashire loom sheds. To the intense chagrin of the unions the Midland Agreement also specified that more-loom weavers were to be paid a lower piece-rate than four-loom weavers. However, less than one-fifth of firms took advantage of the opportunity to introduce more-loom working, as it was unsuited to certain types of weaving. But in the mid 1930s the A.W.A. complained that in practice six-loom weavers often earned a mere shilling a week more than four-loom weavers.(7)

Between the wars both the government and the employers complained about what they regarded as restrictive labour practices. The report of the government's Cotton Industry Committee in 1930 welcomed the 'More Looms' experiment, expressing the hope that it would help safeguard the long-term future of jobs, although it might lead to higher unemployment in the short run.(8) Spinning employers declared that production in their section could be speeded up if the unions would allow the oiling of machines outside normal working hours. They were also angered by the refusal of strippers and grinders (preparatory workers) to accept higher workloads despite technical improvements which

had made their jobs easier. But it was hardly surprising that operatives should try to protect their jobs at a time of severe unemployment.(9)

Formal work study techniques were first introduced into the cotton industry in the 1920s. In the 1930s 21 per cent of all British firms using the Bedaux system, which was the most popular form of redeployment based on work measurement, were in the textile industry.(10) Mike Savage has shown that the workloads of overlookers at Horrockses in Preston were set according to work study principles in 1929-30.(11) But the cotton textile unions were generally united in their opposition to all such practices. Mr L.H.C. Tippet of the Shirley Institute vividly recalled the reaction of cotton operatives to the application of work study during the thirties: "In the early days we used the stop-watch to obtain much of the data...[but] for many workers and their leaders the stop-watch has become the symbol of exploitation and driving, and of an attitude that regards operatives as machines".(12)

The question of the application of work study techniques to the cotton industry acquired greater urgency between 1943 and 1945, as Lancashire prepared for the end of World War Two. A severe labour shortage was expected and a considerable degree of thought was given to the solution of this problem. During 1943 a team of cotton industry representatives, including Andrew Naesmith the general secretary of the A.W.A., went to the United States to observe labour practices in

American mills. The Platt Report, published in 1944, raised the alarm by revealing that British spinning operatives produced between 18 and 49 per cent less yarn per hour than U.S. workers, while weavers in Lancashire produced between 56 and 67 per cent less cloth per hour than their American counterparts. Although this disparity was partly due to the use of obsolete equipment in Lancashire, the Platt Report attached considerable importance to the flexible attitude of the U.S. trade unions towards new forms of labour utilization, and the almost universal employment of 'scientific' methods of work assignment. It was concluded that Britain should follow suit, thereby relieving the labour shortage, and tackling the long-term problem of declining competitiveness.(13)

Curiously, despite these warnings, the official U.T.F.W.A. plan for the postwar development of the industry did not discuss redeployment, concentrating instead on the need to improve working conditions and prospects for promotion in the mills.(14) Even the Cotton Board Committee to Enquire into Post-War Problems was reluctant to take the hint and merely suggested that action should be taken to ensure that "too much rigidity" in the function of operatives was avoided.(15) However the extreme caution of trade union leaders in public was not always mirrored in private. By 1943-4 Andrew Naesmith and the A.W.A. were beginning to consider the feasibility of introducing a wage system in weaving that would be grounded in work measurement

principles.

Ernest Bevin, the wartime Minister of Labour, was one of the most enthusiastic exponents of moves to increase the efficiency of labour utilization in Lancashire.(16) Bevin thought that the Cotton Board should set aside a mill for the pursuance of work study experiments and the investigation of new systems of labour utilization, and called on the operatives and employers to be realistic, "like Marshall Stalin".(17) A Cotton Board Committee to deal with 'mill investigations and experiments' was duly formed, and during the mid 1940s this body conducted a number of important trials at the Wye Mill in Shaw and the Musgrave Mills (Nos. 7 and 8) at Bolton, into new methods of labour deployment for the spinning section.(18)

Soon after the election of the Labour government in 1945, Stafford Cripps called for a review of wage systems and staffing procedures in cotton spinning. The following train of events led to the establishment of the Evershed Commission in spinning, and the Cotton Manufacturing Commission in weaving. Between 1945 and 1950 the government was the most enthusiastic advocate of redeployment in the cotton industry. Britain faced a major balance of payments crisis which threatened the maintenance of reasonable living standards. Redeployment in cotton would assist Lancashire to increase its output and exports, and play an important role in the struggle for economic survival.

Employers were keen to see improvements in the

efficiency of labour utilization, as this would enable productivity to be increased, and idle looms and spindles to be brought back into production. But the masters were not prepared to force the issue to the point of confrontation with the unions. Competitive pressures were weak during the 1940s. Large profits could be obtained for little effort in the conditions of high demand which prevailed under the Attlee government. It was not worth putting these profits in jeopardy by risking a major conflict over redeployment. (19)

Redeployment aroused considerable controversy within the trade union movement. Some prominent figures in the unions, such as Andrew Naesmith of the A.W.A. and Alfred Roberts of the Cardroom Workers, were enthusiastically supporters of redeployment. During the 1940s union leaders were increasingly drawn into the fringes of government and industrial planning through their membership of the Cotton Board, their close relationship with the Labour government, and their involvement in official investigations such as the Platt Mission and the Board of Trade Working Party. They no longer saw matters in purely trade union terms, and were prepared to work for what they, rightly or wrongly, regarded as the wider 'national interest'. (20) But most of their members retained an implacable fear of driving and the Bedaux system from the dark years of the 1930s. Consequently the trade unions found it difficult to formulate a consistent policy on redeployment.

The cautious and ambivalent policies of the unions

and employers over redeployment created uncertainty and inertia. Neither side wanted to antagonise the other. Neither side wanted to make concessions which their own supporters would repudiate. In consequence, discussions over changes in staffing, the reform of wage systems, and the introduction of work study techniques took years rather than months. As we shall see, the government took a very dim view of the industry's response to redeployment.

II

Progress towards redeployment in spinning is considered in this section. A cursory study of the subject might create the impression that the implementation of the Evershed Commission's proposals constituted the most radical departure in methods of labour utilization in the cotton spinning industry between 1945 and 1950. But this was far from the case, and the movement for the introduction of forms of labour utilization based on work measurement techniques takes on equal significance when viewed from a longer perspective.

In the previous chapter the report of the Evershed Commission was discussed in some detail.(21) Evershed advocated the introduction of new methods of staffing and new wage lists for many operatives in the cotton spinning industry. In the interests of reaching a speedy and generally acceptable report, the Commission did not attempt to employ work measurement principles to set workloads. The staffing arrangements advocated in the

report were based on rule-of-thumb estimates. In the mule-spinning section the Evershed Commission was primarily concerned with improving the status of semi-skilled workers. It recommended the replacement of the traditional staffing arrangement for a pair of mules, i.e. spinner, big piecer, and little piecer, by a system of staffing comprising a spinner and one or more assistant spinners. Teams of ancillary workers and mule assistants would perform menial tasks such as sweeping, cleaning, and carrying bobbins. The change was minimal, although to be fair the mule room offered little scope for improvements in labour utilization. In the ring-spinning section there were no major departures in job specifications or workloads in the Evershed proposals. Workloads would be increased in the preparatory section, but the new machine complements were not related to the findings of work studies.(22)

Existing forms of staffing in mule-spinning were abolished in late 1946 and replaced by the Evershed system, but the revision of labour practices in the ring-spinning and preparatory sections was delayed until January 1948. The reform of staffing levels brought about by the Evershed Commission was more apparent than real. The best that can be said for the Evershed proposals is that "they gave rough justice between operatives".(23) In some respects it might have been better had the Evershed Report been shelved, for it installed a rigid new orthodoxy in labour utilization which was difficult for innovating firms to overcome.

A modest degree of progress was made in the application of work measurement techniques to cotton spinning during the 1940s, although the movement suffered several important reverses. In 1945 work study tests commenced at the Cotton Board's experimental station at Wye No. 2 ring-spinning mill in Shaw, with the formal support of the executive committees of the Operative Spinners and the Cardroom Workers. The work study team discovered a substantial amount of underloading and was able to secure a 45 per cent increase in output per operative hour by introducing new forms of labour utilization. Following this success it was decided to hold further tests at Wye Mill in January 1946. Unfortunately this decision was taken in the absence of Mr. A.C.C. Robertson of the Oldham Cardroom Workers, who had been looking for a good excuse to disrupt proceedings. Robertson and the local Oldham Cardroom Workers had been opposed to the experiments from the start, as they believed that the employers intended to use the intensification of work as a substitute for investment in new machinery. George Isaacs, the Minister of Labour, was called in to settle the dispute, but Robertson was immovable and the Wye Mill experiments had to be abandoned. (24)

A second series of Cotton Board work study trials was carried out between January and July 1947 in the card room of the Fine Spinners and Doublers Association's Musgrave No. 7 Mill at Bolton. On this occasion the full co-operation of the local trade union

was obtained. Changes were made to the layout of the machinery and each worker received a larger complement of machinery. During the experiment output in the cardroom increased by 15 per cent notwithstanding a 21 per cent reduction in the number of operatives. Earnings per operative rose by 30 per cent, and at the end of the trial the workers and their union representatives resolved to retain the new system at the mill.(25)

Concurrently with these trials, the Shirley Institute was conducting a series of 'Abbreviated Surveys', or mini-work studies, at 100 spinning mills. These surveys, which became available in 1947, revealed very wide variations in labour productivity between mills spinning comparable yarns, suggesting the existence of a substantial measure of underloading at many mills. No actual experiments were made with new methods of labour utilization, but it was estimated that, if the average output per operative hour in the coarse-medium spinning section could be increased to the level of the most efficient 25 per cent of mills, output per worker in the card and ring rooms would increase by 30 per cent. These results could be achieved by partial redeployment, and full redeployment would enable even greater improvements in labour productivity to be made.(26)

The Shirley Institute's findings stimulated considerable interest in government circles. Attempts to attract labour into the cotton spinning industry were having little success, while re-equipment was proceeding

at an extremely slow pace.(27) During 1947 the Technology and Operational Research Panel of the Committee on Industrial Productivity turned its attention to the question of labour utilization in the spinning section. A Study Group on Cotton Productivity was established, and in early 1948 it reported that with the better utilization of labour in the spinning section:

"The output of the industry can be increased...more rapidly than by large-scale re-equipment...and more permanently than by the working of longer hours...So far as the total labour force of the industry is concerned, increased numbers can only come from imported labour or as a result of drastic restrictions on alternative employment in the cotton areas".(28)

Two complementary policies were recommended. Firstly, the government should encourage the employers and the trade unions to press ahead with the full redeployment of mills according to the principles of work measurement. A Cotton Board publicity campaign should be run to disseminate information on the advantages of work study. Firms of industrial consultants should be encouraged to make cotton their priority in cases where there were conflicting demands for their services; furthermore they should be asked to train selected cotton managers in the use of work study techniques. Secondly, the industry should also be encouraged to institute a programme of 'Spring Cleaning': the results of the 'Abbreviated Surveys' had encouraged the belief that substantial improvements could be made in labour utilization without the full

implementation of work measurement techniques. The Shirley Institute should provide firms with technical advice on procedures for 'Spring Cleaning', while the Ministry of Labour should establish a special conciliation service to deal with any disputes which arose. A Human Factors Panel, staffed by economic historians (!), would be set up to help with the 'social and psychological' aspects of redeployment.(29) The success of full redeployment and 'Spring Cleaning' would depend on the willingness of the unions to permit exceptions to the principles of labour utilization enshrined in the Evershed Report.

In considering this report, the Committee on Industrial Productivity despondently noted that the industry had so far shown virtually no interest in the idea of 'Spring Cleaning'.(30) This was unfortunate, as the prospects for successful 'Spring Cleaning' were considerably better than those for full redeployment, in view of the chronic shortage of work study consultants. The Technology and Operational Research Panel calculated that, by March 1948, only five per cent of spinning mills had been fully redeployed. Associated Industrial Consultants Ltd. (A.I.C.), one of the main companies in the work study field, claimed to have improved output per operative hour by an average of 50 per cent in fully redeployed ring rooms, and 40 per cent in fully redeployed card rooms. Average earnings in these mills had risen by 25 per cent, so that average labour costs had fallen by about 20 per cent. But although these

savings were substantial, it was feared that the shortage of industrial consultants would make it impossible for more than one per cent of spinning mills to be fully redeployed each year.(31) This problem was treated very seriously. After pressure from the government the Cotton Board opened a work study school at Manchester in October 1949 to teach the principles of work measurement techniques to managers and trade union officials in the spinning section.(32)

Most of the leading members of the F.M.C.S.A. were anxious to see a more widespread adoption of work measurement principles. Employers found that the attitude of the trade unions to work study varied widely between districts. Local unions were most co-operative in the fine spinning areas such as Bolton, but could be extremely obstructive in Oldham and other coarse spinning towns. A Redeployment Sub-committee was established by the F.M.C.S.A. in 1948, to collect information from redeployed mills and advise firms which were considering introducing modern methods of work organization. Firms were also provided with a list of reputable industrial consultants and warned to beware of "others [who] possess little more than great self-confidence, a good line in sales talk, a smattering of knowledge and the firm intention to cash in on what they take to be a rising market."(33) Uniformity of wage rates was one of the main advantages of the Evershed and Aronson Lists and their predecessors. But in the absence of a central agreement to regulate target wages and

piece-rates in reorganized mills, there was a danger of earnings varying widely between reorganized mills. Each redeployed mill set its own target wage and instituted its own wage list, in line with the findings of its work study consultants. This situation threatened to lead to jealousy between operatives and possibly industrial unrest. One of the major functions of the Redeployment Sub-committee was to encourage the introduction of similar rates of pay at each redeployed mill.(34)

The F.M.C.S.A. was eager to negotiate with the Operative Spinners and the Cardroom Workers about the procedures that should be followed in the application of work measurement techniques to the industry. Mr Alfred Roberts, the secretary of the Cardroom Workers, found himself in an exceptionally difficult situation. He had toured the United States, where he had been convinced of the desirability of introducing modern methods of labour utilization in Lancashire mills. But he recognised that most operatives were still highly suspicious of stop-watch techniques. Roberts explained that he would have to "oppose any attempt to impose [work measurement] upon any group of operatives...It should continue or end by their free vote."(35) Mr A.C.C. Robertson and the Oldham and Rochdale Cardroom Workers continued their campaign of opposition to any deviation from established practices. This caused the government some concern and Harold Wilson, the President of the Board of Trade, secretly met with Roberts and other Cardroom Workers leaders to plot against the powerful delegation from

Oldham.(36) In the event the Cardroom Workers could offer little more than a promise to treat each individual work study application on its own merits.

Discussions about the application of work study methods to mule-spinning were opened with the Operative Spinners in July 1949. In September a General Representative Meeting voted in favour of preliminary trials by 48 to 26. At a time of national crisis the Operative Spinners Amalgamation was concerned not to be seen as a defender of restrictive labour practices, but it expected little would be gained from the application of work study techniques to mule-spinning: "Having regard to the changes of deployment already provided for in the recent Evershed List, the workload is now at a maximum."(37) The trials were not a great success. At Britannia Mill, Bury, the spinners were asked to take a reduction in piece-rates after their workloads had been calculated. Quite naturally they refused, and the trial was cancelled.(38) However the Operative Spinners decided that their Executive Council would consider applications for permission to introduce new methods of labour utilization from individual firms.(39) Thus the F.M.C.S.A. failed to achieve a general agreement on internal redeployment with either of the main unions.

Work study applications proceeded by means of negotiations at each individual mill. By 1950 21 per cent of mills (i.e. 104) affiliated to the F.M.C.S.A. were using forms of labour utilization derived from work measurement techniques in one or more departments, while

another 15 mills were just about to commence work studies.(40) Successful applications of work study techniques were always accompanied by full consultations with the unions and the operatives. In this respect Greenhalgh and Shaw and English Sewing Cotton were model employers. At the end of the War Greenhalgh and Shaw Ltd. embarked upon a substantial programme of reorganization in their preparatory, ring-spinning, and doubling departments. Their objective was to overcome a chronic shortage of female labour, which prevented the firm from working at more than 61 per cent of productive capacity during 1945. Before any action was taken the district secretaries of the relevant unions were invited to discuss procedures with the firm. Works Councils were established and their co-operation was sought and obtained at each stage of the reorganization of the work process. By 1948 Greenhalgh and Shaw had secured a 21 per cent increase in output per operative-hour and production had returned to full capacity, achievements which the management attributed directly to changes in methods of labour utilization.(41) English Sewing Cotton used similar methods to achieve the successful introduction of a wage system based on work measurement and the reallocation of duties at its spinning mills. As a result, between 1949 and 1954 the production of yarn at English Sewing Cotton's Stanhill ring-spinning mill increased by 50 per cent, despite a 15 per cent reduction in the workforce.(42)

Nevertheless employers continued to suffer setbacks

in their plans for the extension of work measurement techniques. For instance, in 1950 can-tenters (a grade of preparatory worker) at the Werneth Spinning Company in Oldham, went on strike to demand a 30 per cent increase in their rates of pay. At that time the can-tenters were paid according to the Aronson List, which had been established under the recommendations of the Evershed Report. Employers were horrified by this wage claim, for they believed that the can-tenters were already grossly underloaded. The F.M.C.S.A. pressed for work studies to determine a proper workload for can-tenters, which they hoped would form the basis for negotiations on a new wage list. Indeed Werneth was regarded as a major test case by the employers: "In the country's interests, as well as in the interests of the industry, we are not justified in accepting this and adopting a passive attitude."(43) But this time the employers had to capitulate. A.C.C. Robertson and the Oldham Cardroom Workers staunchly refused to agree to the employers' proposals, and were able to enforce the continuation of the staffing arrangements specified in the Aronson Agreement. Werneth was by no means an isolated episode and similar cases caused intense frustration among the ranks of the F.M.C.S.A. One local spinning masters' secretary complained that:

"There is nothing so discouraging as the 'horse-trading' method especially in regard to new machines, or new arrangements. What we object to most is that the Unions are opposed to bargaining on a scientific, objective and impartial basis, insisting on trials of strength. And this produces the unevenness of the workload, so that some operatives are

considerably underloaded compared with others."(44)

Pruthi's hypothesis that the introduction of the Evershed and Aronson Lists was detrimental to the development of wage systems based on work measurement was certainly borne out in the Werneth case.(45) The unions were very reluctant to stray from these lists, which had only been secured after difficult and protracted negotiations. Had the Bolton and Oldham mule-spinning lists, and the old ring-spinning and cardroom lists managed to survive the Evershed investigation, it is likely that the operatives would have been more amenable to new developments in labour utilization.

Changes in methods of labour utilization had a negligible effect on productivity in the spinning section between 1945 and 1950, although some quite spectacular results could be obtained at the level of the individual firm. Consequently these innovations made little contribution to the resolution of the industry's labour shortage. In 1948 a Cotton Board survey showed that output per operative-hour in the spinning section fell by five per cent between May 1939 and November 1947.(46) Later research suggested that there was no appreciable change in productivity in cotton spinning between 1948 and 1952.(47) During the 1940s it would appear that labour productivity was held back by poor standards of machine maintenance, the dubious quality of raw cotton supplies, high absenteeism, and the shortage of experienced operatives. These difficulties were

largely a product of the war.

Few significant improvements in the efficiency of labour utilization in cotton spinning followed from the recommendations of the Evershed Report, which largely reproduced the status quo. Most of Lancashire ignored the call for 'Spring Cleaning', i.e. partial redeployment, while the application of full work measurement studies proceeded at far too slow a pace to have had a major impact on productivity in the industry at large: indeed in 1950 redeployment was proceeding at the unsatisfactory rate of two mills per month. Substantial increases in the efficiency of labour utilization in the cotton spinning industry were held back by the shortage of work study consultants, the ambivalent attitude of the trade unions, and the complacency of many employers.

III

In the weaving section the struggle for redeployment revolved around the twin issues of the wage lists and the number of looms to be assigned to each weaver. Between 1940 and 1950 steps were taken to develop greater flexibility in labour utilization in Lancashire loom weaving. These moves culminated in the introduction of the Cotton Manufacturing Commission (C.M.C.) system in 1949, which incorporated many of the principles of work measurement. Although the consent of the workforce was required before the C.M.C. system could be applied at a particular mill, it enabled employers to tailor loom complements to the

particular circumstances of the shed.

At the outbreak of World War Two there were several alternative systems of labour utilization in operation in the weaving section. Approximately 80 per cent of operatives were employed under the terms of the Uniform Lists for Lancashire loom weaving. The Uniform Lists had been introduced between 1890 and 1914 and specified piece-rates for weavers operating six, four, or fewer looms.(48) Since the mid 1930s about 15 per cent of weaving operatives had been paid according to the 'More Looms' lists, which set piece-rates for Lancashire loom weavers working with complements of eight looms. The remaining weavers (under five per cent) operated automatic looms. As there was no central agreement on piece-rates or machine complements in the automatic loom section, many firms were able to reorganize their sheds in accordance with the findings of work study investigations.(49)

The Lancashire loom lists were extremely unsatisfactory. They had evolved in an unplanned fashion, and the loom complements which they specified bore little relation to those which would have prevailed had workloads been established by work measurement techniques. Over the years the introduction of new and unusual varieties of cloth, yarn, and equipment had led to a number of special clauses being added to the original Uniform Lists. For instance, between 1900 and 1914 rayon cloth began to be woven in the cotton industry. Initially it was more difficult to weave rayon

than cotton cloth; consequently a series of 'Rayon Differentials' were incorporated into the Uniform List to give rayon weavers up to 15/- more in their weekly wage packets than ordinary weavers.

Before long the Uniform List contained 43 separate clauses, mainly dealing with additions to the basic piece-rates. These additions were made on a percentage basis and were calculated cumulatively; moreover their amount was determined primarily by the relative strength of the unions and the employers at the time of their negotiation. (50) Consequently there was often only a tenuous relationship between weavers' workloads and earnings under the Lancashire loom lists. Operatives weaving 'good sorts' obtained high wages for relatively little effort, while operatives weaving 'bad sorts' were inadequately compensated for difficult or arduous work. Once a new clause had been added to the Uniform Lists it achieved the status of holy writ, and was rarely amended despite changing circumstances. For example, by the 1930s and 1940s the quality of rayon yarn had improved to such an extent that man-made fibre cloth could be woven just as easily as cotton, but no attempt was made to eliminate the rayon differentials, and as a result rayon weaving became a privileged occupation.

Thus the Lancashire loom lists imposed penalties on firms weaving certain types of cloth, including rayon, while they artificially reduced the wage costs of firms producing simpler cloths. In times of labour shortage it was difficult to find any weavers who were prepared to

put up with working on the bad sorts. Archaic wage lists and forms of work organization were distorting the industry's product range, and it would be fair to say that neither the employers nor the trade unions were particularly happy with the status quo.

"If the proper aim of a wages system for cotton weaving is to relate reward to effort, then the Uniform List is fundamentally unsound, because it largely ignores the two factors [i.e. the length of time needed to change shuttles containing the weft and to repair breakages in the warp] which chiefly determine the amount of effort required from the weaver."(51)

During World War Two careful consideration was given to the question of reforming the Lancashire loom lists. Mr Andrew Naesmith and the A.W.A. were gravely concerned about the low wages of weavers on bad sorts. In 1935 a minimum wage had been introduced for 'More Looms' weavers.(52) A lengthy campaign was mounted for the extension of the guaranteed minimum wage to four-loom weavers who were paid under the Uniform Lists, and this point was finally conceded by the C.S.M.A. in December 1942 after the issue had been brought before the industry's Conciliation Committee.(53)

However, the introduction of a minimum wage was merely a palliative, designed to deal with the symptoms rather than the causes of bad sorts. A complete overhaul of the Lancashire loom lists would be required to enable the industry to combat the inevitable postwar labour shortage and to make weaving a more attractive occupation to new entrants in the long run. In 1943 the C.S.M.A. set up a 'Special Wages Sub-Committee' to look

at the possibilities for reform. At the suggestion of Mr Yerkes, an outspoken employer from Nelson, the Special Wages Sub-Committee decided to commission a report from the Shirley Institute on the advantages of systematically applying time study techniques to Lancashire loom weaving.(54)

Work study experts from the Shirley Institute measured the time needed for an average weaver to change a shuttle and to repair a broken warp (warp and weft work) in an average mill producing several kinds of cloth. Obviously timings varied according to the type of cloth to be woven. This information facilitated the calculation of the number of operations that an average weaver of each grade of cloth could perform in a given period. Under such a system, a weaver would be assigned a sufficient number of looms to enable the performance of a full load of warp and weft work in the given period. Piece-rates would be manipulated to ensure that all fully loaded weavers attained the same target wage, irrespective of the type of cloth they were producing. Hence, weavers would be paid according to the work which they did and not on the basis of the arbitrary clauses of the old lists. Consequently all operatives of equal skill and diligence should receive the same wage regardless of the sort which they were weaving.(55)

Shirley Institute investigators visited a selection of mills and found that many four-loom weavers were grossly underloaded.(56) A number of employers volunteered to take part in trials using the Shirley

Institute scheme. Unfortunately the Shirley Institute system was not free of anomalies, and weavers of different cloths continued to earn different wages. Warp and weft work timings based on industry-wide averages failed to take into account the special circumstances at each mill and could not provide for the infinite variation in cloth construction. Therefore the Shirley Institute's scheme was unable to equalise workloads in mills across the county.(57)

Only a system of labour utilization depending on comprehensive work studies at each individual mill could ensure the equalization of workloads and earnings. The R.W.A. had produced plans for such a scheme, but the C.S.M.A. believed that it would be impractical. Firstly, the performance of full work studies at every mill in the county would have been extremely expensive. Secondly, there was a serious shortage of industrial consultants. Thirdly, both the C.S.M.A. and A.W.A. wanted a wage system which would be suitable for 'legalisation' in case depression returned to the industry. In 1935 the government had made the Uniform Lists legally enforceable to prevent wages being reduced by maverick employers. But it would be almost impossible to legalise the R.W.A.'s scheme, as different piece-rates would be required at each mill to enable all weavers to earn the centrally determined target wage.(58)

The report of the C.S.M.A.'s Special Wages Sub-Committee (October 1944) unreservedly called for the

abolition of the Uniform Lists. But serious doubts were expressed about the Shirley Institute and R.W.A. schemes, neither of which made special provision for additional payments to such groups as rayon weavers. Although the C.S.M.A. accepted that rayon differentials etc. were unjustified, they feared that the A.W.A. would not accept any scheme which would deprive some of their members of a long established privilege. The report concluded that an amended version of the Shirley Institute's scheme, which took into account the need to retain the guaranteed minimum wage and certain special payments might be acceptable. (59)

Union members were taken aback by this report. They had vigorously opposed redeployment and work measurement during the interwar period, and were now being asked to abandon the legalised Uniform Lists in favour of a system which left indeterminate machine complements for Lancashire loom weavers. Nevertheless, in April 1945 two members of the Shirley Institute staff were invited to explain their plans to the A.W.A. Central Committee. It was reported that an "interesting discussion" took place. (60) Several years later one A.W.A. official eloquently explained the rationale for the union's cautious attitude towards changes in labour utilization:

"The protective walls of Unionism against unemployment, which we have erected during the last hundred years in the protracted struggle against capitalist exploitation, cannot crumble in one or two years... People are afraid that if they give up their small protective defences, they will stand unarmed if the trial of strength comes once more and

full employment comes to an end."(61)

In late 1945 the deliberations of the Evershed Commission led the weaving industry to anticipate that a similar commission was in the offing for their own section. In principle the C.S.M.A. was in favour of such an initiative, but lived in mortal fear that it would result in a general levelling up of wages, possibly to the rates earned by rayon weavers.(62) This expectation was fuelled by the recommendation of the Board of Trade Working Party Report in early 1946 that: "A review of wages arrangements and methods of organization of work should be made in all sections."(63) As spinning had already been the subject of a detailed investigation, the clear implication was that weaving should be next. In July 1946 Sir Raymond Streat reported to the C.S.M.A. that since "London is honestly fumbling with the Report with no fixed ideas or policy", it was up to the industry itself to take the initiative if it wanted a fair deal.(64) The government was bound to ask for a wages commission and the C.S.M.A. must show eagerness to co-operate. Employers' leaders resolved to follow Streat's advice and adopt a positive attitude to any calls for an enquiry. The following week Streat was able to elicit a similar promise from the A.W.A.'s Central Committee.(65)

George Isaacs, the Minister of Labour, announced in November 1946 that he would be setting up a commission to devise a new method of labour utilization for the Lancashire loom weaving section. Mr R. Moelwyn Hughes

K.C. chaired the Cotton Manufacturing Commission, which consisted of three independent members plus five each from the C.S.M.A. and A.W.A.. External events gave the deliberations greater urgency. During 1947 the government was forging ahead with its plans for a re-equipment subsidy for the spinning section. One of the conditions for the receipt of a re-equipment grant would be the willingness of the firm and its operatives to introduce modern methods of labour utilization. Weaving employers hoped that a similar investment subsidy would be made available for the purchase of new looms and were anxious to proceed with the establishment of a new wage list. (66)

The Cotton Manufacturing Commission produced an interim report in early 1948. Two crucial assumptions underlay the Commission's recommendations. Firstly, that trade would be sufficiently buoyant to prevent redeployment leading to a net loss of jobs in the industry. Secondly, that automatic looms could not be produced in sufficient numbers to re-equip the industry in the near future.

Some rayon weaving sheds outside the North West area (and therefore not subject to the Uniform Lists) were able to run their Lancashire looms in complements of up to 48 per operative, but the restrictive clauses of the Uniform Lists were holding back all progress in Lancashire: "We have been told that the craft of weaving in Lancashire is still the same in all important respects as it was half a century ago. It is hardly too

much to say that the Uniform List has seen to that...the Uniform Lists must go."(67)

Setting out the principles which must govern the new list, the Commission stressed that it must enable the great majority of operatives to increase their earnings, otherwise it would be unacceptable to the unions; however those currently weaving particularly well paid sorts might have to accept a reduction in wages.(68) The Commission decided to recommend a wage list based on the Shirley Institute scheme, as it was thought that the R.W.A.'s plan for a full work measurement study at each mill would have been unworkable. Several amendments to the scheme as it stood would be necessary: for instance, the guaranteed minimum wage would be retained. In a concession to expediency the rayon differentials would also continue, although at a considerably reduced level. The interim report concluded that the new C.M.C. List should be optional, with firms free to use the old lists if they or their operatives so desired. This was in sharp contrast to the Evershed proposals which involved the abolition of the prevailing lists. However, it was imperative that the C.M.C. List be speedily introduced: "We cannot wait years before the cotton manufacturing industry has its proper chance to contribute more fully to the vital needs of our export trade and of our own homes."(69)

Reaction to the Commission's report was mixed. Herbert Morrison, the Lord President of the Council, told a rally at Belle Vue, Manchester, that redeployment

would form an essential part of the industry's production drive, while most employers were generally favourable to its recommendations.(70) The trade union response was less fulsome. Andrew Naesmith, still general secretary of the A.W.A., welcomed the report as "revolutionary" and predicted that the C.M.C. List would soon entirely supplant the Uniform Lists.(71) Not all of Mr Naesmith's members, particularly in rayon weaving and high wage centres such as Nelson, Colne, and Padiham, shared his enthusiasm.(72) Nevertheless the industry resolved to proceed with a number of 'notional' experiments to find out what effect the C.M.C. List would have on wages. These experiments took several months and by January 1949 the government was growing increasingly impatient with the weaving section's dilatory progress, threatening to set up a Wages Council to implement the C.M.C. List regardless of the industry's attitude.(73)

The results of the 'notional' experiments showed that (without redeployment) the C.M.C. List would reduce the earnings of rayon weavers and operatives producing mixtures and some coloured cloths by up to 25 per cent. But it was expected that these losses would be more than offset after redeployment. Underloading, especially in rayon weaving sheds, was described as "ludicrous". Most cotton weavers could easily take on several more looms, while rayon weavers could tend up to eight more looms without being overworked. To support their case, the Commission referred to data from ten mills which had

tried out the C.M.C. List in conjunction with a major reorganization of the work process. Output per operative hour increased by an average of 89.4 per cent, while average earnings rose by an average of 43.2 per cent. It was pointed out that these were model sheds and that such spectacular results could not always be expected. (74)

Dissension in the Nelson area was not quelled by these results. Nelson's employers continued to complain that they would be left "high and dry" by the C.M.C. Lists, as their weavers would not accept the introduction of the system. They proposed the addition of a quality bonus for weavers in areas producing fine cloths and were the only group within the C.S.M.A. to vote against endorsement of the C.M.C. Lists. (75) The Nelson Weavers Association stridently opposed the C.M.C. List and warned that:

"The drive for redeployment is taking place on the old machinery. It is in many cases becoming a cover for the old pre-war rationalisation with a drive for speed-up and exploitation. It is true that in some cases the bait offered to the worker is increased earnings, but the amount of increase is not commensurate with the speed up in the work." (76)

In November 1949 agreement was finally reached between the A.W.A. and C.S.M.A. on implementation of the C.M.C. List. The A.W.A. insisted that the new list could only be introduced after a ballot of the operatives at the mill concerned, although this was not always followed in practice. It was resolved that a special enquiry should look into the question of the rayon

differentials in an attempt to placate the Nelson interest, but little came of this proposal.(77) Three years had elapsed since the establishment of the Cotton Manufacturing Commission in 1946. Negotiations had been painfully slow as a result of suspicions on both sides, and this was undoubtedly detrimental to the redeployment movement in the weaving section as a whole.

The C.M.C. system was not based on the application of work measurement techniques at mill level; therefore it could not guarantee that workers at different firms were assigned exactly the same workload. Nevertheless the C.M.C. List constituted the best approximation under the circumstances.(78) Operatives in redeployed mills using the C.M.C. system enjoyed an increase in earnings of about 32 per cent.(79) Unfortunately the new list was introduced too late for it to have had a major impact on productivity or the postwar labour shortage. Only four per cent of mills had introduced the C.M.C. List by the end of 1950.(80) Lomax estimated that between 1948 and 1952 productivity in weaving rose by a mere 1.8 per cent per annum.(81) The Cotton Manufacturing Commission's recommendations had been far more ambitious than those of the Evershed Commission, but they had been stifled by the same environment of inertia and suspicion.

IV

"A great wealth lies dormant in the mills and sheds of Lancashire which can, by redeployment, be used for the benefit of all concerned...[but the wage lists] had conceived, brought forth and nurtured, a Frankenstein monster which, by its cloying grasp, envelops the trade, barring the way to progress".(82)

R.J. Gigli, A.I.C. Ltd, 1947.

Ministers had hoped that the cotton industry could be induced to reform its methods of labour utilization, thereby assisting Lancashire to contribute to the export drive between 1945 and 1950. The results were disappointing. Discussions on schemes involving the reform of labour practices took longer than could reasonably have been expected. Employers were reluctant to force the pace and risk strikes at a time when they were already making substantial profits. The unions themselves were unsure how to proceed. In the twenties and thirties they had fought the intensification of work on the grounds that it increased the exploitation of their members and threatened them with unemployment. Although in 1945 it seemed unlikely, to men such as Naesmith, that unemployment would return in the short-term, it was not easy to convince the rank-and-file that things had changed.

In these circumstances it was perhaps inevitable that negotiations should be convoluted and almost interminable. Slow progress in redeployment put additional constraints on Lancashire's contribution to the production and export drives of the 1940s, and reduced the industry's ability to stand up to renewed overseas competition in the 1950s.

Notes to Chapter 4.

(1) Cotton Board, Equipment and Labour Utilisation in the Cotton Industry (Manchester: Cotton Board, 1947), pp. 9-11.

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Chapter 5.

INVESTMENT IN THE LANCASHIRE COTTON INDUSTRY, 1945-51.

The re-equipment of Lancashire's elderly fixed capital stock was commonly regarded as one of the prime tasks facing the cotton industry at the end of World War Two. A substantial investment programme was considered important on two counts: to assist the industry to save scarce labour and increase its output, thereby raising cotton's contribution to the nation's postwar export drive; and in the longer term to enable British mills to regain their international competitiveness.

Little had been done to re-equip the industry during the interwar years, when low profits, failing confidence, and the depressed state of demand had made investment a particularly unattractive proposition. In 1945 mule spindles still made up the lion's share of British cotton spinning capacity, while in most other countries the mule was virtually extinct. The vast majority of mule spindles had been installed before World War One, with few, if any, new mules constructed after the mid 1920s.(1) In weaving Britain was unique among major cotton textile producing regions in persisting with the Victorian technology of the Lancashire loom. Over 90 per cent of looms in place in British mills in 1945 were aging Lancashire looms, the automatic loom having gained only a small foothold in the weaving sheds. It was clear to everyone, the government, the unions, and the employers' federations, that this state of affairs could not be allowed to

continue, that Lancashire would have to re-equip if the future was to be met with confidence.

This chapter discusses the progress made towards re-equipment between 1945 and 1951.(2) In the event Lancashire's achievement was minimal. Section I considers the re-equipment plans devised by the government and the industry at the end of the war, and contrasts these ambitious programmes with the low level of investment in cotton during the late 1940s. Section II provides a theoretical background for the following analysis of the reasons for Lancashire's failure to invest. In Section III factors influencing the demand for textile machinery are considered, while Section IV looks at the supply of textile machinery. The general conclusion is that a combination of low levels of capacity utilization, uncertainty about the long run demand for British cotton textiles, the low fixed costs of continuing to operate with old machinery, technical inter-relatedness, and the inadequacy of supplies of certain crucial items of equipment, were the main constraints on investment in Lancashire between 1945 and 1951.

I

After the debacle of the 1920s and 1930s few people involved with the cotton industry questioned the need for some measure of modernization, although doubts remained over the appropriate nature and extent of re-equipment. There was no shortage of grandiloquent schemes for re-equipping Lancashire's spinning mills and

weaving sheds. The most authoritative of these programmes will receive consideration in the first part of this section; in the second part the evidence, such as it is, on the level of investment in the cotton industry during the late 1940s will be examined.

In 1944 the Cotton Board Committee to Enquire into Post-War Problems reported that many firms were eager to re-equip, provided the government could assure them of the maintenance of stability in the markets for raw cotton, cotton textiles, and textile machinery. A survey conducted for the Cotton Board estimated that the industry had firm plans to place orders for plant and machinery worth £43M at prewar prices.(3) But several preconditions would have to be met before firms would have the confidence to implement their re-equipment plans. Firstly, the government would have to promise to follow a 'sound policy' towards the industry, guaranteeing a regime of minimum prices to prevent the re-emergence of weak selling (the sale of output below cost-price), establishing a redundancy scheme to eliminate excess capacity, and taking political action to ensure that cheap foreign cloth would not be allowed to overrun Lancashire's export markets. Secondly, there would have to be an agreement between the government, the cotton industry, and the textile machinery industry to facilitate an adequate supply of new equipment. This agreement would include plans for the early release of textile machinery works from munitions production, and the assignment to textile machinery makers of priority

access to supplies of skilled labour and raw materials. There would also be understandings on the proportion of textile machinery to be exported and on the pursuance of a responsible pricing policy for new looms and spinning equipment. Given these measures the Cotton Board was confident that re-equipment could proceed without an investment subsidy. But this belief in the industry's ability to raise the finance for re-equipment without government assistance was not universally shared. The United Textile Factory Workers' Association, the political arm of the cotton unions, warned that "the public...have already lost large sums" lending to Lancashire and may not want to risk more, in which case the state should provide the cash for re-equipment.(4)

In broad terms the significance of the 1944 Cotton Board report did not lie in the spuriously exact figure specified for firms' investment plans, but in the assertion that expectations were crucial to the decision to re-equip. Nevertheless the government chose largely to ignore the 1944 report and appeared unsympathetic towards proposals for price maintenance and redundancy schemes, and action to curb the resurgence of Japanese competition.(5) Talks were initiated between the cotton and textile machinery industries but these proved of dubious value, as will be seen in section IV. By casting aside the Cotton Board's recommendations for measures to restore confidence to Lancashire, the government created a serious rift between itself and the cotton industry.

Further prominence was given to the re-equipment

issue by the publication, also in 1944, of the report of the Ministry of Production's Textile Mission to the U.S.A.. The Platt Report, named after its chairman Frank Platt, stressed that labour productivity in British mills was far below that in U.S. mills.(6) Platt claimed that the use of archaic machinery contributed to Britain's low level of productivity. He recommended that Lancashire should increasingly concentrate on modern ring spinning systems (i.e high-drafting) and automatic looms. One manufacturer described the Platt Report as "terrifying", but it probably did more to raise employers' hackles than to spur them on to more rapid modernization.(7) A leading spinning employer, J.A. Barber-Lomax, complained that Lancashire was already doing its best to re-equip and that the installation of the latest spinning technology often led to a reduction in yarn quality.(8) In the weaving section the C.S.M.A. considered the Platt Report, but came to the lame conclusion that substantial progress could be made through the reconditioning of existing machinery, without resorting to extensive re-equipment.(9)

Trade unionists were generally more effusive in their advocacy of large-scale re-equipment, possibly because they would not have to foot the bill. Leaders of the ring spinners' and weavers' unions were particularly enthusiastic about new techniques. Andrew Naesmith, general secretary of the A.W.A., "wanted to see a wide expansion in the use of automatic looms, something like 250,000 operating alongside 150,000 Lancashire

looms."(10) Hardly surprisingly the mule spinners were the least amenable to re-equipment, as this would have involved the gradual disappearance of their section of the industry. In 1948 they told the President of the Board of Trade, Harold Wilson, that the government was being hasty in its dismissal of the mule-spinning section, and argued that mules could produce yarn of a higher quality than ring frames.(11)

By far the most detailed examination of the re-equipment question was carried out by the 1946 Board of Trade Working Party on the cotton industry, which was chaired by Sir George Schuster. The Working Party could not agree on the amount of investment that was desirable. One group, consisting of Schuster and the trade union members, had no qualms about putting forward an ambitious scheme under the motto: "Fewer and better mills." They advocated a five-year plan to install 120,000 automatic looms.(12) As regards spinning, they were less precise, but indicated that there must be an "eventual transformation into an industry equipped with a greatly reduced number of modern spindles...worked double shifts." They recommended an immediate survey of equipment in the spinning section to assess needs. Although much could be achieved by reconditioning existing capacity, it was emphasised that unless this was accompanied by extensive re-equipment, cotton would "drift into a period of prolonged trouble and eventually shrink down to the size of a minor British industry."(13) There was a danger that high textile

machinery prices would render re-equipment unprofitable; but as it was in the national interest to maximize production and guarantee the future of a major industry, the Schuster group recommended the institution of schemes for purchasing and scrapping redundant spinning machinery, and for the provision of a spinning investment subsidy, to be financed by a compulsory levy on firms in the industry. (14)

These proposals were vigorously resisted by the other members of the Working Party, mainly comprising representatives of the employers, whose spokesman was John Jewkes of Manchester University. Jewkes believed that market forces would ensure that the appropriate amount of re-equipment would take place. A redundancy scheme would be foolhardy in the absence of any firm idea of the future level of demand in the industry: "To carry out a 'surgical operation' before it is known what part, if any, of the patient should be amputated, seems to us a highly precipitate move." (15) Schuster's investment programme was based, in part, on the need to introduce labour-saving machinery to increase production at a time of labour shortage, but the extent of the permanent shortfall of operatives would not be known until demobilization had been completed. Jewkes maintained that a re-equipment subsidy would probably do no more than redistribute a fixed amount of investment expenditure among firms in the industry. Even assuming that the subsidy succeeded in increasing the overall level of investment in cotton, it would be at the

Table 5.1.

U.K. output, exports, and imports of ring spindles,
1937-51.

	RINGS IN PLACE	PRODUCTION OF RING SPINDLES		EXPORTS OF RING SPINDLES		IMPORTS OF RINGS
	'000s (i)	'000s (ii)	tons (iii)	'000s (iv)	tons (v)	tons (vi)
1937	10,700	..	44,773	..	..	..
1945	10,360	..	..	..	9,059	12
1946	10,410	..	..	..	30,292	131
1947	10,260	..	..	..	41,298	302
1948	10,090	1284	24,298	1085	19,492	297
1949	10,190	..	..	879	15,341	215
1950	10,330	..	..	799	14,434	189
1951	10,570	1264	..	787	15,243	302

N.B. (i) This column refers to rings in the cotton industry and includes rings in closed mills. Source: C.B.Q.S.R.

(ii), (iii) Production figures refer to sales of rings for spinning all fibres except wool. Source: Board of Trade, Census of Production, 1948, 1951.

(iv), (v) Exports comprise rings for spinning cotton and rayon staple fibres. Source: Annual Statement of the Trade of the United Kingdom.

(vi) Figures for 1945-7 include machinery for preparatory processes. Imports exclude imports for re-export, but include rings for the spinning of all fibres. Source: Annual Statement of the Trade of the United Kingdom.

expense of a misallocation of resources. It was pointless bribing spinning companies to install equipment which they did not really want, for this would not help the industry to reduce its costs in the long-term.(16) Moreover there were other sectors of the economy more deserving of subsidy, such as the housing programme. Jewkes's only positive suggestion was that textile firms should have access to subsidised loans for a limited period, if this was considered necessary to break through a psychological barrier to re-equipment.(17) With hindsight Jewkes's policy of non-intervention would have been at least as rational as the confused and half-hearted meddling of successive governments in the affairs of the Lancashire cotton industry.

In the remainder of this section the industry's success, or rather lack of success, in fulfilling the government's plans for large-scale re-equipment will be examined. Unfortunately this task is hampered by the relative paucity of useful data. Nevertheless a clear picture emerges.

Table 5.1 shows that the number of ring spindles in place in British cotton mills hardly changed between 1937 and 1951. Re-equipment in spinning was particularly sluggish. British textile machinery manufacturers produced a mere 24,298 tons of ring spindles in 1948, compared with 44,773 tons in 1937. What is more, 80 per cent of the U.K. output of ring spindles was exported. Since imports were negligible, this left approximately

Table 5.2.

World cotton spinning capacity, 1939-50.

(Figures in thousand spindles)

	(1939)		(1950)	
	Mule	Ring	Mule	Ring
U.K.	25,847	10,475	19,270	10,310
Germany	3,287	8,938	446	5,339
France	2,303	7,491	1,388	6,760
Italy	550	4,774	91	5,475
U.S.	213	25,698	0	23,286
India	494	9,560	314	10,220
Japan	6	11,496	0	3,739
WORLD	36,996	110,652	24,450	98,876

N.B. In the 1950 data the Russian Zone is excluded from Germany, and Ceylon and Pakistan are excluded from India.

Source: International Federation of Master Cotton Spinners' and Manufacturers' Associations, International Cotton Statistics (Manchester: I.F.M.C.S.A., 1950).

200,000 ring spindles per annum for the British market. At this rate of re-equipment it would have taken fifty years to replace Britain's mule spindles with ring spindles, and a further fifty years to renew the stock of prewar ring spindles in place in 1948. The figures for 1951 suggest that the quantity of ring spindles available for the home market had risen to about 500,000 per annum, primarily as a result of falling exports, but it would still have taken several decades to replace the capacity installed prior to 1939. Between 1939 and 1950 Britain's share of world mule-spinning capacity rose from 69 per cent to 79 per cent, while its share of ring-spinning capacity was roughly constant at 10 per cent (see Table 5.2). There can be no clearer evidence that Britain was failing to keep pace with its competitors in the scrapping of old mule spindles and the installation of modern ring frames. In the light of the high expectations of the 1946 Board of Trade Working Party this performance appears particularly damning.

The data on automatic looms are depicted in Tables 5.3 and 5.4. As in the case of ring spindles, little progress was made during the postwar era. Although the Ministry of Supply's Committee of Investigation into the textile engineering industry had looked forward to the installation of 20,000 automatic looms per annum, and Andrew Naesmith wanted this doubled to 40,000, there was no prospect of these targets coming to fruition. Indeed the number of automatic looms in British mills rose by

Table 5.3

U.K. output, exports, and imports of automatic looms,
1936-52.

	LOOMS IN PLACE		PRODUCTION		EXPORTS	IMPORTS
	Total ('000s) (i)	Autos Looms (ii)	OF AUTOS Total Cotton (iii)	(iv)	OF AUTOS Total (v)	OF AUTOS Total (vi)
1936	505	15,224	..	..	..	..
1937	471	..	3,062	..	..	..
1945	300	..	..	..	158	40
1946	325	..	..	..	6053	72
1947	364	..	..	..	7732	650
1948	364	25,719	7,032	6055	2495	398
1949	357	..	..	..	2687	1087
1950	358	..	6,259	..	2931	628
1951	358	..	10,021	8051	4045	213
1952	354	34,282	9,042	..	4171	101

N.B. (i) Automatic and non-automatic looms in running mills in the cotton and rayon industry of N.W. England. Source: C.B.Q.S.R.

(ii) 1936 figure is for the cotton and rayon industry of Great Britain; 1948 and 1952 figures are for the cotton and rayon industry of the United Kingdom. Source: Cotton Board, Survey of the Machinery in the Weaving Section of the Cotton Industry (Manchester: Cotton Board, 1949), p. 10; International Federation of Master Cotton Spinners' and Manufacturers' Associations, International Cotton Loom Statistics: Census of the World's Cotton Power Looms (Manchester: I.F.M.C.S.M.A., 1937-53).

(iii) This series refers to the production of automatic looms for all sections including the wool industry. Source: Annual Abstract of Statistics; Board of Trade, Census of Production, 1948, 1951.

(iv) Automatic looms for weaving cotton, rayon, and silk only. Source, Board of Trade, Census of Production, 1948, 1951.

(v), (vi) Figures for 1945-7 do not distinguish between automatic and other looms. Figures deal with automatic looms for use in all branches of textile production. Source: Annual Statement of the Trade of the United Kingdom.

Table 5.4.

World cotton and rayon weaving capacity, 1936-52.

(Figures in thousand looms)

	(1936)			(1952)		
	LANCS	AUTOS	SEMI-AUTOS	LANCS	AUTOS	SEMI-AUTOS
U.K.	484	15	6	309	34	6
Germany	170	18	13	141	..	..
France	153	38	3	92	64	..
Italy	92	34	22	51	50	37
U.S.	181	392	..	..	399	..
India	197	4	..	189	9	0
Japan	293	40	..	238	52	..
WORLD	2344	662	64	830	834	65

N.B. In the data for 1952 the Russian Zone is excluded from Germany and Ceylon and Pakistan are excluded from India.

Source: International Federation of Master Cotton Spinners' and Manufacturers' Associations, International Cotton Loom Statistics: Census of the World's Cotton Power Looms (Manchester: I.F.M.C.S.M.A., 1937-53).

slightly less than 20,000 in the 18 years between 1936 and 1952. Exports accounted for between one third and one half of British automatic loom production. Had exports been eliminated, production would still have been insufficient to fulfil the Board of Trade Working Party's objective of 120,000 new automatics looms for Lancashire. In 1936 Britain possessed two per cent of automatic looms in the world cotton textile industry. By 1952 this proportion had risen to four per cent, a paltry figure for a cotton industry second only to that of the United States. Lancashire's weaving mills had no more success than its spinning section in re-equipping between 1945 and 1951.

This section has described the plans for re-equipment which were formulated in the mid 1940s. An account has been given of the course of investment in Lancashire between 1945 and 1951. No attempt has been made to explain the cotton industry's failure to renew its fixed capital stock during this period. Such an exercise must await the introduction of a theoretical framework in the next section.

II

The present section outlines the theoretical framework within which the analysis of fixed capital formation in the British cotton industry between 1945 and 1951 will be conducted. A neo-classical approach to investment will be eschewed in favour of one which builds on the work of Michal Kalecki. Recourse will also be made to the theory of the inter-relatedness of

technology, which suggests that investment may be inadequate in industries lacking a strong element of vertical integration. As Britain in the 1940s exhibited some of the traits of an East European socialist economy, Janos Kornai's examination of resource-constrained economic systems will be of assistance in discussing bottlenecks in the investment process.

Irving Fisher provided one of the baldest statements of the neo-classical theory of investment in his The Theory of Interest: "The rate of return over cost [of a project] is that rate which, employed in computing the present worth of all the costs and the present worth of all the returns, will make these two equal."(18) If the rate of return exceeds the rate of interest, the firm will proceed with the project. It was argued, other things being equal, that the rate of interest was the prime influence on the decision to invest. In the late 1930s the Oxford Economics Research Group was able to refute this hypothesis with empirical data. Firms in a variety of industries were asked to fill in a detailed questionnaire about interest rates. 80 per cent said that the rate of interest had no affect whatsoever on investment. Crucially, from the point of view of the present work, 23 of the 29 textile firms in the survey came to this conclusion.(19) Many firms considered expectations of changes in the price and availability of raw materials to be of far greater importance than interest rates in determining whether or

not to invest.

More recent neo-classical investment theories have played down the role of interest rates. For instance, Jorgenson's postulates that changes in tax rates, the output of final goods, and the ratio of the price of final goods to the price of capital goods, are crucial factors in determining the profitability of an investment project.(20) This cautious retreat from emphasis on the interest rate does not resolve the other major problem with the neo-classical argument, namely the assumption that firms can accurately predict both the lifespan of the project and the running costs and revenues that will prevail in each year. It is plainly impossible for the firm to know how its costs and the price of its final product will change in the future. Such uncertainty will be increased by firms' ignorance of their competitors' intentions. G.B. Richardson has demonstrated that firms may be reluctant to proceed with otherwise attractive items of investment, if they suspect that other companies are planning similar projects. They will fear the emergence of surplus capacity and the consequent redundancy of their newly installed equipment. If all firms shared the same concern no investment would take place and the industry's capital stock would become increasingly obsolete.(21) By assuming that firms have perfect foresight, neo-classical theories are able to ignore such difficulties. Herein lies the poverty of the neo-classical approach and the need to devise a more

fruitful theory of investment.

In their analysis of the United Steel Company's performance, Andrews and Brunner concluded that the level of demand for the final product was the foremost influence on the decision to invest in fixed capital.(22) This view is echoed by economists working in the Kaleckian tradition. The accelerator theory predicts that a firm's investment intentions are a function of changes in its planned level of final output. Thus it is possible to identify the first set of factors influencing the decision to invest: the current state of demand for the final product, expectations of changes in the demand for the final product, and the level of capacity utilization. A further important influence would be the ratio of the price of capital goods to the price of the final product.(23)

In Kaleckian investment theory financial factors are of great significance. Undistributed profits are the most accessible source of finance for the firm, and consequently their level and rate of growth will be important factors for a company to bear in mind when it is considering its plans for investment. The rate of change of profits relative to the rate of change of capital goods prices should also be taken into account. Moreover if firms cannot pay for their investment programmes out of profits alone they will turn to the banks and the stock exchange. The ease with which loans and overdrafts can be obtained and new stocks and shares issued will influence the level of investment. Kalecki

argued that capital markets were highly imperfect, so that small firms would find it disproportionately difficult to raise finance.(24)

Two further factors could affect the level of investment. Firms may be induced to install new machinery if they perceive that it embodies technical improvements. Finally the Kaleckian approach to investment puts great emphasis on the state of business confidence, i.e. on Keynes's 'animal spirits'. In essence Kaleckian investment theory can be reduced to four basic influences: demand, capacity, profits, and expectations. Empirical support for this approach has been forthcoming in recent years. In a study of seven major U.K. manufacturing sectors, Panic and Vernon concluded that demand, profitability, and confidence were the main determinants of gross investment between 1960 and 1972. Nobay has produced similar results for the U.K. between 1959 and 1966, while Savage has found that fixed investment in the U.K. is insensitive to changes in the interest rate.(25)

Lancashire's cotton textile industry was organized on a horizontal basis, the successive processes of spinning, weaving, finishing, and converting, being carried out by separate firms. Marvin Frankel argued that the form of industrial structure in the Lancashire cotton industry had important consequences for investment behaviour.(26) Technology was inter-related: to obtain the maximum return from the introduction of automatic looms, it was necessary to operate them in

conjunction with ring frames, which produced a stronger and more uniform yarn than the mule. Unfortunately weaving concerns had no control over the investment programmes of spinning firms, so there was no guarantee that a weaver re-equipping with automatic looms would be able to obtain a suitable supply of ring-spun yarn. The lack of co-ordination between the investment decisions of firms at different stages of the production process could well have been a factor retarding fixed capital formation in the cotton industry. William Lazonick has pointed out a related problem, resulting from the infrequency with which spinning and weaving capacity was located on the same or adjoining sites. Mule yarn could be transported on cheap and lightweight paper tubes, while ring yarn had to be wound onto large, heavy wooden bobbins. Consequently transport costs were higher for ring spinners, reducing the incentive for firms to substitute ring frames for mules.(27) It is impossible to say just how important these factors were in the 1940s, but they will certainly have to be borne in mind in the following discussion.

W.E.G. Salter clarified a crucial aspect of the decision to invest. Old fully written down machinery would be worth keeping in production for as long as it covered its average variable costs. But new machinery would be required to meet both average variable and average fixed costs. Therefore firms would only adopt a policy of scrapping and re-equipping if the total costs of operating the new machinery were less than the

variable costs of maintaining the existing equipment.(28) In an industry such as cotton, which was replete with elderly equipment, this factor should have been of considerable importance.

The work of Janos Kornai has been directed towards an analysis of economic transactions in economic systems where the problem of shortage predominates.(29) To a significant degree this was the situation in Britain during the 1940s: there was a general shortage of inputs, and, to varying degrees, the government instituted schemes for the rationing of coal, steel, and skilled labour. Prices of important commodities were controlled by formal and informal methods; consequently long waiting lists were the norm in situations of excess demand. The building of new factories was strictly regulated, as was the issuing of new stocks and shares.(30) Britain exhibited many of the features of an East European economy.

Kornai argued that markets experiencing chronic excess demand would exhibit 'suction'. This concept will be employed in the succeeding analysis of relations between cotton textile producers and textile machinery manufacturers during the 1940s. In a regime marked by suction there is constant pressure on suppliers to increase production as quickly as possible. Unable to raise prices at will or to obtain a greater allocation of inputs, suppliers will institute 'shock-work', working on Sundays and through holidays. Their investment plans will be directed towards obtaining a

rapid increase in output using established methods, and few resources will be channelled into projects with a long gestation period or into research and development. The short supply of some materials results in the 'forced substitution' of others and a reduction in efficiency. Suppliers need not provide work of a high quality, or adjust their product to meet the requirements of the customer. The customer's desperation is a function of the length of the waiting list, expectations of changes in the degree of shortage and the price level, and the urgency with which supplies are needed. Crucially, the vendor is in a position to choose the buyer. Output could be allocated among customers in various ways: the supplier may select purchasers at random; a higher authority may distribute output according to a plan; supplies may be made available to those prepared to pay the largest bribes; or suppliers may express a preference for buyers who are willing to accept shoddy work without complaint.(31)

The process of investment in cotton textiles during the second half of the 1940s will be examined within the context of the theories described in this section. Kaleckian investment theory, the economics of inter-relatedness, Salter's exposition of the choice between old and new machinery, and Kornai's analysis of markets in excess demand, will be of considerable use in the analysis of investment in the cotton industry.

III

This section analyzes the factors affecting the demand for capital goods in the Lancashire cotton industry between 1945 and 1951; namely the strength of demand for cotton textiles; the industry's level of capacity utilization; the prevailing state of confidence; profitability; the industry's access to external sources of finance; the effect of re-equipment on production costs; the inter-relatedness of technology; and the 1948 spinning re-equipment subsidy.

In the aftermath of World War Two there was no question of investment in cotton being constrained through a lack of demand. Table 5.5 shows that the production of yarn and cloth rose by over 50 per cent between 1945 and 1950. Both domestic and export markets were buoyant. Although clothing was strictly rationed during the postwar era, the supply of cotton and allied textiles to industrial and public sector consumers increased by 28 per cent between 1935-7 and 1949.(32) Cotton was also selected by the Labour government to play a major part in the nation's export drive during successive balance of payments crises in the second half of the 1940s. Textile production in Japan and Germany had been severely curtailed as a result of the war, and Lancashire had a free run of world markets. In January 1948 the Working Party on the Increase of Textile Exports reported to the Cabinet Production Committee that: "The present demand is almost insatiable, and in

Table 5.5.

Demand and capacity utilization in the British cotton and allied textiles industry, 1937-50.

(1) Spinning section (excluding waste spinning and doubling)

	(a)	(b)	(c)	(d)	(e)
	YARN OUTPUT (M lbs)	EMPLOY- -MENT	SPINDLES IN PLACE (ALL MILLS) (M mule equivalent sp.)	RUNNING SPINDLES	(d) as % of (c)
1937	1253	176,000	44.1	39.3	89
1945	625	71,700	39.0	17.0	44
1946	697	82,610	38.2	20.4	53
1947	704	87,380	37.3	21.8	58
1948	863	99,110	36.1	25.1	70
1949	887	103,420	35.0	26.8	77
1950	944	106,990	34.5	27.5	80

(2) Weaving section

	(a)	(b)	(c)	(d)	(e)	(f)
	CLOTH OUTPUT (M yd)	CLOTH EXPORTS (M yd)	EMPLO- -MENT	LOOMS IN PLACE IN RUNNING MILLS (thousands)	RUNNING LOOMS	(e) as % (d)
1937	4124	1429*	187,000	..	..	..
1945	1847	517	96,020	300.0	215.9	72
1946	1974	626	101,000	324.6	208.4	64
1947	2012	643	108,600	363.6	224.0	62
1948	2440	916	121,270	363.5	252.4	69
1949	2592	1084	129,800	356.9	268.3	75
1950	2971	1020	137,080	357.7	281.4	79

*1938.

N.B. Yarn production and exports include spun rayon and mixtures yarn; cloth production and exports include mixtures and man-made fibres cloth. One ring spindle is equivalent to approximately 1.5 mule spindles.

Sources: Annual Abstract of Statistics; Board of Trade Journal, 152 (1946), p. 28; E. Hopwood, A History of the Lancashire Cotton Industry and the Amalgamated Weavers' Association (Manchester: A.W.A., 1969), pp. 191, 6; R.W. Lacey, 'Cotton's War Effort', Manchester School, XV (1947), pp. 56-7; C.B.Q.S.R.

so far as other countries are unable to find dollars to import from the U.S.A., is likely to be intensified."(33) Investment in new equipment, argued the Textile Exports Working Party, would facilitate an increase in production and exports to meet the demands of overseas customers. In the prevailing labour shortage, the installation of automatic looms and large modern ring-spinning equipment would be particularly desirable, as these would enable output per operative to be increased.

Other things being equal, the intense pressure of demand experienced by the cotton industry between 1945 and 1951 would have been a powerful incentive to the industry to re-equip. However, in the peculiar conditions of the late 1940s, a high level of demand was accompanied by a low level of capacity utilization. During the war 40 per cent of the cotton industry's capacity had been closed under the 'concentration scheme', which aimed to free workers for munitions production.(34) After the war the industry and the government had great difficulty, both in attracting operatives back into cotton, and in recruiting new labour. Conditions in the mills were unattractive and other industries, such as engineering, chemicals, clothing, and the public sector, were increasing their employment at cotton's expense.(35) Consequently the utilization of capacity in spinning and weaving remained at a comparatively low level. It could be argued that the condition of the labour market should have impelled

Table 5.6.

Index of cotton textile shares, 1938-51.

(100=Par)

June 30 1938	54	June 30 1948	190
Dec. 31 1938	50	Dec. 31 1948	214
June 30 1939	55	June 30 1949	149 .
Dec. 31 1939	84	Dec. 31 1949	164
June 30 1946	204	June 30 1950	173
Dec. 31 1946	227	Dec. 31 1950	199
June 30 1947	220	June 30 1951	258
Dec. 31 1947	232	Dec. 31 1951	195

N.B. The shares are those of 12 leading combines involved in the spinning, doubling, weaving, and finishing sections of the cotton industry, viz: Amalgamated Cotton Mills Trust; Bleachers Association; Bradford Dyers association; British Cotton and Wool Dyers Association; Calico Printers Association; Crosses and Heaton's; English Sewing Cotton; English Velvets; Fine Spinners and Doublers; Joshua Hoyle and Sons; Lancashire Cotton Corporation; and Rylands and Sons.

Source: F.W. Tattersall's Annual Cotton Trade Review.

firms to install labour saving equipment such as automatic looms, modern ring frames, and high drafting preparatory equipment.(36) But since this clearly did not happen, an alternative line of reasoning must be sought. The most logical explanation would be that firms did not expect the shortage of labour to last. Once operatives were available in sufficient numbers it would be possible to increase output and exports without first re-equipping. Firms would have reached this conclusion on the evidence of Lancashire's experience in 1918, when labour was in short supply, but only for a relatively brief period.

Expectations are naturally quite difficult to quantify, especially as there are no C.B.I. surveys of industrial trends for the 1940s; but data is available on the prices of the leading cotton textile shares. Table 5.6 depicts this information, which must be treated with particular caution, because share prices are a measure of the Stock Exchange's short-term confidence in the cotton industry, and do not necessarily reflect long-term expectations within textile firms themselves. It is apparent that the market's confidence in the Lancashire was considerably greater than it had been before the war, although it began to flag a little between 1948 and 1950. However, the share index for January 1951 marked a peak which was not to be exceeded, even during the merger drive of 1963-4. Unfortunately the City's relative optimism about cotton was not echoed in the board-rooms of Lancashire.

Most of the literary sources suggest that the latter half of the 1940s was dominated by apprehension and uncertainty. As Mr. G.A. Barnes, president of the F.M.C.S.A., told the Federation's A.G.M. in March 1946: "No firm will renew its machinery merely to have 1946...on it."(37) The industry feared a return to the disastrous conditions of the 1920s and 1930s, when firms were forced into liquidation by the loss of export markets and the recession in domestic demand. If demand collapsed again in the 1940s, after firms had installed new equipment, they would be faced with large depreciation charges, and possibly interest payments, which they could ill afford in the changed market conditions. This possibility was a powerful deterrent to investment and was stressed by many firms during the discussions on the Platt Report. In this connection great concern was expressed about the revival of overseas competition. One weaving employer voiced the fear that if the Indian cotton industry invested its wartime profits in automatic looms, "we should be in a hopeless position."(38) During the period after 1945 the Cotton Board regularly petitioned the British government, without success, to limit the future development of the Japanese cotton industry. In 1950 the chairman of the Cotton Board went so far as to visit Japan to acquaint the Allied authorities with the depth of Lancashire's fears.(39) Firms were well aware that competition would eventually return to world textile markets. Instead of spurring them on to even greater

Table 5.7.

Net profits and textile machinery prices in the Lancashire cotton industry, 1930-1951.

(i) Independent Spinning Companies: profits, dividends, and textile machinery prices.

	Firms No.	Total Profits (£)	Average Profit (£)	Average Dividend (% p.a.)	Machinery Prices (£/ton)*
1930	..	..	-6,548	1.91	95
1931	..	..	-7,727	1.46	95
1932	..	..	-3,550	1.55	87
1933	..	..	-3,273	1.50	92
1934	..	..	-356	1.57	85
1935	..	..	196	1.75	103
1936	95	157,511	1,658	1.91	112
1937	90	797,108	8,857	4.28	112
1938	85	913,119	10,742	5.53	119
1939	86	481,292	5,596	5.39	131
1940	74	1,072,085	14,488	8.80	162
1941	71	792,482	11,162	9.84	200
1942	65	525,071	8,078	9.59	262
1943	62	493,476	7,959	10.68	360
1944	63	534,856	8,490	11.00	357
1945	65	535,801	8,243	11.13	339
1946	68	667,174	9,812	12.21	278
1947	73	1,026,267	14,058	14.52	303
1948	81	1,626,762	20,083	15.25	330
1949	73	1,920,863	26,313	16.83	367
1950	73	2,602,252	35,166	18.21	386
1951	80	4,443,309	55,154	21.26	416

* This series is derived from figures showing the weight and value of textile machinery (for all fibres) exported from Britain.

(ii) Leading Spinning and Weaving Combines: profits and dividends.

	Firms No.	Average Profit (£)	Average Dividend (% p.a.)
1948	9	306,684	15.00
1949	9	426,850	15.22
1950	10	484,371	16.96
1951	11	761,526	19.00

N.B. The combines controlled over 200 mills. Figures include profits of subsidiaries.

Source: F.W. Tattersall's Annual Cotton Trade Review.

efforts to re-equip, this knowledge merely served to deepen the industry's gloom. Lancashire's confidence had been shattered after 1920 and the industry had no faith in its ability to compete, except in a heavily protected imperial market.

Uncertainty was increased by concern about the government's intentions towards the industry. Although nationalization of cotton was not mentioned in Labour's election manifesto, Sir Stafford Cripps warned the Cabinet in August 1945 that many employers were still profoundly suspicious of the government's involvement in the industry's affairs, and that this was threatening to undermine his plans for Lancashire's postwar reconstruction.(40) Even the establishment of the Board of Trade Working Party was regarded in some quarters as a prelude to nationalization. Confidence, as both Keynes and Kalecki emphasised, is a crucial factor in the decision to investment. The climate of pessimism in Lancashire after 1945 was a major cause of the industry's failure to re-equip.

Kalecki stressed that profits were the main source of finance for industrial investment. Table 5.7 shows levels of net profits (i.e. after depreciation) for independent spinning companies and large combines in 1930-51 and 1948-51 respectively. Due to the inadequacy of the data, movements in the profitability of the independent spinners will have to be taken as a proxy for changes in the profitability of the industry as a whole. It is evident that there was a substantial

improvement in profits between the mid 1930s and mid 1940s, particularly when it is recalled that the apparently high profits of the late 1930s are the result of the exclusion from the statistics of bankrupted firms, and do not reflect a dramatic improvement in market conditions.(41) Firms constantly complained that their profits were being eroded by punitive levels of taxation. P.W.S. Andrews, the economist, also believed that high taxation had contributed to Lancashire's failure to invest after 1945. But there seems little justification for such an argument. The burden of taxation on companies was reduced during the period of the Attlee government, while steps were taken in 1945 to introduce a 20 per cent investment allowance.(42) Lancashire had no call to decry the tax laws when a substantial proportion of the industry's increased profits during the late 1940s was dissipated in increased dividend payments. Tattersall's figures do not take account of inflation during the war; consequently it is useful to be able to compare profits with machinery prices. Kalecki postulated that changes in the ratio of profits to machinery prices were important influences on investment. The Board of Trade Cotton Working Party estimated that automatic loom prices rose by 50 per cent during World War Two, while the price of high-draft ring spindles increased by an average of 65 per cent. The machinery prices in Table 5.7 indicate that the Board of Trade's figures may have been underestimates. Nevertheless it still seems that

profits increased faster than capital goods prices between the mid 1930s and the mid 1940s.(43) It must be concluded that profits were not the obstacle to re-equipment after 1945 that they had been before World War Two.

Useful evidence on borrowing by the cotton textile industry is not easily available. Bank advances to the cotton industry were stable at between 2.6 and 2.8 per cent of total advances to manufacturing between 1947 and 1951, while over the same period advances to the smaller wool industry rose from 4.4 to 8.8 per cent of advances to manufacturing.(44) Improvements in short term liquidity would have freed other financial resources for investment, but it is impossible to say from the data whether Lancashire's low share of manufacturing advances was due to prejudice against cotton on the banks' part, or whether it was simply due to a lack of demand. J.A. Barber-Lomax, a Bolton spinning employer, thought the latter was probably the case, and remarked upon: "[T]he inherent distaste of companies to place themselves in creditors' hands again, now that they are financially sound after the experiences of the past twenty years."(45) Investment theory would suggest that, if firms were not inclined to invest out of their profits, they would hardly seek outside sources of finance.

The question of the savings in costs of production that could be made from installing the latest machinery was examined by the Costs Sub Committee of the Board of Trade Working Party. A comparison was made of the costs

Table 5.8.

Cost savings from re-equipment, 1946.

(Costs are expressed as a percentage of costs using new low-drafting rings and new Lancashire looms run on the four-loom system)

	High Dft 8 Lancs 1 Shift	High Dft 8 Lancs 2 Shifts	High Dft Autos* 1 Shift	High Dft Autos* 2 Shifts
DRILL				
Raw cotton	98.4	98.4	99.1	99.1
Spinning	95.1	93.5	96.3	94.3
Weaving	107.4	112.0	96.7	93.8
* 20 autos per weaver.				
TOTAL COST	99.7	100.4	97.9	96.7
 LINING				
Raw Cotton	100.0	100.0	97.8	97.8
Spinning	97.8	89.4	96.7	88.2
Weaving	92.3	90.9	102.2	92.4
* 16 autos per weaver.				
TOTAL COST	96.4	93.6	99.3	93.2
 CAMBRIC				
Raw cotton	99.2	99.2	99.2	99.2
Spinning	96.0	90.1	96.9	90.6
Weaving	94.8	98.0	97.2	91.6
* 20 autos per weaver.				
TOTAL COST	97.1	96.5	98.0	94.8

	High Dft 8 Lancs 1 Shift	High Dft 8 Lancs 2 Shifts	High Dft Autos* 1 Shift	High Dft Autos* 2 Shifts
HAIR CORD				
Raw Cotton	100.0	100.0	97.8	97.8
Spinning	97.5	89.5	96.8	88.8
Weaving	98.5	99.4	119.0	109.5
* 20 autos per weaver.				
TOTAL COST	98.8	96.9	104.3	99.0

SHEETING				
Raw Cotton	100.7	100.7	98.0	98.0
Spinning	93.5	91.0	92.0	89.3
Weaving	100.0(a)	100.5(a)	100.9	92.7
* 12 autos per weaver.				
TOTAL COST	99.0	98.7	97.9	94.4

POPLIN SHIRTING				
Raw cotton	99.5	99.5	99.5	99.5
Spinning	99.8(b)	97.7(b)	99.8(b)	97.8(b)
Weaving	96.5	102.4	92.0	92.2
* 16 autos per weaver.				
TOTAL COST	98.1	99.6	97.3	96.3

(a) 4 Lancs looms, (b) Low draft spinning throughout.

Source: Board of Trade, Working Party Reports, Cotton
(London: H.M.S.O., 1946), pp. 264-5.

of producing six classes of cloth, using various types of newly installed machinery and shift-work regimes. For example, the cost of producing a particular cloth on a combination of new low-draft mules and Lancashire looms, was compared with the cost of producing the same cloth on new high-draft ring-spinning equipment and automatic looms.(46)

The Costs Sub Committee's conclusions, which are summarised in Table 5.8, were not encouraging to firms contemplating investment. Although it was nearly always worthwhile installing new high-drafting rather than new low-drafting spinning equipment, new automatic looms were not always preferable to new Lancashire looms. On some of the more complex weaves the Lancashire loom was still competitive when employed on the 'More Looms' system. However the high piece prices specified for certain cloths under the Uniform List for Lancashire loom weaving favoured the use of automatic looms in other cases. Unfortunately on even the most beneficial assumptions, including the employment of a double-shift system, the automatic loom's cost advantage over the Lancashire loom was rarely greater than five per cent of the total cost of the cloth.(47) In one important respect the Costs Sub Committee's report did not give a true picture of the choice open to firms. For most firms the crucial decision was not whether to invest in new Lancashire looms or new automatic looms, but whether to re-equip at all. As Jewkes pointed out in the 'Dissenting Memorandum' to the Working Party Report, if

capital costs were removed from the data for Lancashire looms, to represent the cost of producing cloth with old prewar equipment, it would be pure folly for firms to re-equip at all.(48) According to Salter's criterion the existence of an aging capital stock was a severe deterrent to re-equipment. Indeed the Cotton Board was able to show that 91.8 per cent of ring frames in Britain in 1946 had been installed before 1935, and 73 per cent of all looms in place in 1948 were of pre 1920 origin.(49)

Another detailed series of costings was conducted for the Cotton Board in 1947.(50) This investigation placed greater emphasis on the problems of inter-relatedness. Firms re-equipping with new automatic looms were generally at a disadvantage over firms re-equipping with new Lancashire looms, unless they could secure a supply of 'direct spun' yarn. But the availability of direct spun yarn depended on the modernization of spinning capacity to enable the production of larger yarn packages, something over which weaving firms had little control. The problem of inter-relatedness of technology recurred within the mill, with the installation of heavy modern machinery requiring the strengthening of floors in old weaving sheds, which could often be at a prohibitive cost.(51)

The general conclusion of these surveys was that re-equipment would not be forthcoming unless something could be done to reduce the price of textile machinery, and to persuade the unions to adopt a more

forward-looking attitude on the question of shift-work.(52) These difficulties were confronted by the 1948 Cotton Spinning (Re-equipment) Subsidy Act, which was the government's response to the Board of Trade Working Party's recommendation for an investment subsidy scheme. Sir Stafford Cripps announced the scheme in the autumn of 1946. Spinning firms would be entitled to a 25 per cent grant on the cost of new machinery on condition that certain criteria were met. Mills would have to combine into groups of approximately 500,000 spindles to be eligible for assistance, while the unions would have to agree to double day-shift working in re-equipped mills and to co-operate in schemes to improve the efficiency of labour utilization.(53) Applications would be sifted by the Cotton Board, which would recommend suitable groupings and proposals to the Board of Trade. The cost of the subsidy would wholly be met by the Exchequer and firms in receipt of a subsidy would receive priority in the allocation of textile machinery supplies.

Cripps's terms were accepted by the operatives, but the unions described the attitude of the employers as "obscure."(54) Amalgamations were generally regarded with antipathy, especially among smaller firms which stood to lose their independence. The F.M.C.S.A. complained that a 25 per cent subsidy would be inadequate to stimulate a substantial increase in investment.(55) Unfortunately the scheme did not get off to a good start. Mr. Belcher, Parliamentary Secretary to

the Board of Trade, told the Commons in March 1948 that the intransigence of shareholders was preventing appropriate groupings being formed in many cases. (56) Several weeks later the minimum size of groupings was reduced to 400,000 spindles and it was established that vertically integrated groups with only 250,000 spindles would be eligible. Robson, the Cotton Board's director of statistics estimated that only eight new groupings were formed to take advantage of the subsidy, and most of these were based on prior directorial linkages. (57) The Cotton Board had hoped that Cripps's scheme would lead to the installation or modernization of six million spindles, plus the acquisition of a substantial amount of preparatory equipment, but the spinning subsidy proved a singular failure. (58) Although the government had planned to spend £12M on the scheme, implying an overall investment of £48M, only £2.6M was actually claimed by the spinning industry.

Clearly the F.M.C.S.A. was correct in its assertion that a 25 per cent subsidy would be inadequate to overcome prevailing disincentives to re-equip. In conclusion the cotton industry's demand for capital goods between 1945 and 1951 was constrained by a high level of spare capacity, flagging confidence, the low fixed costs associated with the use of aging capital stock, and the problems of technical inter-relatedness in a vertically disintegrated industry.

IV

In a resource-constrained economy, such as Britain

in the 1940s, the supply of a commodity may be very slow to adjust to changes in the level of demand. Consequently the possibility that re-equipment in Lancashire was severely hampered by restrictions on the output of the textile machinery industry, and on the levels of machinery imports and exports, is at least deserving of serious consideration. As there was a wide divergence of conditions within the textile machinery industry, it will be convenient to begin with the section producing equipment for the weaving industry, and then to look at the factors affecting the supply of spinning machinery.

During World War Two the textile machinery industry had been diverted to munitions production. As in the cotton industry itself, the immediate postwar problem was one of attracting labour back into the factories and resuming normal levels of production. But in the case of automatic loom production the Board of Trade Working Party identified a more fundamental problem: the complete inadequacy of existing capacity to meet the requirements of the re-equipment drive.(59) Over 90 per cent of automatic loom production was in the hands of the British Northrop Loom Company of Blackburn. Although this company was well on the way to increasing its capacity from 3000 automatic looms per annum in 1939 to 6000 in 1948-9, this level of production would not be sufficient to fulfill the Board of Trade Working Party's objective of 120,000 new automatic looms in five years. What is more, the government regarded exports of

machinery as a vital source of foreign exchange. High export targets were established and enforced by the government's control over steel allocations.(60) In 1948 35 per cent of British automatic loom production was exported and in 1949 Harold Wilson, President of the Board of Trade, set an export target of 60 per cent for textile machinery as a whole.(61) Imports of automatic looms were restricted for similar reasons, although the government's rigid controls were occasionally relaxed, as when arrangements were made in 1947 to acquire 192 Japanese Toyoda automatic looms.(62)

In these desperate circumstances the Ministry of Supply was empowered to make a full inquiry into the industry's affairs. Several options for increasing output were considered and rejected. Plant and labour currently engaged in the manufacture of Lancashire looms would not be suitable for the production of automatic looms. Former Royal Ordnance Factories lacked the necessary foundries to facilitate their conversion to loom production. Eventually the Committee of Investigation declared that the only solution was for automatic looms to be mass-produced "by application of some similar scheme of manufacture as was applied in the war to the production of...Lancaster bombers".(63) This would have involved opening factories in areas where there was a more plentiful supply of engineering labour. But such a scheme would have entailed a considerable commitment of the nation's resources; moreover the government judged that there were more pressing needs.

Mr. G.R. Strauss, Minister of Supply, told the Commons that existing capacity absorbed all the materials and components that were available. (64) An Official Working Party on Textile Machinery Supplies was established by the Cabinet to consider a more modest programme of expansion. Reporting in February 1948, this body suggested that production could be increased to about 11 000 automatic looms per annum by 1949. This would involve easing bottlenecks in timber and steel supplies to assist the further expansion of British Northrop's capacity. The Working Party felt that it would not be worthwhile embarking on a more extensive scheme for growth until there was a major improvement in the supply of ancillary equipment, such as automatic winding machines, for the preparatory stages to weaving. (65)

Despite the government's efforts, Table 5.3 shows that the production of automatic looms for use in the cotton and rayon sections had only risen to 8000 per annum by 1951. There were shortages of labour, delays in the delivery of materials, and in the completion of extensions to the Northrop works. The government's schemes to attract other firms into automatic loom production had come to nothing. In 1948 Courtaulds had shown an interest in producing American Crompton and Knowles automatic looms on license in Britain. Although the government agreed to Courtaulds' demand that they be given special guarantees of steel supplies, the man-made fibre producers pulled out of the arrangement. (66)

During the 1940s British Northrop's order books

exceeded six years work; using Kornai's phraseology, a high level of 'tension' existed in the market for automatic looms.(67) To a large extent production was allocated by government fiat through the system of export targets. Unfortunately it is impossible to say whether weaving firms had to offer Northrop officials bribes to obtain looms. Kornai suggested that the existence of chronic excess demand in a market would reduce the supplier's incentive to produce high quality products of the latest design. In 1950 a government report into research and development in the textile machinery industry concluded that the position in the loom making section was highly unsatisfactory. There were no "facilities for fundamental research of any kind and indeed the quality of their staff is...not such as would enable them to grasp the significance of the results of research being done elsewhere."(68) The Minister of Supply had been unable to persuade British Northrop to improve its range of products, and weaving companies were beginning to claim that British automatic looms were no longer of a comparable technical standard to foreign products, especially at the fine end of the trade. The market for automatic looms in Britain closely resembled the type of market described by Kornai, and the conditions which prevailed were obviously an important constraint on re-equipment in the weaving section.

By sharp contrast with the loom making section, the section producing spinning equipment was marked by a

substantial degree of slack. The Textile Machinery Makers (T.M.M.) group controlled 80 per cent of British capacity and had an appalling reputation in the spinning industry for abusing its monopoly position by overcharging, making outdated products, treating its customers with contempt, and neglecting research and development. Although T.M.M. attempted to assure the Cotton Board in 1944 that it would pursue a responsible pricing policy, some spinning employers doubted their sincerity and advocated government control of machinery prices. (69) Suspicion of T.M.M. was not unjustified, in view of the Board of Trade Working Party's conclusion that high-draft spinning prices had risen by 65 per cent between the mid 1930s and 1945, compared with a price rise of 50 per cent for automatic looms. The Ministry of Supply's Committee of Investigation into the Textile Machinery Industry tried to allay these fears by pointing to improvements in the quality of T.M.M.'s management and to extensions to its capacity, notably the new Barton works at Eccles which had formerly been an aero-engine factory. (70) But it was not possible to restore the industry's faith in T.M.M.. Although it would be facile to claim that distrust of T.M.M. was in itself a major factor in restricting the demand for new spinning machinery, it could well have been a contributory factor to the general feeling of malaise in the spinning section.

As domestic demand for machinery was inadequate, T.M.M. increasingly concentrated on the export market.

Table 5.1 shows that 85 per cent of U.K. production of spindles was exported in 1948, a much higher percentage than in the case of automatic looms. Nevertheless T.M.M. was forced to operate with spare capacity. The Barton works had been leased from the government in anticipation of a large postwar demand for ring spindles and preparatory machinery, but despite the efforts of the Government to encourage re-equipment, this demand did not materialise. In April 1948 the M.P. for Stretford reported that 112 workers had been dismissed from the Barton works due to a lack of work, and the following year he was able to show that the Barton works was operating at no more than half its full capacity. (71)

Lack of capacity in the spinning machinery industry was by no stretch of the imagination a constraint on re-equipment. The 1948 Re-equipment Subsidy Act was, in part, an attempt to secure the greater utilization of T.M.M.'s new capacity. Investment grants were not offered to weaving firms because they would have merely served to increase the pressure of demand for automatic looms.

V

No monocausal explanation can be offered for the failure of the Lancashire cotton industry to meet the investment targets set for it at the end of World War Two. Several factors contributed to a climate which constrained the rate of re-equipment. A shortage of labour, particularly in the spinning section, led the

industry to operate well below capacity. But few expected labour scarcity to be a permanent characteristic of the postwar economy. It was less risky for firms to increase their output by gradually attracting more labour, than step up production by the installation of expensive labour-saving machinery. Confidence was brittle after the industry's traumatic experiences in the twenties and thirties. Fears of the return of Japanese competition and of the emergence of Indian competition held the industry in thrall. It would be difficult to overemphasise the importance of confidence. Lancashire's large complement of old looms and spindles was an additional deterrent to investment for many firms. The low fixed costs associated with the operation of prewar equipment, made it difficult for many firms to justify re-equipment. The absence of co-ordination between re-equipment decisions in different sections was a significant handicap. Finally, the inadequate capacity of automatic loom producers, coupled with the government's policy of encouraging textile machinery exports, reduced the quantity of machinery available to the weaving section.

Notes to Chapter 5.

(1) G.R. Saxonhouse and G. Wright, 'New Evidence on the Stubborn English Mule and the Cotton Industry', Ec.H.R., XXXVII (1984), p. 519.

(2) For a study of investment in cotton between 1950 and 1965, see below, Ch. 7, pp. 282-37.

(3) Cotton Board, Report of the Cotton Board Committee to Enquire into Post-War Problems (Manchester: Cotton Board, 1944), p. 9. At inflated wartime prices this was equivalent to £65M.

(4) U.T.F.W.A., Report of the Legislative Council on Ways and Means of Improving the Economic Stability of the Cotton Textile Industry (Rochdale: U.T.F.W.A., 1943), p. 93.

(5) P.R.O. BT175/3, Minutes of the Cotton Board, 112th meeting, 25 Apr. 1944; 113rd meeting, 9 May 1944; BT175/4, Minutes of the Cotton Board, 160th meeting, 9 Apr. 1946; 161st meeting, 23 Apr. 1946.

(6) British spinning operatives produced 18 to 49 per cent less yarn per hour, and British weavers 56 to 67 per cent less cloth per hour, than American workers. Ministry of Production, Report of the Cotton Textile Mission to the United States of America (London: H.M.S.O., 1944), p. viii.

(7) G.M.R.O., C.S.M.A., Platt Report Sub-committee Minutes, 2 Feb. 1945.

(8) J.A. Barber-Lomax, A Consideration of the Report of the Cotton Textile Mission to the U.S.A. in 1944 Concerning the Spinning Section (Manchester:

Textile Weekly, 1945), pp. 4-8.

(9) G.M.R.O., C.S.M.A., Platt Report Sub-committee Minutes, 9 Feb. 1945.

(10) Cotton Board, Equipment and Labour Utilisation in the Cotton Industry (Manchester: Cotton Board, 1947), p. 68.

(11) L.R.O., F.M.C.S.A., Annual Report, 1948, p. 15.

(12) Ministry of Supply, Interim Report of the Committee of Investigation into the Cotton Textile Machinery Industry (London: H.M.S.O., 1947), p. 4.

(13) Board of Trade, Working Party Reports: Cotton (London: H.M.S.O., 1946), p. 163.

(14) Ibid. pp. 69-70, 172-7.

(15) Ibid, p. 222.

(16) J. Jewkes, A Return to Free Market Economics? Critical Essays on Government Intervention (London: Macmillan, 1978), p. 75.

(17) Board of Trade, Working Party Report, p. 229.

(18) I. Fisher, The Theory of Interest (New York: Macmillan, 1930), p. 168.

(19) J.E. Meade and P.W.S. Andrews, 'Summary of Replies to Questions of the Effects of Interest Rates', and P.W.S. Andrews, 'A further Inquiry into the Effects of Rates of Interest', in T. Wilson and P.W.S. Andrews (eds.), Oxford Studies in the Price Mechanism (Oxford: Clarendon Press, 1951).

(20) D.W. Jorgenson, 'Capital Theory and Investment Behaviour', A.E.R., 53 (1963), pp. 247-68.

(21) G.B. Richardson, Information and Investment: A Study in the Working of the Competitive Economy (Oxford: Oxford University Press, 1960), pp. 57-64.

(22) P.W.S. Andrews and E. Brunner, Capital Development in Steel: A Study of the United Steel Company (Oxford: Basil Blackwell, 1952), pp. 356-60.

(23) The Kaleckian approach is summarised in M.C. Sawyer, Macro-Economics in Question: The Keynesian-Monetarist Orthodoxies and the Kaleckian Alternative (Brighton: Wheatsheaf, 1982), pp. 29-30, 99-104.

(24) M. Kalecki, Selected Essays on the Dynamics of the Capitalist Economy, 1933-1970 (Cambridge: Cambridge University Press, 1971), pp. 105-9.

(25) M. Panic and K. Vernon, 'Major Factors Behind Investment Decisions in British Manufacturing Industry', Oxford Bulletin of Economics and Statistics, 37 (1975), pp. 191-209; A.R. Nobay, 'Forecasting Manufacturing Investment: Some Preliminary Results', N.I.E.R., 52 (May 1970), pp. 58-66; D. Savage, 'The Channels of Monetary Influence: A Survey of the Empirical Evidence', N.I.E.R., 83 (Feb. 1978), pp. 73-89.

(26) M. Frankel, 'Obsolescence and Technical Change in a Maturing Economy', A.E.R., XLV (1955), pp. 206-319; and M. Frankel, 'Reply', A.E.R., XLVI (1956), pp. 652-6; see above, Ch. 1, pp. 18, 25-6.

(27) W. Lazonick, 'Industrial Organization and Technological Change: The Decline of the British Cotton Industry', Business History Review, LVII (1983), pp.

205-6.

(28) W.E.G. Salter, Productivity and Technical Change (Cambridge: Cambridge University Press, 1966), p. 75.

(29) J. Kornai, Anti-Equilibrium: On Economic Systems Theory and the Tasks of Research (Amsterdam: North Holland, 1971); 'Resource-Constrained Versus Demand-Constrained Systems', Econometrica, 47 (1979), pp. 801-19; Economics of Shortage (Amsterdam: North Holland, 1981); Growth, Shortage and Efficiency (Oxford: Basil Blackwell, 1982).

(30) For descriptions of the postwar system of controls see: A. Cairncross, Years of Recovery: British Economic Policy, 1945-51 (London: Methuen, 1985), pp. 333-53; J.C.R. Dow, The Management of the British Economy, 1945-1960 (Cambridge: Cambridge University Press, 1965), pp. 44-77.

(31) Kornai, Anti-Equilibrium, pp. 286-98.

(32) B. Vitkovitch, 'The U.K. Cotton Industry, 1937-54', J.I.E., 3 (1955), pp. 248-50.

(33) P.R.O., CAB134/637, Cabinet Production Committee Memorandum, PC(48)9, Report by the Working Party on the Increase of Textile Exports, Minute 2, p. 2, 12 Jan. 1948.

(34) R.W. Lacey, 'Cotton's War Effort', Manchester School, XV (1947), pp. 26-74.

(35) P.R.O., CAB134/637, PC(48)9, Increase of Textile Exports, Minute 47, p. 19.

(36) High drafting in the preparatory stage

involved the installation of modern cardroom equipment which eliminated certain stages in the process of making the raw cotton ready for spinning.

(37) L.R.O., F.M.C.S.A., Annual Report, 1946, p. 115.

(38) G.M.R.O., C.S.M.A., Special Wages Sub Committee Minutes, 25 May, 1944.

(39) L.R.O., F.M.C.S.A., Annual Report, 1950, p. 19.

(40) P.R.O., CAB128/1, Cabinet Conclusions, CM(45)18, Minute 7, p. 10, 7 Aug 1945.

(41) L.A. Sandberg, Lancashire in Decline: A Study in Entrepreneurship, Technology, and Industrial Change (Columbus, Ohio: Ohio State University Press, 1974), p. 122. On measures of profitability see: J.L. Walker, 'Estimating Companies' Rate of Return on Capital Employed', Economic Trends, No. 253 (Nov. 1974), pp. xxx-xlvi.

(42) P.W.S. Andrews, 'Some Aspects of Capital Development', Journal of the Textile Institute, 44 (1953), p. 693; Cairncross, Years of Recovery, pp. 422-3; Dow, Management of the British Economy, pp. 204-9.

(43) Board of Trade, Working Party Report, p. 267.

(44) Monthly Digest of Statistics, No. 96 (1953), Table 139, p. 112.

(45) J.A. Barber-Lomax, The Finance of Cotton Spinning Mills: Past, Present, and Future (Oldham: Oldham Textile Society, 1945), p. 16.

(46) The machinery was assumed to be depreciated at current replacement cost over a period of 20 years under single-shift working, and 15 years under a double-shift system. Interest charges were imputed at five per cent of the full replacement value of fixed capital plus working capital. Board of Trade, Working Party Report, pp. 71-7, 251-65.

(47) Shift-working was desirable because it spread the annual capital charges associated with expensive new machinery over a larger output.

(48) Board of Trade, Working Party Report, p. 227.

(49) Cotton Board, Modernisation in the Cotton Spinning Industry (Manchester: Cotton Board, 1947), p. 12; Survey of the Machinery in the Weaving Section of the Cotton Industry (Manchester: Cotton Board, 1949), p. 10.

(50) A. Sidebottom, 'Observations on Weaving Costs, Lancashire and Automatic Type Looms', in Cotton Board, Equipment and Labour Utilisation in the Cotton Industry, pp. 132-47.

(51) At the William Birtwistle Group's Waterfall Mill, Blackburn, the weaving shed had to be demolished and rebuilt to accommodate new automatic looms. Board of Trade, Working Party Report, p. 69, 84; William Birtwistle Group, Centenary, 1851-1951 (Preston: William Birtwistle Group, 1951).

(52) The cotton unions had traditionally been opposed to shift-work as a result of its disruption of the normal pattern of life. See below, Ch. 8, pp. 339;

J. Hilton, Are Trade Unions Obstructive? An Impartial Inquiry (London: Gollancz, 1935), p. 78.

(53) L.R.O., F.M.C.S.A., Annual Report, 1946, p. 30.

(54) L.R.O., Operative Spinners, Quarterly Report, 30 April 1947, p. 4.

(55) L.R.O., F.M.C.S.A., Annual Report, 1947, p. 16.

(56) Hansard (Commons), 5th ser. 448, 12 Mar. 1948, col. 1630.

(57) R. Robson, The Cotton Industry in Britain (London: Macmillan, 1957), p. 160.

(58) P.R.O., BT175/5, Minutes of the Cotton Board, 3rd meeting, 18 May 1948.

(59) Board of Trade, Working Party Report, p. 79.

(60) Cairncross, Years of Recovery, pp. 459-60.

(61) Hansard (Commons), 5th ser. 460, 18 Jan. 1949, cols. 11-12 (Written Answers).

(62) Board of Trade Journal, 153 (1947), p. 1219.

(63) Ministry of Supply, The Second and Final Report of the Committee of Investigation into the Cotton Textile Machinery Industry (London: H.M.S.O, 1947), p. 5.

(64) Hansard (Commons), 5th ser. 446, 26 Jan. 1948, col. 96 (Written Answers).

(65) P.R.O., CAB134/637, Cabinet Production Committee Memorandum, PC(48)22, First Interim Report of the Official Working Party on Textile Machinery Supplies: Memorandum by the President of the Board of Trade, 9 Feb. 1948.

(66) P.R.O., CAB134/636, Cabinet Production Committee Conclusions, PC(48)3, Minute 4, p. 4, 11 Feb. 1948; CAB134/638, PC(48)90, Second Interim Report of the Official Working Party on Textile Machinery Supplies, Minute 2, p. 2, 8 July 1948.

(67) Ministry of Supply, Final Report on Textile Machinery, p. 7.

(68) P.R.O., CAB134/647, Cabinet Production Committee Memorandum, PC(50)82, Report of the Official Working Party on Textile Machinery: Research and Development, Minute 12, p. 6, 25 July 1950.

(69) P.R.O., BT175/3, Minutes of the Cotton Board, 118th meeting, 18 July 1944.

(70) Ministry of Supply, Interim Report on Textile Machinery.

(71) Hansard (Commons), 5th ser. 450, 30 Apr. 1948, col. 798; 469, 4 Nov. 1949, col. 839.

Chapter 6.

DECLINE AND FALL: THE LANCASHIRE COTTON INDUSTRY,
1950-70.

The prosperity of the 1940s and the heady days of 1950-1 were followed by two decades of painful and irreversible decline for the Lancashire cotton industry. Cotton ceased to be a major industry during the fifties and sixties and it is the purpose of this chapter to describe and account for this decline.

The present chapter is divided into four sections. Section I is primarily descriptive and illustrates the industry's demise with the assistance of tables outlining trends in employment, output, trade, and labour productivity between 1950 and 1970. Section II provides a brief narrative of the industry's fortunes during the fifties and sixties, concentrating on fluctuations in the state of trade, government policy towards Lancashire, and the industry's perceptions of its future. Section III employs an 'accounting procedure', drawn from the theory of trade and development, to estimate the relative contributions of changes in the levels of exports, imports, domestic demand, and average labour productivity, to the decline in employment in spinning and weaving between 1950 and 1970. The results suggest that the impact of these factors varied significantly over the period in question. Between 1950 and 1955 falling exports were the primary cause of the decline in employment of cotton operatives. Rising imports were the dominant factor between 1955 and 1960, while falling domestic demand for

yarn and cloth was the major cause of declining employment during the 1960s. Section IV attempts to go behind these results by comparing costs of production in British and overseas mills.

I

Lancashire, temporarily shielded from foreign competition during the forties, approached the new decade with apprehension. In July 1950 Sir Cuthbert Clegg, leader of the spinning employers, warned his colleagues in spinning and weaving that the days of easy markets would shortly be over and that they had better prepare for hard times: "'The position was bound to become more acute since Japan could not be held down indefinitely...intense competition amongst Tokyo merchants was to be feared'".(1) Clegg's worries were well-founded, for after 1951 the long decline of the British cotton industry resumed its course. Tables 6.1, 6.2, and 6.3 reveal the extent of the industry's trials over the following twenty years. British yarn production (inclusive of staple man-made fibre yarn) fell from 944 million lbs. in 1950 to 439 million lbs. in 1970, while the output of cotton and man-made fibre cloth declined from 2971 million square yards to 1276 million square yards over the same period. Employment fell apace, from 244,000 operatives (excluding doubling) in 1950 to 76,000 in 1970.(2)

It goes without saying that declining output and employment were accompanied by a further reduction in the U.K.'s share of world cotton textile exports and a

Table 6.1.

The share of U.K. cloth exports in world trade, 1937-68.

	world cotton cloth exports (M yds)	U.K. share (%)	world man-made & mixtures cloth exports (M yds)	U.K. share (%)
1937	6500	29.6	800	10.0
1950	5500	15.0	900	21.9
1955	4700	11.8	1700	7.9
1960	6030	5.3	2234	2.4
1965	5588	3.7	2893	3.3
1968	5559	2.8	3555	2.2

Sources: C.B.Q.S.R., R. Robson, The Cotton Industry in Britain (London: Macmillan, 1957), p. 359.

Table 6.2.

The U.K. cotton and allied textiles spinning industry,
1950-70.

	(A)	(B)	(C)	(D)	(E)	(F)	(G)
	total yarn output M lbs.	(spun m-m-f & mix. M lbs)	total yarn exports M lbs	(spun m-m-f & mix M lbs)	total yarn imports M lbs	Spg. Empt. 000's	Spg. Py. lbs/ worker
1950	944	(91)	87	(3)	14	107	8820
1951	968	(103)	85	(5)	32	110	8820
1952	682	(91)	48	(3)	7	87	7850
1953	844	(151)	57	(5)	3	97	8750
1954	887	(147)	56	(4)	11	100	8840
1955	771	(125)	51	(4)	14	91	8450
1956	737	(139)	52	(5)	17	86	8550
1957	763	(141)	53	(5)	15	86	8840
1958	671	(144)	40	(6)	15	78	8660
1959	652	(145)	34	(3)	21	71	9190
1960	640	(145)	34	(4)	39	64	10060
1961	591	(126)	26	(3)	44	62	9340
1962	505	(113)	27	(5)	33	54	9390
1963	516	(121)	26	(5)	37	49	10440
1964	552	(139)	27	(6)	43	48	11510
1965	528	(135)	21	(6)	32	45	11780
1966	495	(127)	24	(7)	36	41	12010
1967	425	(117)	23	(6)	46	36	11930
1968	445	(141)	28	(10)	47	34	13130
1969	446	(154)	34	(15)	48	33	13460
1970	439	(162)	36	(18)	49	33	13470

N.B. All figures exclude doubling and continuous filament man-made fibre yarn.

(A) Total output of cotton, spun rayon and mixtures yarn. (Million lbs.)

(B) Output of spun rayon and mixtures yarn. (Million lbs.)

(C) Total exports of cotton, spun rayon, and mixtures yarn and thread. (M lbs.)

(D) Exports of spun rayon and mixtures yarn and thread. (M lbs.)

(E) Total imports of cotton, rayon, and mixtures yarn. (M lbs.)

(F) Employment in spinning. (Thousands)

(G) Average labour productivity (lbs. spun per worker per annum)

Sources: C.B.Q.S.R.; Annual Abstract of Statistics.

Table 6.3.

The U.K. cotton and allied textiles weaving industry, 1950-70.

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	Total	(M-m-f	Total	(M-m-f	Total	Wvg.	Wvg.	Yarn
	Cloth	& mix	Cloth	& mix	Cloth	Empt.	Py.	Used
	Output	cloth)	Exports	cloth)	Imports	000's	sq yd/ worker	M lb
	(	Million	square	yards)			
1950	2971	(742)	1020	(197)	342	137	21670	714
1951	3109	(797)	1082	(218)	475	140	22150	742
1952	2406	(631)	863	(152)	209	118	20330	551
1953	2764	(807)	887	(177)	143	124	22260	631
1954	2914	(820)	812	(175)	335	127	22930	666
1955	2603	(733)	689	(134)	365	118	22070	578
1956	2430	(737)	595	(121)	380	108	22430	535
1957	2402	(692)	570	(112)	490	104	23210	550
1958	2131	(631)	468	(84)	434	93	22990	479
1959	2024	(620)	407	(64)	575	85	23850	445
1960	2007	(648)	375	(54)	786	81	24700	450
1961	1934	(638)	331	(49)	801	80	24250	411
1962	1693	(594)	287	(55)	642	75	22610	352
1963	1653	(588)	303	(80)	700	68	24300	350
1964	1727	(641)	301	(91)	859	67	25930	356
1965	1722	(656)	300	(95)	676	65	26590	336
1966	1608	(647)	236	(65)	680	61	26500	294
1967	1338	(556)	215	(71)	784	51	26230	297
1968	1350	(583)	234	(78)	854	47	28450	303
1969	1377	(618)	243	(101)	700	46	29780	293
1970	1276	(556)	255	(117)	631	43	29670	264

(A) Total output of cotton, man-made fibre, and mixtures cloth. (Million sq. yds.)

(B) Output of man-made fibre and mixtures cloth. (M sq. yds.)

(C) Total exports of cotton, man-made fibre, and mixtures cloth. (M sq. yds.)

(D) Exports of man-made fibre and mixtures cloth. (M sq. yds.)

(E) Total imports of cotton, man-made fibre, and mixtures cloth. (M sq. yds.)

(F) Employment in weaving. (Thousands)

(G) Average labour productivity. (Sq. yds. woven per worker per annum)

(H) Cotton, spun rayon, and mixtures yarn used by the weaving section. (M lbs.)

Sources: C.B.Q.S.R.; Annual Abstract of Statistics.

Table 6.4.

U.K. exports of cotton cloth to selected markets,
1938-69.

(all figures in million square yards)

	1938	1950	1955	1960	1965	1969
Argentina*	95	6+	..	..	..	..
Australia	138	105	100	36	13	10++
Br. E. Africa	6	12	13	6	4	1
Br. W. Africa	66	121	89	61	17	2
Canada*	41	16	8	7	5	2
Ceylon	19	11	10	5	3	..
Egypt	42	4	..	..	..	..
India	216	5	5	..	..	..
Indonesia	36	9	7	..	..	..
Ireland	29	25	12	11	10	13++
Jamaica	13	6	3	2	1	1
New Zealand	18	43	35	25	13	7++
Pakistan	..	70	5	..	..	..
Rhodesia(a)	26	38	23	20	..	..
Malaya(b)	49	36	9	4	2	1
S. Africa	152	117	75	57	27	11++

* thousand quintals. The Cotton Board took 1000 quintals to be approximately one million sq. yds.

(a) Inc. Nyasaland; (b) Inc. Singapore.

+ 1948.

++ 1970.

Source: C.B.Q.S.R.

Table 6.5.

British cloth imports from selected countries, 1938-69.

(i) Cotton cloth (million square yards).

Origin	1938	1950	1955	1960	1965	1969
Belgium	12	10	14	27	19	4
Canada	..	..	..	10	22	26
China	..	..	5	25	35	48
France	1	10	10	18	19	7
Hong Kong	..	5	51	123	123	97
India	1	76	137	231	157	119
Ireland	2	5	4	12	30	22
Japan	19	91	64	52	28	10
Holland	6	7	3	13	19	4
Pakistan	..	..	..	40	43	76
Portugal	..	..	..	18	14	30
Spain	..	21	..	64	6	6
U.S.A.	1	2	..	17	3	4
W. Germany	2	8	4	18	7	5
Others	8	52	8	60	64	87
TOTAL	52	287	300	728	589	545

(ii) Man-made fibre and mixture cloth (million square yards).

Origin	1938	1950	1955	1960	1965	1969
Austria	..	5	13	1	3	22
Belgium	1	1	2	2	10	11
France	6	8	11	3	4	4
Hong Kong	..	..	..	..	..	13
Italy	3	22	15	11	16	15
Japan	3	3	9	4	4	5
Portugal	2	..	..	..	3	14
Switzerland	2	4	..	..	2	14
U.S.A.	..	1	..	15	14	13
W. Germany	6	4	6	10	11	10
Others	1	7	9	12	21	34
TOTAL	24	55	65	58	69	155

Figures include imports for re-exports after finishing.

Source: C.B.Q.S.R.

deteriorating balance of trade in yarn and cloth. During 1959 British cotton and rayon cloth imports exceeded cotton and rayon cloth exports for the first time since the dawn of industrialization. The deficit inexorably widened in the following years. In fact between 1950 and 1970 British cotton and man-made fibre cloth exports declined from 1020 million sq. yds. to 255 million sq. yds. While exports of rayon, nylon, and mixtures cloth fell by 80 million sq. yds. during this period, cotton cloth exports declined by a massive 685 million sq. yds.

Although some of the inter-war reduction in British cotton textile exports could be attributed to the general recession in world textile exports, this was no longer the case after 1950. Table 6.1 shows that world trade in cotton textiles was rapidly expanding during the fifties and sixties. As in the thirties, the only encouraging trend was in the man-made fibre section. After a period of decline, during the 1950s and early 1960s, exports of man-made fibre cloth began to regain some ground.

Imports were another major problem for the industry. Between 1950 and 1960 cotton cloth imports rose from 287 million sq. yds. to 728 million sq. yds., although there was little increase in imports of man-made fibre and mixtures cloth. This trend was reversed in the sixties. Between 1960 and 1970 imports of man-made fibre cloth rose from 58 million sq. yds. to 164 million sq. yds., while cotton cloth imports declined, from a peak of 731 million sq. yds. in 1961,

to 467 million sq. yds. in 1970. However, Britain was still holding its own in the man-made fibre section: between 1960 and 1970 the deficit in Britain's trade in man-made fibre and mixtures cloth increased by a comparatively small amount, from 4 million sq. yds. to 47 million sq. yds. Exports of yarn spun from staple man-made fibre rose from 3 million lbs. in 1950 to 18 million lbs. in 1970. Moreover, despite the rapid increase in world output of man-made staple and continuous filament fibre during these years, Britain's share of this total only fell from 10.3 per cent in 1950 to 8.1 per cent in 1960 and 7.2 per cent in 1970.(3) British involvement in the initial establishment of man-made fibre producing and processing capacity had been substantial. Until the 1930s Courtaulds had dominated the world rayon scene and had large subsidiaries in Germany, Italy, France, Switzerland, and the U.S.A.(4) It also had strong links with firms in India, Japan, Denmark, Spain, Sweden, Poland, the U.S.S.R., and Holland. But the pre-eminence of British capital was no longer in evidence after 1945, with the American firm Du Pont leading the way in the development of the nylon section.(5)

Additional light can be thrown upon Lancashire's trading difficulties by examining the position in individual export markets. Table 6.4 shows that Lancashire lost substantial export markets in Argentina, Canada, Egypt, India, and Indonesia between 1938 and 1950, when supplies of British cloth were severed by the

war. In 1950 only three major overseas customers remained: the West African colonies of Nigeria and the Gold Coast (Ghana), South Africa, and Australia. Tables 6.11, 6.12, and 6.13 (see Appendix I to this chapter) illustrate the course of exports to these three areas, which accounted for 63 per cent of the total reduction in British cotton cloth exports between 1950 and 1970. Ultimately Lancashire lost these vital customers because it was unable to produce cloth cheaply enough. To take one example, in January 1962 in the home market, where transport costs for British cloth were at a minimum, Lancashire drill 3110 cloth could be purchased for 23d per yard, while identical pieces of cloth woven in Hong Kong, India, and China, could be obtained for 18.75d, 18.25d, and 16.75d per yard respectively. (6)

This weakness was exposed by the erosion of the Imperial Preference system during the 1950s. After the early fifties the West African governments became increasingly hostile to the principle of Imperial Preference and gradually reduced their tariff and quota restrictions against European and Japanese cloth. (7) Imperial Preference did little to protect Lancashire's trade with Australasia, as textiles from India and Hong Kong were permitted to enter these markets at the same preferential duties as British cloth. In addition G.A.T.T. and other trading agreements served to reduce the margin between full and preferential tariffs. Moreover adjustments to preferential margins usually failed to keep pace with inflation, resulting in a

further decline in their effectiveness.(8) The net result was that British cotton cloth exports to Australia fell from 105 million sq. yds. in 1950 to 10 million sq. yds. in 1970, while over the same period Australian imports of Japanese cloth increased from 8 million sq. yds. to 102 million sq. yds. British exports to South Africa were increasingly hampered by protectionism and the subsidisation of local firms. In the early 1960s Cyril Lord responded to this challenge by closing two of his British mills and establishing production facilities in the Cape, but Lord's solution was the exception rather than the rule.(9) By the mid 1960s Lancashire had been forced into the role of a second or even third-rate power in the international cotton textile trade.

According to Table 6.5 India, Hong Kong, and Pakistan were the main suppliers of cotton cloth to Britain between 1950 and 1970.(10) India already had a large cotton industry in 1945, and this continued to grow despite periodical attempts by the government to protect handloom weavers by restricting the installation of modern automatic looms, and to encourage production for the domestic market by imposing export duties and controls.(11) The development of cotton textile production occurred at a far more dramatic pace in Hong Kong and Pakistan. The flight of Shanghai industrialists to Hong Kong during the revolutionary period provided the initial impetus for the development of a cotton industry. Productive capacity increased from 8000

spindles and a negligible quantity of looms in 1948 to 210,000 spindles and 4500 looms in 1951 and continued rapidly to expand. When exports to Britain were restrained by quotas in the 1960s, Hong Kong firms responded by diversifying into clothing and man-made fibre products and establishing production facilities in other Asian countries.(12) Pakistan's cotton industry was established in 1947. Its development was assisted by public investment, the provision of subsidised credit, tax concessions for foreign investors, and state-financed export bonus schemes.(13) But it should not be imagined that these special circumstances were the primary reasons for the devastating impact of Asian cotton textiles on the Lancashire industry. As will be seen in Section IV the Asians countries' success was largely due to their low labour costs.

The statistics displayed in this section reveal the fundamental failure of the Lancashire cotton industry to attain viability in the increasingly competitive world environment of the 1950s and 1960s. In the following section the sequence of events between 1950 and 1970 will be examined in greater detail and the succeeding sections will attempt to analyze the reasons for decline.

II

In retrospect 1950 and 1951 were years of remarkable prosperity for the cotton textile industry. Output and exports of cloth reached their maximum postwar levels of 3109 and 1082 million square yards

respectively in 1951. Profits rose to heights unheard of since 1918-20.(14) This prosperity was short lived, and the period from spring 1952 to spring 1953 saw a major slump in the fortunes of the industry. Although the causes of this particular recession were largely unrelated to the factors responsible for the continuing decline of the cotton industry over the following fifteen years, the events of 1952-3 had an immense symbolic value, representing the end of the postwar era of high demand and easy markets.

Between their peak levels in 1951 and the low spot of May 1952 hours worked in cotton weaving declined by 26.4 per cent, while those worked in cotton spinning fell by 48.5 per cent, as a result of increasing unemployment and short-time working.(15) Table 6.6 shows that between May 1951 and May 1952 unemployment in cotton spinning increased from 0.4 per cent to 32.9 per cent, while unemployment in weaving rose from 0.3 per cent to 22.3 per cent. Meanwhile short-time working returned to many Lancashire towns: for instance in Royton during the first week of May 1952 10 out of a total of 21 mills were running a three-day week, while seven more were closed all week. Unemployment increased by more in spinning than in weaving because weavers ran down their stocks of yarn during the recession. Consequently, orders for yarn declined by a greater proportion than the fall in orders for cloth.(16) In addition to unemployment and short-time working many firms enforced reductions in machine complements. H.A.

Table 6.6.

Percentages unemployed and on short-time in the cotton industry, 1950-70.

	spinning		weaving	
	unemployed	short-time	unemployed	short-time
1950	0.6	..	0.4	..
1951	0.4	..	0.3	..
1952	32.9	29.5	22.3	16.5
1953	1.5	1.4+	1.1	0.5+
1954	0.7	0.1+	0.5	0.4+
1955	5.8	10.5	3.4	7.9
1956	1.9	6.6	2.3	4.2
1957	0.8	0.4	1.1	0.6
1958	9.3	15.6	6.2	6.5
1959	4.7	1.7	3.0	0.3
1960	3.4	0.2	2.8	0.1
1961	2.3	1.2*	1.3	-
1962	5.2	6.1*	4.7	-
1963	3.8	1.9*	3.4	-
1964	2.0	0.1*	1.4	-
1965	1.6	0.3*	1.1	-
1966	1.3	0.1*	1.0	-
1967	4.8	5.2*	4.9	-
1968	2.7	0.1*	2.1	-
1969	2.0	..	1.8	-
1970	2.2	..	2.7	-

Unemployment figures apply to May/June each year; short-time figures to August. Figures for 1959-70 include the spinning and weaving of flax and man-made fibre.

* spinning and weaving combined.
+ August.

Source: Ministry of Labour Gazette; Annual Abstract of Statistics.

Turner estimated that 12.3 per cent of spinning and 5.2 per cent of weaving operatives were 'underemployed' in the depths of the recession.(17) In May 1952 Andrew Naesmith criticized employers for cutting the number of looms assigned to each operative instead of introducing short-time working, and thought the recession was "as bad as at any time he could recall, even in 1925-31".(18) Rates of unemployment, except for very brief periods in particular towns, never again approached the levels of 1952, and during the remainder of the fifties and sixties the decline in employment was effected by retirements and the smooth transfer of operatives to other industries.

The slump of 1952 was part of a general world-wide recession, yet the Lancashire cotton industry suffered to a greater degree than the rest of the British economy. A number of explanations were offered for this state of affairs. The most curious of these was the allegation that in September 1951 Hugh Dalton, the Minister of Local Government, encouraged a 'buyers' strike' by telling a meeting of housewives in Swansea that they should refuse to buy clothing and textiles until the prevailing exorbitant price levels had been reduced.(19)

Turner and Smith provided a more reasonable account of the factors responsible for the crisis. Firstly, excessive stock-piling by traders during the early stages of the Korean War had produced a reaction in which new orders collapsed. Secondly, the wider national

recession reduced the earnings of unskilled and semi-skilled workers, the class with the highest average propensity to consume textiles. Recession abroad, accompanied by increasing Japanese competition, and the imposition of import controls in Australia, resulted in a fall in cotton textile exports. These misfortunes were aggravated by uncompetitive prices, which were partly the consequence of higher costs and partly the effect of the price-fixing arrangements of the Yarn Spinners' Association. (20)

During 1953 demand improved. Yarn output recovered to 87 per cent of the 1951 level and cloth output to 89 per cent of the 1951 level. Short-time working virtually disappeared and unemployment in spinning and weaving declined to 1.5 per cent and 1.1 per cent of their respective labour forces. But all was not well. The slump had resulted in the loss of 16,000 spinning operatives to other industries or through retirement. Firms argued that they were unable to restore 1951 levels of production because of a shortage of labour, a complaint which was to recur time and time again over the following years. (21) This contention was not strictly true, for other things being equal the supply of labour is a function of the wage offered. It is hardly surprising that cotton firms were unable to attract more labour, given that between 1952 and 1955 average wages in cotton increased 12 per cent compared with 16 per cent in U.K. industry as a whole. (22) But, on the other hand, in the increasingly difficult

competitive climate of the 1950s, a faster increase in wage costs would have brought about an even more rapid decline in demand. In retrospect it seems obvious that 1952 was the beginning of the end for Lancashire.

Lancashire's cotton industry experienced a high rate of attrition during the mid-1950s. A total of 20 mills were permanently closed in 1952, 17 were abandoned in 1953, 14 were closed in 1954, while in 1955 and 1956 the rate of closure accelerated to 59 and 55 mills respectively.(23) In 1955 unemployment in spinning rose to 5.3 per cent and in weaving to 3.4 per cent. This recession was relatively mild compared with that of 1952, but it created widespread concern among the employers for the industry's future. In their annual report the spinning employers remarked that: "In 1955 the position was caused by more permanent factors which will continue to affect the industry adversely over a far longer period if no action is taken by the Government".(24) Rapidly expanding competition from Asian producers and uncertainty about raw cotton prices in the United States constituted the 'permanent factors' feared by the spinning masters. Cotton textiles from India, Hong Kong, and Pakistan were able to enter the British market free of duty under the provisions of the Imperial Preference system. Employers and trade unionists in Lancashire mounted a vigorous campaign to secure the industry a measure of protection from Commonwealth imports, but met with no success.(25)

The governments of Churchill and Anthony Eden

showed little sympathy for the fate of the cotton industry. Peter Thorneycroft, the President of the Board of Trade, confirmed the government's policy of non-intervention in the industry's affairs during a visit to Lancashire in 1954. While Thorneycroft maintained that the Cabinet was genuinely concerned for Lancashire's future, he stressed that there would be no special legislative measures along the lines of the 1948 re-equipment subsidy to help the industry. Neither would there be any restriction of Commonwealth exports to Britain, as this would lead to retaliation and a loss of goodwill. Moreover Britain would not oppose Japanese entry to G.A.T.T.. Thorneycroft argued that the government had already done a great deal for Lancashire by creating a healthy and buoyant domestic economy. There would be minor reductions in purchase tax on cotton textiles, but he implied that the industry's constant self-pity was counter-productive and only served to weaken confidence in Lancashire. (26)

Non-interventionism was not popular in all quarters. It was attacked by protagonists of both the left and the right. The Tory imperialist L.S. Amery argued for a far more active policy, contending that stringent restrictions should be placed on foreign exports to Commonwealth and colonial markets. He believed that further protection for the U.K. market might also be required, but did not specify whether this would include the control of imports from the Asian Commonwealth. The government should assist Lancashire to

specialize in the spinning and weaving of man-made fibres: "The State might advance money on specially favourable terms to cover the cost of converting or adapting cotton factories to the new fabrics, as well as of erecting new factories for their production".(27) Amery went on to say that serious consideration should be given to subsidising exports of the 'new fabrics'. It is ironical that a politician who was outraged at goods being 'dumped' in the U.K. should have advocated a policy of 'dumping' by Lancashire. But Amery's advocacy of subsidised re-equipment anticipated the provisions of the 1959 Cotton Industry Act.

In 1953 the U.T.F.W.A. invited Harold Wilson to prepare an analysis of the prospects for the cotton industry and to set out a programme for its revival. Wilson made a number of urgent recommendations.

Firstly, an international raw cotton agreement should be negotiated. This would create an agency with powers to stabilise raw cotton prices through a buffer-stock system. Encouragement should be given to raw cotton growing in the colonies, and the Raw Cotton Commission should be reconstituted to regulate prices and supplies in the home market.(28) Secondly, the price-maintenance functions of the Yarn Spinners' Association should be subject to regulation by the Board of Trade. An investigation should take place into allegations of excessive margins in the merchanting section. It might be necessary to license merchants to rid the industry of 'spivs'.(29) Thirdly, British

Overseas Cottons Ltd. should be resurrected to negotiate long-term export orders for standard lines. In the home market the Utility scheme should be revived, while the public sector should bring forward purchases of cotton textiles during periods of poor trade.(30) Fourthly, there should be a state buying agency with exclusive powers to import yarn and cloth. The mere threat of a state import monopoly would encourage the Asian producers to accept voluntary quota agreements. Action should be taken to raise wages in Hong Kong.(31)

Fifthly, investment allowances should be increased and a tripartite Cotton Industry Re-organization Commission (C.I.R.C.) established to assist firms to invest. This body would have the authority to build, equip, and lease new mills to 'efficient firms', to lease machinery, and provide 'easy finance' for firms wishing to re-equip. The C.I.R.C. would have first claim on the output of the textile machinery industry. But if firms were reluctant to co-operate, as they had been at the time of the Cripps subsidy in 1948, the C.I.R.C. would have powers to force them to amalgamate into larger groups, to control the appointment of the new boards, and to compel the new groups to re-equip. The C.I.R.C. would be financed either by a levy on the industry or directly by the state.(32) Finally, although outright nationalization would not take place, the state should purchase a controlling interest in the major combines.(33)

The Wilson plan was readily endorsed by the cotton

unions, the Labour Party, and the T.U.C., and became the basis of Labour's policy for cotton at the 1959 General Election.(34) The Cotton Board itself, having to accommodate the interests of conservative employers as well as 'socialist' trade unionists, refused to be drawn into a discussion of long-term planning for the industry. Instead it rather shamefacedly concentrated on the single issue of restricting cheap Commonwealth imports.(35)

In 1958 a further recession interrupted the otherwise sedate decline of the Lancashire cotton industry, and unemployment increased to 9.3 per cent in spinning and 6.2 per cent in weaving. Short-time working affected thousands more operatives. In August, according to the local employers' secretary, at least 4000 operatives in Rochdale alone were on short-time.(36) A major debate in the Commons during July saw Harold Wilson launch a blistering attack on the President of the Board of Trade: "For four years the industry ha[s] been slowly bleeding to death and the Government ha[s] rejected or ignored all appeals for help".(37) The employers' associations in spinning and weaving were busy devising schemes for the organized scrapping of excess capacity.(38)

Tories in Lancashire were in revolt and the government feared the consequences in the approach to the coming election. At the 1958 Cotton Board Conference in Harrogate, Harold Macmillan asked the industry to prepare schemes for re-organization. The government

would sympathetically consider such schemes with a regard to the provision of financial assistance. Macmillan's initiative came to fruition in the 1959 Cotton Industry Act.(39) Firms would be offered grants to scrap redundant machinery. It was hoped that productive capacity in the spinning section would be cut by at least 50 per cent, and in the weaving section by at least 40 per cent, eliminating surplus capacity and removing a major disincentive to re-equipment. A levy on firms remaining in the industry, supplemented by a contribution from the taxpayer, would pay for the scheme. After pressure from the employers, the government agreed to offer a 25 per cent subsidy on the purchase of modern looms and spinning machinery. The re-equipment grants would be financed by the state. Machinery to be scrapped under the provisions of the 1959 Act was taken out of commission in 1959-60 and broken up in 1961. A total of 48 per cent of the spindles, and 38 per cent of the looms in place in April 1959 were eliminated under the scheme, proportions only marginally below the targets set by the government.(40)

While the 1959 Cotton Industry Bill was still under consideration, the government was involved in a further initiative, this time in the field of import regulation. For several years the Cotton Board had been trying to secure voluntary quota arrangements with Hong Kong, India, and Pakistan. Eventually the British government intervened to give added weight to the Cotton Board's proposals, and voluntary trading agreements between the

U.K. and the Asian textile producers were concluded in early 1959. Unfortunately the ceilings were exceedingly liberal, and gave plenty of scope for Hong Kong, India, and Pakistan to expand their cotton cloth exports to Britain. Moreover, as the arrangements were confined to cotton cloth imports, Commonwealth producers were encouraged to increase their exports of clothing and man-made fibre products. These industry-level agreements were soon followed by equally permissive bilateral quota agreements with other low-cost producers in the Far East, Eastern Europe, and the Mediterranean.(41)

Despite the government's attempts to liquidate surplus capacity, subsidise re-equipment, and institute voluntary quota agreements, Lancashire's cotton textile industry entered the 1960s in complete disarray. Confidence remained at an extremely low ebb and trading conditions continued to deteriorate. In 1961 an A.W.A. survey discovered that the lack of orders was forcing some firms to abandon shift-working. The secretary of the Blackburn Weavers' Association added that: "this is a sorry state of affairs so soon after the Government scheme."(42)

The decline in output and employment continued unabated during the 1960s. Conditions were so bad that firms were reluctant to take advantage of the re-equipment subsidy provided under the 1959 Act. Only 678,000 new spinning spindles and 11,000 new looms were installed as a result of the subsidy, representing 12.8 per cent and 8.8 per cent respectively of 1965 spinning

and weaving capacity.(43) In retrospect it is hardly surprising that the re-equipment scheme failed. Caroline Miles calculates that the subsidy offered was actually quite trivial: the equivalent of an effective rate of protection of a mere five per cent over two years.(44)

Contraction did not ease cotton's labour shortage. As native Lancastrians became increasingly reluctant to enter the mills, the number of Asian workers grew. Net immigration to the U.K. from India and Pakistan rose from 8350 persons per annum between 1955 and 1960 to 34,812 per annum between 1961 and 1966.(45) In 1965 Asians comprised seven per cent of the labour force in the cotton industry, and by 1968 59 per cent of operatives on night-shifts in spinning and 36 per cent of those on night-shifts in weaving were Asians.(46) As late as 1975 47 per cent of all Gujaratis of working age in certain wards of Bolton were employed in the textile and clothing industries, mainly as spinners, weavers, and doffers.(47)

By the late 1960s the Lancashire cotton industry had become an ancillary industry serving the needs of the major man-made fibre producers. One of the first victims of the man-made fibre firms was the rayon weaving concern, James Nelson Ltd., which had risen to prominence earlier in the century under the benevolent guidance of Sir Amos Nelson. After taking over Nelsons in 1963, Courtaulds acquired a number of major spinning combines in 1964, including the Lancashire Cotton Corporation, Fine Spinners and Doublers, and Hayeshaw.

This policy was designed to secure a stable market for Courtaulds' man-made fibre products and was accompanied by a large investment programme. Indeed between 1962 and 1969 Courtaulds spent £57 million re-equipping its fibre-using operations in Lancashire and built a large new weaving mill at Skelmersdale.(48) At the same time I.C.I. lent money to Viyella International and Carrington and Dewhurst to establish a cotton textile empire of its own. Naturally the remaining small firms were heavily dependent upon the the goodwill of Courtaulds and I.C.I. for work and for survival. The merger movement was accompanied by the growing use of computers in the industry. A survey conducted by the National Computing Centre in 1968 estimated that 12 per cent of textile and clothing firms either owned or had access to a computer, primarily for stock control and general management purposes. About 90 per cent of these firms had started using computers within the previous five years, although there is little evidence that they were applied to the control of the production process.(49)

None of these developments halted the secular decline of cotton textile production in the U.K. Towards the close of the 1960s the last of the great cotton industry reports was issued by the Textile Council, successor to the Cotton Board. The report recommended the replacement of the fairly ineffective import quota schemes developed during the 1960s by a system of tariffs. It predicted that a further round of

contraction would be necessary, but did not want another state scrapping scheme:

"There is no evidence that the industry itself would welcome such a scheme. If, as in 1959, it were to involve a levy on firms staying in the industry, we consider that the objection then advanced to this system of financing - namely, that it penalised the efficient firms - would still hold good. If, on the other hand, it were to be entirely Government financed, we would regard the expenditure of public funds as unjustified."(50) -

The Textile Council requested temporary investment grants for firms outside Development Areas, and an increase in depreciation allowances for firms operating three or four-shift systems. In 1970 the government raised depreciation allowances and established a special £10 million loan fund for investment by small and medium sized textile firms under the auspices of the Industrial Reorganization Commission. But after much vacillation the Conservative government decided not to replace quotas by tariffs.(51)

This section has surveyed the virtually unbroken course of decline for the cotton industry between the peak year of 1951 and the appearance of the Textile Council's rather forlorn report in 1969. The remainder of the chapter analyzes the factors contributing to the process of contraction.

III

It has been seen that the period from 1950 to 1970 saw a rapid decline in employment in the Lancashire cotton industry. What were the immediate causes of this process? It would be very useful to to have some means of estimating the relative contributions to the

reduction in employment, of such factors as the increase in imports, the decline in exports and in home demand, and the course of average labour productivity. This is the function of the 'accounting procedure', a technique which is applicable to the analysis of reductions in employment in either a single industry or a group of industries. The variant of the procedure that is used in this chapter is similar to the one employed by Cable in his examination of the causes of declining employment in the U.K. textile and clothing industries over the 1970s. (52)

The procedure is based on the following identities:

$$[1] \quad D = Q - X + M$$

$$[2] \quad P = Q / E$$

$$[3] \quad \text{therefore } E = (1 / P)(D + X - M)$$

$$[4] \quad dE = f(dP, dD, dX, dM)$$

$$[5] \quad dE = (1 / P_0)(dD + dX - dM - E_t \cdot dP)$$

D is domestic demand, E is employment, M is imports, P is average labour productivity, Q is output, X is exports, 0 and t are the beginning and end years of the exercise.

The first identity defines domestic demand (D) as output (Q) minus exports (X) plus imports (M). Identity [2] defines average labour productivity (P) as output divided by employment (E). Combining [1] and [2] we arrive at identity [3], which defines employment in terms of domestic demand, exports, imports, and average labour productivity. Identity [4] shows that changes in employment depend upon changes in exports, imports, productivity, and domestic demand. Identity [5] gives the final form of the procedure. (53)

Data collected by the Cotton Board enable the changes in E, X, M, and P to be calculated, which leaves D as a residual. The next step is to hold M, P, and D constant, and calculate the number of jobs lost over the period in question as a result of variations in X. The same procedure is applied to the analysis of changes in M, P, and D. In the case of employment in the weaving section this is relatively straightforward. But in the application of the technique to spinning, it is necessary to take into account the effects of changes in the exports, imports, and domestic demand for cloth, on the consumption of yarn and hence on the employment of spinning operatives. The weight of yarn consumed each year in the weaving section can be obtained from Cotton Board statistics. Since the output of cloth is already known, the amount of yarn required to produce one square yard of cloth in a given year is easily calculated. Holding yarn consumption per square yard constant over the period to be examined, it becomes possible to measure the effects of changes in exports, imports, and domestic demand for cloth on the demand for yarn and consequently on employment in the spinning section. This completes the procedure. (54)

At this point it is worth mentioning some of the defects of this technique. Martin and Evans have criticized the 'accounting procedure' on several grounds. (55) Firstly, they suggest that the choice of D (or indeed of X, M, or P) as the residual term is in essence arbitrary. This is not wholly accurate. In the

present case the choice of residual factor was determined by the availability of data. Secondly, they assert that the technique is unable to measure the proportion of any reduction in employment which is due to the interaction between X, M, P, and D. This is a more telling criticism, as the procedure assumes that these factors are strictly independent. In the real world this would almost certainly not be the case. Moreover the 'accounting procedure' does not allow for feedback between factors. For instance, although in the first period employment in cotton would be reduced by an increase in imports, there would also be ramifications for employment in later periods. Increased competition from imports may induce surviving firms to reduce their costs through re-equipment. As this would increase average labour productivity, it would lead to a further crop of redundancies. With a static model this problem is insoluble. One answer would be to develop a dynamic model capable of incorporating these effects. But this may lead to further problems in estimating the most appropriate time lag. In practice, the shorter the period of the exercise, the less important will be these inter-relationships. This will be particularly the case in an industry such as cotton, which was not renowned for its speed of adaptation.

The results displayed in Table 6.7 suggest that the fifties and sixties can be divided into three distinct periods: 1950 to 1955, 1955 to 1960, and 1960 to 1970. (56) From 1950 to 1955 employment in spinning and

Table 6.7.

Factors accounting for the decline in employment in the
U.K. cotton industry, 1950-70.

(i) Spinning section.

Loss in employment due to changes in:	1950-5	1955-60	1960-5	1965-70	(1950-70)
Yarn/thread exports	-4143	-2010	-1315	1307	-5822
Yarn imports	54	-2917	646	-1409	-3880
Average labour productivity (spg)	3851	-12108	-7682	-4690	-17213
Cloth exports	-9015	-8248	-1673	-746	-20836
Cloth imports	-624	-11063	2456	745	-7869
Use of continuous filament m-m-f yarn	-5402	570	-5035	1257	-4878
Home demand for cloth	-381	3643	-7132	-7372	-17451
Home demand for yarn*	-40	4493	865	-1262	3569
TOTAL CHANGE IN EMPLOYMENT	-15700	-27640	-18870	-12170	-74380

(ii) Weaving section.

Loss in employment due to changes in:	1950-5	1955-60	1960-5	1965-70	(1950-70)
Cloth exports	-15272	-14229	-3037	-1692	-35296
Cloth imports	-1057	-19087	4485	1692	-13329
Average labour productivity (wvg)	-2139	-9677	-4975	-4973	-15865
Home demand for cloth	-642	6283	-12973	-16727	-29560
TOTAL CHANGE IN EMPLOYMENT	-19110	-36710	-16500	-21700	-94050

* excluding yarn used in weaving.

weaving fell by 34,820. Given the assumptions of the 'accounting procedure' as specified above, the main factor accounting for decline during this period was the reduction in exports of yarn and cloth. If exports had remained at their 1950 level, there would have been 28,430 more jobs in the British cotton industry in 1955 than was actually the case. Changes in employment due to imports and domestic demand were relatively slight, while average labour productivity in spinning actually declined in the early fifties.

The second period, from 1955 to 1960, saw rising imports become the major element in employment decline, although by a less decisive margin. Employment fell by 64,350 between 1955 and 1960. The level of employment in 1960 would have been 33,067 higher if imports had not risen over the previous five years, 24,487 higher if exports had not fallen, and 21,785 higher if average labour productivity had not increased.

During the 1960s declining domestic demand for cloth and yarn took over as the primary contributory factor to the reduction in employment. Between 1960 and 1965 employment in spinning and weaving fell by 35,370. Employment in 1965 would have been 19,240 higher in the absence of falling domestic demand, 12,657 higher if average labour productivity had not risen, and 6025 higher if exports had not decreased. Declining domestic demand was by far the largest single factor in the continuing reduction in employment during the late

1960s. The net decline in spinning and weaving employment was 33,870 between 1965 and 1970, with falling domestic demand for yarn and cloth accounting for 25,361 job losses during this period.

Under the restrictive assumption that X, M, P, and D are entirely independent, it appears that the loss of Lancashire's export markets was the primary factor accounting for the decline in employment in British cotton and allied textiles between 1950 and 1955; the rising tide of imports was the major element between 1955 and 1960; while falling domestic demand predominated during the sixties.

Competition from the rapidly expanding warp-knitting industry was a major cause of declining domestic demand for woven cloth. U.K. production of warp-knitted fabric increased from eight million kg. in 1961 to 35 million kg. in 1970. This impressive rate of growth was mainly at the expense of woven cloth, and was primarily the result of the technical superiority of warp-knitting over weaving, especially after the introduction of double-jersey knitting in 1954. Continuous filament fibre yarn did not weave particularly well, but it knitted excellently, so that warp-knitting firms were at an advantage in the production of man-made fabric for use in the clothing industry. (57) Warp-knitting also produced fabric at a higher speed than the weaving process. In 1970 warp-knitted shirtings could be made 25 per cent more cheaply than woven shirtings of the same quality. As a

result by 1969 50 per cent of men's shirts and 80 per cent of women's lingerie and nightwear were made using fabric produced by the warp-knitting industry.(58)

There is little evidence to support the view that a decline in the British clothing industry reduced domestic demand for woven cloth. Despite rising imports the clothing industry continued to prosper. Between 1958 and 1963 British imports of cotton dresses rose from 727,000 per annum to 2,768,000 per annum, while imports of cotton shirts rose from 529,000 per annum to 1,264,000 per annum over the same period.(59) Nevertheless U.K. production of stockings and socks (from all types of fabric) increased from 33.5 to 50.5 thousand dozen pairs between 1958 and 1969. During the same interval the output of underwear and shirts rose from 14.6 to 17.3 thousand dozen items, and outerwear production increased from 7.7 to 9.1 thousand dozen items.(60) Thus the decline in domestic demand for cloth during the 1960s cannot be attributed to the problems of the clothing industry, and must be put down to clothing manufacturers substituting warp-knitted fabrics for woven fabrics.

To conclude this section, it might be worthwhile comparing the results derived from the current application of the 'accounting procedure' with those obtained in similar studies. Frobel et al have estimated that increasing labour productivity was the main factor accounting for the decline in employment in the West German textile industry between 1960 and 1975. Krueger's

study of the U.S. between 1970 and 1976 concluded that the net effect of foreign trade in textiles was to improve the prospects for employment in the textile industry. Cable has shown that, in the British case, an increase in imports was the primary cause of declining employment in cotton cloth production between 1970 and 1976. (61) Cable's results are interesting in the present context, for they raise the possibility that the dominance of domestic demand as an explanation of falling employment in cotton textiles during the 1960s may only have been a temporary phenomenon; and that the deteriorating trade balance was the primary factor in the long run.

IV

The accounting exercise in the previous section identified rising imports, declining exports, and stagnant and declining domestic demand as the prime causes of contraction in the British cotton industry between 1950 and 1970. But it would be facile to regard the results of this procedure as constituting an adequate explanation of the underlying causes of decline. The 'accounting procedure' merely provides a first approximation. The purpose of this section is to delve deeper and uncover the basic forces responsible for the industry's demise.

Chapter 1 outlined a theory of industrial contraction. To recapitulate, the rate of growth of demand, and in particular of exports, was proffered as the main determinant of the growth rate of manufacturing

output. The faster the growth of output, the greater would be the opportunity for exploiting increasing returns, and hence the more rapid would be the increase in manufacturing productivity. But it was also recognised that causation was unlikely to be uni-directional. An initial loss of markets would lead to a slow rate of growth of industrial productivity. Slow productivity growth would inevitably result in declining competitiveness in domestic and overseas markets and a further reduction in sales. In cotton's case the initial loss of markets occurred in the late nineteenth and early twentieth centuries, as a result of industrialization in North America, Europe, and Asia. The product cycle theory suggests that less developed nations industrialize by imitating the products and practices of the technological leader. Consequently the establishment of a mechanized cotton textile industry was one of the first manifestations of overseas industrialization. As the rate of growth of demand for Lancashire's output declined the industry became increasingly depressed and inefficient, and this resulted in further losses of markets during the mid twentieth century. (62)

Lancashire's inability to compete with imported piece goods in the home market is illustrated in Table 6.8, which refers to the market prices of a typical selection of cloths during January and February 1962. Tables 6.9 and 6.10 are still more instructive; they outline average production costs of cotton textile

Table 6.8.

Prices of British and overseas cloth in the U.K. market,
Jan.-Feb. 1962.

(Old pence per yard)

	UK	HK	INDIA	CHINA*
Drill 3110	23.00	18.75	18.25	16.75
Poplinette	27.50	23.00		
Satin Drill	23.00	20.00		
4 Shaft Drill	21.50	19.00		
Sheeting	48.00	43.00		

* For re-export.

All U.K. prices are claimed to be severely cut.

Source: Cotton Board, The Implications for the U.K. Cotton Industry of Britain's Entry into the E.E.C. (Manchester: Cotton Board, 1962), p. 30.

Table 6.9.

Comparative production costs: 20s yarn, 1967.

(Old pence per lb.)

	UK	US	FRA.	WG	POR.	HK	IND.	PAK.
Raw cotton	31.7	33.4	31.2	31.9	29.1	30.1	28.1	27.9
Labour	8.3	6.1	4.7	5.7	4.0	3.2	4.2	2.6
Depreciation	2.4	1.1	3.4	3.4	2.0	1.3	2.0	2.7
Other	4.4	6.5	3.0	3.4	1.9	2.1	2.3	3.3
TOTAL SPG COST	15.1	13.7	11.1	12.5	7.9	6.6	8.5	8.6
Selling cost	1.8	1.7	1.2	1.1	3.0	2.1	2.6	1.2
TOTAL YARN COST	48.6	48.8	43.5	45.5	40.0	38.8	39.2	37.7

Other costs include supplies and maintenance, electricity, mill management, administration, etc.

Profits excluded.

Differences in depreciation charges depend on age of plant, write-off practices, hours worked, etc.

FRA. - France; WG - W. Germany; POR. - Portugal; HK - Hong Kong; IND. - India; PAK. - Pakistan.

Source: Textile Council, Cotton and Allied Textiles: A Report on Present Performance and Future Prospects (Manchester: Textile Council, 1969), p. 37, Table 5.

Table 6.10.

Comparative production costs: cotton/polyester shirting cloth,
1967

(Old pence per lb.)

	UK	US	FRA.	WG	POR.	HK	IND.	PAK.
Yarn cost	20.3	19.6	16.5	17.4	15.9	17.7	16.4	16.2
Labour	4.4	4.7	5.3	5.9	2.9	2.7	2.8	1.8
Depreciation	1.1	0.3	1.1	1.2	0.7	0.5	0.6	0.7
Other	4.4	4.1	5.0	6.0	4.6	3.6	4.3	3.6
TOTAL WVG COST	9.6	9.1	11.4	13.1	8.2	6.8	7.7	6.1
TOTAL G.C. COST	29.9	28.7	27.9	30.5	24.1	24.5	24.1	22.3

G.C. - grey cloth.

Other costs include supplies and maintenance, electricity, mill management, administration, etc.

Profits excluded.

Differences in depreciation charges depend on age of plant, write-off practices, hours worked, etc.

FRA. - France; WG - W. Germany; POR. - Portugal; HK - Hong Kong; IND. - India; PAK. - Pakistan.

Source: Textile Council, Cotton and Allied Textiles: A Report on Present Performance and Future Prospects (Manchester: Textile Council, 1969), p. 40, Table 12.

producers in a variety of leading nations. In Britain labour costs per lb. of 20s yarn were considerably above those incurred in any other of the countries shown; while fixed costs (excluding depreciation) in British spinning mills were also unusually high. In the production of cotton/polyester shirtings Britain was put at a distinct disadvantage by high yarn costs. Although labour costs per yard in weaving were somewhat below those in the United States, France, and West Germany, they were much higher than those in Portugal, Hong Kong, India, and Pakistan. High costs in Lancashire were both cause and effect of the loss of domestic and overseas markets. In the remainder of this section consideration will be given to the ways in which the loss of demand could have led to increasing relative inefficiency. This anticipates some of the conclusions of the following chapters.

Investment and technical progress are crucial to the survival and prosperity of all industries. The link between demand, confidence, and investment has already been established.(63) In view of this it is not surprising that investment per capita in the Lancashire cotton and allied textiles industry was below that in other developed nations during the 1950s and 1960s. For instance, in 1954 British cotton textile producers made new investments of \$80 per worker, compared with \$114 per worker (excluding new buildings) in France and \$191 per worker in the Netherlands.(64) As late as 1964 only

37 per cent of British cotton textile looms were automatic or semi-automatic, compared with 100 per cent in the United States, 74 per cent in the E.E.C., 86 per cent in Hong Kong, and 54 per cent in Taiwan.(65) Britain was no longer the technological leader, as had been the case in the mid nineteenth century, but was now a technological laggard installing equipment which was commonplace in many other countries.

British cotton textile firms were not in the forefront of research and development after World War Two. In 1950-1 the Federation of British Industries calculated that textile firms spent a mere 0.5 per cent of their turnover on research and development, compared with 2.4 per cent for chemical producers, 3.2 per cent for electrical engineering firms, and 5.1 per cent for scientific instrument producers.(66)

A high quality of managerial and technical staff is of great importance for industrial success. Carter and Williams found that declining industries such as cotton were unable to attract young managers of a high standard.(67) Moreover, in the mid-1960s cotton textile firms had a lower proportion of graduate scientists and engineers among their research and development staff than all but two (i.e wool and clothing) of a group of 25 major British industries.(68)

Fewer textile operatives were employed on shift-work in Lancashire than in competing industries overseas. In 1959 British cotton spinning concerns were operating an average of only 1.1 shifts, while the

Japanese were operating an average of 2.0, and the Americans an average of 3.0 shifts.(69) Shift-working was important because it enabled the high capital costs associated with new machinery to be spread over a larger annual output. During the 1950s the trade unions became increasingly reconciled to shift-working. Consequently it would be inaccurate to blame the obscurantism of labour for Lancashire's backwardness in this area. It is more likely that the slow spread of shift-working was the result, rather than the cause, of the low rate of investment. Inadequate shift-working in Lancashire was merely another symptom of the weak state of demand.(70)

Cotton textile producers in less developed countries enjoyed extremely low wage costs. The Textile Council estimated that average wages in Hong Kong, India, Pakistan, and Portugal were merely 25 per cent of those in the United Kingdom.(71) Cotton spinning and weaving are not particularly skill-intensive occupations; hence the higher quality of labour in advanced countries is unable to outweigh low wages in underdeveloped countries.(72)

Larger machine complements might have redressed the imbalance in labour costs between high-wage and low-wage economies. Chapter 4 described Britain's failure to increase output per worker during the 1940s.(73) In the 1950s and 1960s Lancashire made better progress. In a sample of 23 representative British industries, cotton spinning experienced the seventh fastest rate of increase in the value of output per head between 1953

and 1964.(74) But the data in Tables 6.9 and 6.10 suggest that it would have required an even faster rate of labour productivity growth for Lancashire to close the gap on its rivals. Tables 6.9 and 6.10 show that despite wages twice as high as those in Britain, the U.S. cotton industry could still produce yarn and cloth at roughly the same price as Lancashire.(75)

Rapid growth of demand for British cotton textiles during the mid nineteenth century led to an increasingly atomistic industrial structure, in which tiny firms specialized in a small range of products. When demand began to slacken specialist firms found themselves in difficulties. There was a need to combine to close down inefficient units, improve the financial stability of the industry, and permit modernization. But small family firms preferred to eke out a modest living than become insignificant parts of large combine. Consequently it proved difficult for the industry to adapt its structure to the changing conditions of demand.(76)

The debilitating effects of a fall in demand on productivity and on the suitability of the industry's structure have been considered. A further criticism made of Lancashire was that its marketing procedures were wholly inadequate. Hundreds of small merchants competed for orders, making it virtually impossible for spinners and weavers to gain a guaranteed outlet for their products. Moreover the financial resources of individual merchants were severely constrained, preventing them from financing large orders, and thereby limiting the

industry's ability to concentrate on longer and therefore more profitable production runs. The persistence of small merchanting firms can be explained by the factors which accounted for the survival of similar firms in spinning and manufacturing: the inertia of the industrial structure in the face of new market conditions. Merchanting arrangements were vigorously attacked from all sides but the merchants themselves. (77) During the 1950s the industry increasingly discussed means of by-passing the merchanting system, either through vertical integration, or by spinners, weavers, converters, and clothing companies directly dealing with large retail chains such as Marks and Spencers. (78) This policy would have been more effective had it been implemented twenty years earlier.

Clearly, a number of factors contributed to the poor performance of Lancashire's textile industry during the 1950s and 1960s: low investment, low levels of expenditure on research and development, second-rate management, comparatively inefficient labour utilization, an atomistic industrial structure, and an outmoded marketing system. These problems were largely the result of declining markets, which sapped confidence in the industry and made it twice as difficult for it to modernize productive capacity, labour practices, and structure. The industry failed in this hopeless task.

V

Between 1950 and 1970 the Lancashire cotton industry underwent an increasingly damaging process of decline. The 'accounting procedure' employed in section III attempted to identify the relative contributions of exports, imports, domestic demand, and average labour productivity to the fall in employment in cotton. Section IV supplemented this analysis by a look at supply-side factors, such as high wage costs, and poor management, which contributed to Lancashire's relatively high costs of production. These supply-side factors were not exogenous forces, for they were partly the result of the loss of markets in earlier periods. In short, demand factors and supply factors interacted in a cumulative process of decline for Lancashire's cotton industry.

APPENDIX I: British exports to W. Africa, South Africa, and Australia.

Table 6.11

Cloth exports to British West Africa, 1937-69.

(i) Cotton cloth (million square yards).

Origin	1937	1938	1950	1955	1960	1965	1969
U.K.	163	66	121	89	61	17	2
Bulgaria	..	..	..	..	..	8	1
China	..	..	..	..	27	53	75
Egypt	..	..	..	..	..	..	19
Hong Kong	..	..	..	..	..	6	3
Hungary	..	..	..	..	..	18	1
India	15	13	27	75	21	9	1
Japan	5	4	50	94	124	117	6
Netherlands	16	4	17	32	52	21	5
Pakistan	..	..	..	..	..	..	18
U.S.A.	..	..	..	..	..	..	39
U.S.S.R.	..	..	..	..	..	..	12
Others	32	13	19	29	29	64	65
TOTAL	231	100	234	319	314	313	247
UK share (%)	71	66	52	28	19	5	1

(ii) Man-made fibre and mixture cloth (million square yards).

Origin	1938	1950	1955	1960	1965	1969
U.K.	2	17	6	1	1	2
Japan	2	5	124	120	20	1
Others	5	8	22	19	17	4
TOTAL	9	30	152	140	38	7
U.K. share (%)	22	57	4	1	3	29

Source: C.B.Q.S.R.

Table 6.12.

Cloth exports to South Africa, 1938-70.

(i) Cotton cloth (million square yards).

Origin	1938	1950	1955	1960	1965	1970
U.K.	152	117	75	57	27	11
Belgium	3	2	14	8	2	1
Hong Kong	..	..	10	20	14	10
Japan	32	42	16	34	26	9
Netherlands	..	3	24	30	5	1
U.S.A.	2	13	34	32	16	5
West Germany	..	2	5	10	4	3
Others	2	16	19	43	19	12
TOTAL	191	195	197	234	113	52
U.K. share (%)	80	60	38	24	24	21

(ii) Man-made fibre and mixture cloth (million square yards).

Origin	1938	1950	1955	1960	1965	1970
U.K.	9	44	20	14	6	3
Italy	1	24	10	7	7	5
Japan	15	42	79	90	59	57
U.S.A.	..	12	39	20	20	15
West Germany	1	2	12	7	6	8
Others	1	12	12	..	15	13
TOTAL	27	136	172	138	113	101
U.K. share (%)	33	32	12	10	5	3

Source: C.B.Q.S.R.

Table 6.13.

Cloth exports to Australia, 1938-70.

(i) Cotton cloth (million square yards).

Origin	1938	1950	1955	1960	1965	1970
U.K.	138	105	100	36	13	10
Belgium	2	2	12	16	1	1
China	..	..	..	14	52	69
Czechoslovakia	..	11	7	12	9	10
Hong Kong	..	..	5	17	52	73
India	1	54	44	63	17	15
Japan	61	8	71	140	120	102
Taiwan	..	..	..	..	11	39
Others	7	17	33	57	42	39
TOTAL	209	197	272	355	317	358
U.K. share (%)	66	53	37	10	4	3

(ii) Man-made fibre and mixture cloth (million square yards).

Origin	1938	1950	1955	1960	1965	1970
U.K.	20	51	20	5	1	1
Japan	50	2	4	10	25	50
U.S.A.	..	5	..	6	5	5
West Germany	2	..	5	3	1	2
Others	4	13	18	1	13	4
TOTAL	76	71	47	25	45	67
U.K. share (%)	26	72	43	20	2	1

Source: C.B.Q.S.R.

.APPENDIX II: An accounting procedure.

(i) An analysis of declining employment in weaving.

Employment in weaving (EW) is defined as cloth output (QW) divided by average labour productivity in weaving (PW):

$$(1) \quad EW \equiv \frac{QW}{QW/EW} \equiv \frac{QW}{PW}$$

dEWT is the total change in employment between year 0 and year t:

$$(2) \quad EW(t) - EW(0) = dEWT$$

$$(3) \quad \text{Therefore: } dEWT = \frac{QW(t)}{PW(t)} - \frac{QW(0)}{PW(0)}$$

Adding and subtracting $QW(t)/PW(0)$ from (3) we obtain:

$$(4) \quad dEWT = \frac{QW(t)}{PW(t)} - \frac{QW(t)}{PW(0)} + \frac{QW(t)}{PW(0)} - \frac{QW(0)}{PW(0)}$$

$[\frac{QW(t)}{PW(t)}] - [\frac{QW(t)}{PW(0)}]$ is the change in employment due to changing productivity, which can be rewritten as dEWP:

$$(5) \quad \text{Therefore: } dEWT = dEWP + \frac{QW(t) - QW(0)}{PW(0)}$$

$[1/PW(0)].[QW(t) - QW(0)]$ is the change in employment due to changing output (dEWQ). This can be subdivided into the changes in employment due to domestic demand (dEWD), exports (dEWX), and imports (dEWM):

$$(6) \quad dEWQ = dEWD + dEWX + dEWM;$$

Where:

$$(7) \quad dEWD = [1/PW(0)].\left[[QW(t) - QW(0)] - [XW(t) - XW(0)] + [MW(t) - MW(0)] \right];$$

$$(8) \quad dEWX = [1/PW(0)].[XW(t) - XW(0)];$$

$$(9) \quad dEWM = [1/PW(0)].[MW(0) - MW(t)]$$

To summarise, the change in employment in weaving between years 0 and t is made up of the changes in employment due to alterations in the level of average labour productivity, domestic demand, exports, and imports:

$$(10) \quad dEWT \equiv dEWP + dEWD + dEWX + dEWM$$

(ii) An analysis of declining employment in spinning.

In analyzing the factors accounting for declining employment in spinning, it is necessary to consider an additional factor: the change in spinning employment due to declining cloth production (dESW).

$$(11) \quad dEST \equiv dESP + dESD + dESX + dESM + dESW$$

The change in spinning employment due to the change in the weaving section's consumption of non-continuous filament fibre yarn, Y, is shown in (12):

$$(12) \quad dESW = \frac{Y(t) - Y(0)}{PS(0)}$$

Non-continuous filament fibre yarn consumption in a given year can be rewritten as cloth output, QW, multiplied by the quantity of non-continuous filament yarn used to produce a unit of cloth, C.

$$(13) \quad dESW = \frac{[C(t).QW(t) - C(0).QW(0)]}{PS(0)}$$

Adding and subtracting $C(0).QW(t)/PS(0)$ from (13) we obtain (14), where $[1/PS(0)].[C(t).QW(t) - C(0).QW(t)]$ is the change in spinning employment due to the change in the amount of non-continuous filament fibre used to produce a unit of cloth:

$$(14) \quad dESW = C(0). \frac{[QW(t) - QW(0)]}{PS(0)} + \frac{C(t).QW(t) - C(0).QW(t)}{PS(0)}$$

$QW(t) - QW(0)$ can be subdivided into changes in domestic demand, exports, and imports of cloth. Consequently, where $dESW(D)$, $dESW(X)$, $dESW(M)$, $dESW(C)$ are the respective changes in spinning employment due to domestic demand for cloth, cloth exports, cloth imports, and the amount of non-continuous filament fibre yarn used to produce a unit of cloth:

$$(15) \quad dESW = dESW(D) + dESW(X) + dESW(M) + dESW(C)$$

$$(16) \quad \text{Therefore: } dEST = dESP + dESD + dESX + dESM + dESW$$

$$(17) \quad \text{Where: } dESD = \frac{[QS(t) - QS(0)]}{PS(0)} - \frac{[XS(t) - XS(0)]}{PS(0)} + \frac{[MS(t) - MS(0)]}{PS(0)} - \frac{[Y(t) - Y(0)]}{PS(0)}$$

Notes to Chapter 6.

N.B. An earlier (and substantially condensed) version of this chapter appeared as: J. Singleton, 'Lancashire's Last Stand: Declining Employment in the British Cotton Industry, 1950-70', Ec.H.R., XXXIX (1986), pp. 92-107.

(1) G.M.R.O., C.S.M.A., Minutes of a Joint Meeting with the F.M.C.S.A., 4 July 1950.

(2) To avoid excessive complication doubling and waste spinning are excluded from all data in this chapter.

(3) In 1950 U.K. production of all man-made fibre was 173,000 metric tons out of a world total of 1,676,000 metric tons. By 1960 U.K. output had risen to 268,560 metric tons, compared with a global total of 3,305,000 metric tons. In 1970 U.K. output was 599,000 metric tons out of a world total of 8,340,000 metric tons. United Nations Statistical Yearbook, 10 (New York: United Nations, 1958), pp. 199-201; 18 (1967), pp. 263-7; 24 (1973), pp. 256-60.

(4) R. Robson, The Man Made Fibres Industry (London: Macmillan, 1958), pp. 51-4.

(5) W.J. Reader, Imperial Chemicals Industries, II, The First Quarter Century, 1926-1952 (Oxford: Oxford University Press, 1975), pp. 369-79.

(6) See below, Table 6.8, p. 259.

(7) Economist Intelligence Unit, The Commonwealth and Europe (London: Economist Intelligence Unit, 1960), p. 17.

(8) D. MacDougall and R. Hutt, 'Imperial

Preference: A Quantitative Analysis', E.J., 64 (1954), pp. 233-57.

(9) Economist, 15 Sep. 1962, p. 1038. Lord's escapades are recounted in: R. David, 'Lord, Cyril', in D.J. Jeremy (ed.), Dictionary of Business Biography: A Biographical Dictionary of Business Leaders in Britain in the Period 1860-1980, Vol. 3 (London: Butterworths, 1985), pp. 852-5.

(10) Most imported Japanese cloth was finished in the U.K. and then re-exported.

(11) V.N. Balasubramanyam, The Economy of India (London: Weidenfeld and Nicolson, 1984), p. 189; J.N. Bhagwati and P. Desai, India, Planning for Industrialization: Industrialization and Trade Policies since 1951 (Paris: O.E.C.D., 1970), pp. 385-8; S.P.S. Pruthi, 'A Study of Productivity Problems in the Cotton Textile Industries of the U.K. (Lancashire) and India (Bombay and Ahmedabad) since the Second World War', (unpublished Ph.D. thesis, University of London, 1962), pp. 76, 314-6.

(12) T. Geiger and F.M. Geiger, The Development and Progress of Hong Kong and Singapore (London: Macmillan, 1975), pp 69-71.

(13) G.A.T.T., A Study on Cotton Textiles (Geneva: G.A.T.T., 1966), pp. 77-8.

(14) Average net profits at current prices of the leading cotton spinning and weaving combines increased from £306,684 in 1948 to £761,526 in 1951. See above, Ch. 5, Table 5.7, p. 199.

(15) H.A. Turner and R. Smith, 'The Slump in the Cotton Industry, 1952', Bulletin of the Oxford University Institute of Statistics, 15 (1953), p. 106.

(16) The Times, 9 May, 1952; F. Vibert, 'Economic Problems of the Cotton Industry', O.E.P., 18 (1966), pp. 319-27.

(17) H.A. Turner, 'Measuring Unemployment', J.R.S.S., 118 (1955), p. 36.

(18) L.R.O., A.W.A., Minutes of a Joint Meeting with the C.S.M.A., 9 May, 1952.

(19) The Times, 15 Sep. 1951.

(20) Turner and Smith, 'Slump', pp. 105-32; H.A. Turner, 'Unemployment in Textiles: A Note and Some Conclusions', Bulletin of the Oxford University Institute of Statistics, 15 (1953), pp. 295-306. The Yarn Spinners Agreement is discussed below, Ch. 9, pp. 394-404.

(21) L.R.O., Operative Spinners, Quarterly Report, 30 Apr. 1953, p.4; F.M.C.S.A., Annual Report, 1953, p. 11.

(22) E. Devons and R.C. Ogley, 'An Index of Wage-Rates by Industries', Manchester School, XXVI (1958), p. 102.

(23) W.T. Shackleton, 'A New Look at the Structure of the Industry', C.B.C. (Oct. 1956), p. 16.

(24) L.R.O., F.M.C.S.A., Annual Report, 1955, p. 12.

(25) The campaign for protection is described below, Ch. 9, pp. 413-23.

- (26) Street Diaries, XV, 18-9 Aug. 1954.
- (27) L.S. Amery, A Balanced Economy (London: Hutchinson, 1954), pp. 120-1.
- (28) U.T.F.W.A., Plan for Cotton (Ashton: U.T.F.W.A., 1957), pp. 4-12.
- (29) Ibid, pp. 21-2, 28.
- (30) Ibid, pp. 28-30.
- (31) Ibid, pp. 34-5.
- (32) Ibid, pp. 36-9.
- (33) Ibid, pp. 39-40.
- (34) J. Murray, Plan for Cotton (London: Fabian Society, 1956)
- (35) Cotton Board, The Cotton Industry and the Consequences of Unlimited Imports (Manchester: Cotton Board, 1956).
- (36) The Times, 5 Aug. 1958, p. 3.
- (37) The Times, 1 July 1958, p. 13.
- (38) These scrapping plans are discussed below, Ch. 7, pp. 313-6.
- (39) The most comprehensive discussion of the 1959 measures is given in C. Miles, Lancashire Textiles: A Case Study of Industrial Change (Cambridge: Cambridge University Press, 1965). Macmillan's switch from aloofness towards cotton to a policy of meddling has been portrayed as a prime example of the Conservatives' confusion about industrial matters between 1951 and 1964: N. Harris, Competition and the Corporate Society: British Conservatives, the State and Industry, 1945-1964 (London: Methuen, 1972), pp. 211-6. The 1959 act is

discussed below, Ch. 7, pp. 316-20.

(40) Miles, Lancashire Textiles, p. 60.

(41) The voluntary ceilings were as follows (actual exports to Britain in 1958 are in brackets): Hong Kong, 164M sq. yds. (119M sq. yds.); India, 175M sq. yds. (128M sq. yds.); Pakistan, 38M sq. yds. (2M sq. yds.). See below, Ch. 9, pp. 417-21.

(42) L.R.O., A.W.A., DDX1123/6/2/885, General File, District Replies to State of Trade Circular, 1961; DDX1123/6/2/895, General File, Compensation for Redundancy due to Mill Closures, 1962.

(43) Miles, Lancashire Textiles, p. 65.

(44) C. Miles, 'Protection of the British Textile Industry', in W.M. Corden and G. Fels (eds.), Public Assistance to Industry: Protection and Subsidies in Britain and Germany (London: Macmillan, 1976), p. 206.

(45) G.C.K. Peach and S.W.C. Winchester, 'Birthplace, Ethnicity, and the Under-enumeration of West Indians, Indians, and Pakistanis in the Censuses of 1966 and 1971', New Community, III (1974), p. 389.

(46) L. Briscoe, The Textile and Clothing Industries of the United Kingdom (Manchester: Manchester University Press, 1971), p. 176.

(47) K.G. Hahlo, 'Profile of a Gujarati Community in Bolton', New Community, VIII (1980), pp. 305-6.

(48) The merger movement is dealt with below, Ch. 10, pp. 456-73.

(49) National Computing Centre, Computers in Textiles: A Survey of Computer Applications in the

Textile and Clothing Industries (Manchester: National Computing Centre, 1968), pp. 4, 11.

(50) Textile Council, Cotton and Allied Textiles: A Report on Present Performance and Future Prospects (Manchester: Textile Council, 1969), paragraph 616.

(51) Miles, 'Protection of the British Textile Industry', pp. 199-201.

(52) V. Cable, 'British Protectionism and L.D.C. Imports', Overseas Development Institute Review, 2 (1977), pp. 29-48; V. Cable, Protectionism and Industrial Decline (London: Hodder and Stoughton, 1983); V. Cable, '"Cheap" Imports and Jobs: The Impact of Competing Manufactured Imports from Low Labour Cost Countries on U.K. Employment', in P. Maunder (ed.), Case Studies in Development Economics (London: Heinemann, 1982), pp. 54-83.

(53) A more detailed algebraic exposition of the technique used is included in Appendix II, pp. 271-2.

(54) The quantity of yarn required to produce a given length of cloth introduces a further factor into the procedure. Holding exports, imports, and domestic demand for cloth constant, the effect on employment in spinning of changes in the amount of yarn needed to produce a unit of cloth is calculated. As there were no major improvements in the technology employed by the average cotton textile firm between 1950 and 1970, such variations can be put down to changes in the use of cotton and staple man-made fibre relative to continuous filament fibre.

(55) J.P. Martin and J.M. Evans, 'Notes on Measuring the Employment Displacement Effects of Trade by the Accounting Procedure', O.E.P., 33 (1981), pp. 154-64.

(56) The rows in Table 6.7 do not add up to the final (1950-70) column, because of the use of separate base years for each five year period.

(57) J.A. Blackburn, 'The Vanishing U.K. Cotton Industry', National Westminster Bank Quarterly Review (Nov. 1982), p. 49; A.C. Parsonage, 'An Economic and Technological Study of the Competition between Knitting and Weaving in the United Kingdom Textile Industry', (unpublished Ph.D. thesis, University of Surrey, 1973), pp. 16-7, 68.

(58) F.A. Wells, The British Hosiery and Knitwear Industry: Its History and Organization (Newton Abbot: David and Charles, 1972), pp. 181-2.

(59) C.B.Q.S.R., 72 (1964), p. 14.

(60) Wells, British Hosiery Industry, p. 179.

(61) F. Frobel et al, The New International Division of Labour (Cambridge: Cambridge University Press, 1980); A.O. Krueger, 'The Impact of Foreign Trade on Employment in United States Industry', in J. Black and B. Hindley (eds.), Current Issues in Commercial Policy and Diplomacy (London: Macmillan, 1980), pp. 73-98; Cable, 'British Protectionism', pp. 29-48; Cable, Protectionism and Industrial Decline; Cable, '"Cheap" Imports and Jobs', pp. 54-83. See also: Z.A. Silberston, The Multi Fibre Arrangement and the U.K.

Economy (London: H.M.S.O., 1984).

(62) See above, Ch. 1, pp. 5-30.

(63) The theoretical basis for this argument is provided above, Ch. 5, pp. 185-92.

(64) O.E.C.D., Modern Cotton Industry: A Capital Intensive Industry (Paris: O.E.C.D, 1965), Tables I, II, p. 110.

(65) G.A.T.T., Study on Cotton Textiles, Table E, p. 194.

(66) Federation of British Industries, Research and Development in British Industry in the year 1950-51 (London: F.B.I., 1952), p. 10, Table 1.

(67) C.F. Carter and B.R. Williams, Industry and Technical Progress: Factors Governing the Speed of Application of Science (Oxford: Oxford University Press, 1957), p. 158.

(68) B.R. Williams, Technology, Investment, and Growth (London: Chapman and Hall, 1967), p. 36.

(69) O.E.C.D., Modern Cotton Industry, Table III, p. 93.

(70) See below, Ch. 8, pp. 338-58.

(71) Textile Council, Cotton and Allied Textiles, p. 31.

(72) L.A. Sandberg, Lancashire in Decline: A Study in Entrepreneurship, Technology, and Industrial Change (Columbus, Ohio: Ohio State University Press, 1974), p. 215.

(73) See above, Ch. 4, pp. 129-62.

(74) W.B. Reddaway, 'Addendum', in W.E.G. Salter,

Productivity and Technical Change (Cambridge: Cambridge University Press, 1968), p. 197.

(75) Labour matters in the 1950s and 1960s are discussed below, Ch. 8, pp. 338-84; see also C. Henniker-Heaton, 'Wages Structures', in Textile Institute, Management in the Textile Industry (London: Longman, 1969), pp. 231-59.

(76) See below, Ch. 7, pp. 315-6.

(77) W.S. Ascoli, The Merchant in the Cotton Industry: The Case for the Converter and Exporter (Manchester, 1942), pp. 1-6; Cotton Board, Report of a Committee to Enquire into Post-War Problems (Manchester: Cotton Board, 1944), pp. 22-3; U.T.F.W.A., Plan for Cotton, pp. 23-30.

(78) E. Kann, 'Modern Trends in the Buying of U.K. Yarn and Cloth: The Home Market Consumer', C.B.C. (Oct. 1954), pp. 9-15; C.E. Harrison, 'A Company's Policy in the Ten Post war Years', C.B.C. (Oct. 1955), pp. 10-13; O.W. Roskill, 'Market Research in the Cotton Industry', C.B.C. (Oct. 1957), pp. 116-24; E. Kann, 'Changes in Marketing and Distribution of Textiles', C.B.C. (Oct. 1958), pp. 27-42; C.E. Harrison and J.A. Blackburn, 'A Producer Looks at Marketing', C.B.C. (Oct. 1959), pp. 36-7.

Chapter 7.

INVESTMENT IN THE LANCASHIRE COTTON INDUSTRY, 1950-65.

Lancashire substantially failed to modernize its fixed capital stock between 1945 and 1950. Chapter 5 suggested that uncertainty, excess capacity, technical inter-relatedness, the large stock of fully written down machinery, and the short supply of certain types of textile machinery, were responsible for the low rate of re-equipment during this period. Consequently in 1950 the industry was largely equipped with a fixed capital stock of prewar vintage.

The present chapter extends the analysis of investment in the cotton industry into the 1950s and 1960s and is divided into four sections. Section I examines trends in the cotton industry's capital stock during the 1950s and early 1960s and sets out the theoretical background for the succeeding sections. Section II will analyze the course of investment in the cotton industry during the 1950s. Section III looks at the extremely important issue of excess capacity and the schemes hatched within the industry for its elimination. Section IV considers investment during the early 1960s, emphasising the effects of the 1959 Cotton Industry Act and the adoption of new technology such as the shuttleless loom.

I

Between 1950 and 1965 the productive capacity of the cotton industry declined by more than half. Tables 7.1, 7.2, and 7.3 reveal the details of this process of

Table 7.1

Productive capacity and excess capacity in the spinning section, 1950-65.

	Spindles in place			Spindles running			capacity utilizn. (%)
	total m.e. (millions)	mule	ring	total m.e. (millions)	mule	ring	
1950	34.45	18.98	10.33	27.46	15.22	8.16	79.7
1951	34.10	18.24	10.57	27.83	15.01	8.55	81.6
1952	33.42	17.24	10.79	21.10	10.33	7.18	63.1
1953	32.99	16.60	10.93	23.85	11.25	8.40	72.3
1954	32.00	15.76	10.83	24.94	11.77	8.78	77.9
1955	30.80	14.52	10.85	22.18	9.68	8.33	72.0
1956	29.29	13.33	10.64	20.72	8.52	8.13	70.7
1957	27.79	12.28	10.34	20.48	8.12	8.24	73.7
1958	26.24	10.89	10.23	17.21	5.98	7.49	65.6
1959	22.88	8.71	9.45	15.46	4.90	7.05	67.6
1960	13.79	3.33	6.97	12.14	2.83	6.22	88.0
1961	13.05	2.78	6.84	11.90	2.56	6.24	91.2
1962	11.98	2.36	6.40	10.11	1.80	5.54	84.4
1963	10.02	1.56	5.64	8.72	1.20	5.01	87.0
1964	8.82	1.03	5.19	8.06	n.a.	n.a.	91.4
1965	8.25	0.90	4.90	7.32	n.a.	n.a.	88.7

N.B. Figures apply to U.K. and to running mills only; m.e. means mule equivalent.

One ring spindle is assumed to be the equivalent of 1.5 mule spindles.

Capacity utilization refers to the percentage of mule equivalent spindles operating in running mills.

Source: C.B.Q.S.R.

Table 7.2

Productive capacity and excess capacity in the weaving section, 1950-65.

	Looms in place		Looms running	capacity
	total	auto	total	utilization.
	(thousands)		(thousands)	(%)
1950	357.7	n.a.	281.4	78.7
1951	358.3	n.a.	287.2	80.2
1952	354.3	34.3*	229.7	64.8
1953	345.7	n.a.	250.8	72.5
1954	337.8	n.a.	260.0	77.0
1955	326.8	39.2*	233.2	71.4
1956	259.9	39.6*	211.8	71.6
1957	276.0	39.9*	207.1	75.0
1958	255.4	41.5	178.8	70.0
1959	222.6	41.3	160.4	72.1
1960	155.4	40.6	135.8	87.4
1961	149.6	42.9	135.8	90.8
1962	140.1	42.8	119.7	85.4
1963	125.9	42.5	108.3	86.0
1964	118.5	42.5	105.9	89.4
1965	114.0	42.5	102.4	89.8

N.B. Figures apply to the Lancashire area and to running mills only.

* All U.K. mills.

Capacity utilization refers to the percentage of looms operating in running mills.

Sources: C.B.Q.S.R.; International Federation of Cotton Spinners' and Manufacturers' Associations, International Cotton Loom Statistics (Manchester, I.F.M.C.S.M.A., 1950-8).

Table 7.3

Automatic and semi-automatic looms in place as a proportion of all looms in selected countries, 1939-64.

	1939	1953	1960	1964
	(percentages)			
U.S.A.	88.76	100.00	100.00	100.00
France	n.a.	42.37	57.02	68.85
W. Germany	n.a.	n.a.	59.55	76.94
Italy	n.a.	64.06	78.76	86.48
Sweden	n.a.	86.79	95.18	97.78
U.K.	3.17	11.32	27.54	36.92
Hong Kong	n.a.	n.a.	70.59	85.51
India	n.a.	n.a.	8.21	12.17
Pakistan	-	n.a.	60.00	63.58
U.S.S.R.	n.a.	17.78	50.50	62.21

Source: G.A.T.T., A Study on Cotton Textiles (Geneva: G.A.T.T., 1966), Table E, pp. 192-6.

contraction. Ring spindles in place in running mills fell from 10.33 million to 4.90 million between 1950 and 1965, while aggregate mule equivalent spindleage fell from 34.45 million to 8.25 million. Total loomage declined from 357,700 in 1950 to 114,000 in 1965. The number of automatic loom increased from 34,300 to 42,500 between 1950 and 1965, but Britain continued to have a lower proportion of automatic looms than most of its major competitors.

In Chapter 5 a broad theoretical framework for the analysis of industrial investment was outlined.(1) Investment was seen to be a function of the following factors:

(i) Business confidence in relation to both the short-term and long-term prospects for the industry.

(ii) Demand and the rate of change of demand for the final product.

(iii) Capacity utilization levels.

(iv) The price, quality, and availability of capital goods.

(v) Costs of production using old equipment.

(vi) Profits and changes in profits relative to capital goods prices.

(vii) The cost and availability of outside finance.

(viii) Technical inter-relatedness in spinning, weaving, and finishing.

These factors are also relevant to the discussion of investment in Lancashire after 1950, and constitute an essentially post-Keynesian framework for the

succeeding analysis. Perhaps government policy should have been included in the above list. Governments could have a direct impact on the quantity of re-equipment through such measures as the 1948 Cripps re-equipment subsidy and the 1959 Cotton Industry Act.

Nevertheless there is a significant difference between the approach of Chapter 5 and that of the present chapter. In an analysis of the fifties and sixties there is little scope for the application of Kornai's theory of 'suction' in a resource-constrained economy. By the early 1950s the dominance of the market system had been restored in Britain. Lamfalussy's theory of defensive investment is a more appropriate tool. It explains why firms continue to invest in industries marked by weak demand and falling profits.

Lamfalussy considered investment decisions in a declining or stagnating market environment. Firms have three strategies to choose from. They could quit the industry immediately; they could install new equipment (defensive investment); or else they could persevere with their old machinery in the short-term, while planning to withdraw from production in the long-term. Defensive investment would delay, but not prevent, the decline in profitability.(2)

How will firms choose between these strategies? A firm which decided not to re-equip need not make any allowance for depreciation in future years. Assuming perfect foresight, such a firm would calculate the present value of the gross profits (plus scrap value)

that would accrue during the remainder of the working life of its existing equipment. It would plan to quit in the year in which the present value of cumulative gross profits (plus scrap value) reached a maximum. This can be clarified by the following numerical example. For the sake of simplicity it is assumed that the discount rate is zero.

EXAMPLE I: NO-REPLACEMENT OF FIXED CAPITAL.

	Year					
	1	2	3	4	5	6
Gross profit	100	80	60	40	20	0
Scrap value	12	10	8	6	4	2
CUMULATIVE GROSS PROFIT PLUS SCRAP VALUE	112	190	248	286	304	302

It can be seen that the best time to quit would be year 5. But before the firm decided to adopt such a policy, it would compare the present value of cumulative gross profits (plus scrap value) in year 5, with the present value of the cumulative net profits that could be obtained as a result of re-equipment. I refer the reader to the second numerical example.

EXAMPLE II: DEFENSIVE INVESTMENT.

	1	2	3	4	5	6	7
Gross profit*	120	120	60	50	40	30	20
Depreciation	20	20	20	20	20	20	20
Net profit	100	100	40	30	20	10	0
CUMULATIVE NET PROFIT	100	200	240	270	290	300	300

* accruing to the new equipment.

In this case the life-span of the new machinery is

seven years, and during that time it earns cumulative net profits of 300. This is less than the present value of the gross profits (plus scrap value) that could be secured by eschewing investment and scrapping in year 5. A rational firm would decide not to re-equip. The relevant choice can also be expressed algebraically.

Firms will re-equip if:

$$[1] \frac{NP(1)}{(1+r)} + \frac{NP(2)}{(1+r)^2} + \dots + \frac{NP(n)}{(1+r)^n} > \frac{GP(1)}{(1+r)} + \frac{GP(2)}{(1+r)^2} + \dots + \frac{GP(m)}{(1+r)^m}$$

Where: NP(1), NP(2), ..., NP(n) are net profits in years 1, 2, ..., n, and n is the life-span of the new equipment; GP(1), GP(2), ..., GP(m) are gross profits inclusive of scrap value in years 1, 2, ..., m, and m is the year in which the present value of cumulative gross profits plus scrap value using old machinery is maximized.

Firms would adopt the third policy, i.e. scrapping immediately, if the break-up value of the existing machinery exceeded both the present value of maximum cumulative gross profits (plus scrap value), and the present value of the cumulative net profits accruing from re-equipment.

Firms are likely to choose defensive investment if:

(i) The life-span of new equipment is high relative to its replacement cost. This would lead to low annual depreciation costs.

(ii) The new equipment embodies technical improvements.

(iii) Scrap prices are low.

(iv) They have short planning horizons. Returning to our earlier numerical examples, firms which

re-equipped would enjoy large net profits in years 1 and 2. If firms did not possess detailed information about years 3 to 7, they would be inclined to select a policy of defensive investment, although this would make them worse off after the first two years. Lamfalussy argued that small firms tended to have short horizons. This makes his analysis particularly relevant to the analysis of the cotton industry in Lancashire.

Lamfalussy derived his theory of defensive investment from an examination of the Belgian economy during the 1950s:

"The moral...seems to be that...declining or stagnating markets may also induce capital outlay which will not be enough [or of the right kind] to save the firm for good, but will be enough to keep it alive for long years, after which it will nevertheless have to go out of business in the end. If defensive investment of this hopeless kind takes place, the transfer of capital and labour from declining to expanding industries will be greatly delayed."(3)

It would not be unrealistic to speculate that a great deal of the investment in Lancashire after 1950 was of a defensive nature. Moreover it is quite possible that much of this investment would not have taken place had firms been able to take a longer view of demand and profitability in the industry. The theory of defensive investment may also help to explain the survival of a large number of marginal firms in cotton textile production.

II

The 1950s were years of regression for the Lancashire cotton industry. Investment was at a

Table 7.4

Comparative investment expenditure per operative in the cotton industries of selected countries, 1954-63.

	France	Holland	Italy	Japan	U.K.
	(\$U.S.)				
1954	113.9	191.2	n.a.	44.2	80.0+
1955	129.8	190.0	n.a.	81.2	99.3+
1959	179.0	231.1	114.5	73.2	148.8++
1960	176.5	284.0	151.7	128.0	209.0++
1961	243.9	448.5*	144.3	119.0	331.5++
1962	292.7	379.3*	159.5	105.4	342.4
1963	296.5	n.a.	178.3	97.4	n.a.

* including rayon and linen.

+ including hosiery and knitwear.

++ including finishing.

N.B. The French data excludes investment in buildings; the Japanese data excludes investment in weaving.

Source: O.E.C.D., Modern Cotton Industry: A Capital Intensive Industry (Paris: O.E.C.D., 1965), Tables I, II, pp. 110-1.

Table 7.5

Ring spindles in the course of erection, 1951-7.

	As replacement of existing spindles of the same type (thousands)	As an increase in spindleage	Total
Jan. 1951	n.a.	n.a.	378
July 1951	n.a.	n.a.	201
Jan. 1952	n.a.	n.a.	271
July 1952	133	52	185
Jan. 1953	110	164	274
Jan. 1954	162	101	263
July 1954	241	64	305
July 1955	209	66	275
July 1956	265	49	314
July 1957	190	71	261

NB. Cotton and allied textiles only.

Source: International Federation of Master Cotton Spinners' and Manufacturers' Associations, International Cotton Statistics. (Manchester: I.F.M.C.S.M.A., 1950-7).

Table 7.6

Looms in the course of erection, 1952-8.

	As replacement for looms of same type			As an increase in looms			TOTAL
	Lancs	auto	semi auto	Lancs	auto	semi auto	
July 1952	536	1968	-	469	477	-	3450
Jan. 1955	1158	1061	-	1638	620	63	4540
Jan. 1956	813	1126	82	462	246	54	2783
Jan. 1957	428	1139	36	416	198	152	2369
Jan. 1958	417	605	150	277	245	11	1705

N.B. Data refers to looms in the course of erection and expected to run within twelve months. Cotton and allied textiles only.

Source: International Federation of Master Cotton Spinners' and Manufacturers' Associations, International Cotton Loom Statistics. (Manchester: I.F.M.C.S.M.A., 1952-8).

relatively low ebb, as is revealed by the data collected in Tables 7.4, 7.5, and 7.6. Although the information displayed in Table 7.4 is of a tentative nature, it would appear that gross investment per operative in the British cotton textile industry during the 1950s compared unfavourably with levels of investment in competitor countries. At the rate of erection of new ring spindles in July 1954 (see Table 7.5) it would have taken 35 years fully to replace Britain's existing ring spinning capacity. Table 7.3 exhibited the extent of Britain's failure to convert its weaving capacity from Lancashire looms to automatic looms. Table 7.6 reveals that many firms were still installing new Lancashire looms during the 1950s. Taking both Lancashire and automatic looms into account, it would have about 50 years to replace half of Lancashire's total weaving capacity at the rate of re-equipment prevailing in the mid 1950s. It is the purpose of the present section to explain the overall failure of Lancashire to re-equip during the 1950s, and this will involve examining the factors outlined in the previous section.

Re-equipment was seen as an important goal of the industry throughout the 1950s, by both the employers' organizations and the trade unions. During 1949 the employers and the operatives had co-operated in a series of missions to inspect mills in the United States. Their conclusions, published in 1950, led to widespread dismay, for they indicated that British mills had done little to catch up with best U.S. practice since the

Platt Mission in 1943: "There is a great disparity between the average productivity of American and British mills in favour of the U.S.A.. The high productivity in America is obtained without the sacrifice of yarn quality...and without diminution of machine efficiency".(4) It was therefore imperative that Britain should proceed towards the adoption of the latest technology. Two years later these conclusions were echoed in the report of a delegation from the United States, which had been shocked by the use of archaic machinery in Lancashire spinning and weaving mills.(5) Although the Americans' report was treated with thinly disguised contempt by some employers, Mr George Hasty, the president of the F.M.C.S.A., reiterated the need for modernization in his annual statement in March 1953:

"We are now...approaching the top of a hill. Our industry has two choices before it. It can gradually retreat down the hill and contract, relying almost entirely on the old methods. Owing to the skill and reputation which it has, it would still continue to contribute for a long time towards our national economy, but it would not attract the rising generation of workers. As its equipment became old and the average age of its labour force increased, it would be less and less able to compete in a modern world. On the other hand, we can advance to the crest of the hill and go forward with the aim of making our industry the most up to date and competitive in the world."(6)

In sharp contrast to the situation in the 1940s, Mr Hasty could expect little direct assistance for modernization from the government. The Conservatives, elected in 1951, made it clear that the cotton industry would be left to its own devices. On 18 Aug. 1954 Mr Peter Thorneycroft, the President of the Board of Trade,

warned a delegation of employers and trade unionists that there would be no question of special legislative measures, along the lines of the 1948 Cotton Spinning (Re-equipment Subsidy) Act, to assist the industry to replace its aging capital stock.(7) Only the U.T.F.W.A. and the Labour Party appeared to offer a coherent plan for modernizing the industry, in their Plan for Cotton. They argued that management was complacent and would not re-equip while profits could still be made with existing machinery.(8) This obstacle could be overcome by the creation of a Cotton Industry Re-organisation Commission with wide ranging powers. The C.I.R.C. would offer firms subsidised loans for approved re-equipment programmes. But the C.I.R.C. would have powers to compel firms to re-equip if they refused these inducements. Directors could be nominated by the C.I.R.C. and appointed to company boards to press for a policy of modernization. In extreme cases the government would be asked to take a controlling interest in recalcitrant firms to ensure that they implemented a suitable investment programme.(9) A levy on firms varying inversely with their investment expenditure would help to pay for the C.I.R.C. and act as an added inducement to re-equip. Labour's proposals went far beyond the rather weak provisions of the 1948 Cripps subsidy, but they were never implemented, the party remaining in opposition until 1964. As cotton was an industry with no long term future it is doubtful whether such policies would have been desirable from a national standpoint.(10)

Lancashire faced the renewed difficulties of the 1950s without any government aid for re-equipment. In a hostile climate marked by rapidly declining demand it is not surprising that many firms were reluctant to risk large capital expenditure. Output of yarn and cloth fell by one third between 1950 and 1960, exports collapsed, and cheap Asian imports flooded into Britain.(11) This decline was not uniform: there were particularly severe contractions of output in 1952, 1955-6, and 1958-9, with small recoveries in the intervening years, but this instability only added to firms' uncertainty. Tables 7.1 and 7.2 suggest that the industry was experiencing considerable excess capacity between 1950 and 1960. Panic calculated that between 1958 and 1975 capacity utilization in the British manufacturing sector averaged 94.4 per cent at the peaks of the business cycle and 82.9 per cent in the troughs.(12) In the most prosperous year (i.e. 1954) between 1952 and 1959, a mere 77.9 per cent of spindles and 77.0 per cent of looms in running mills were operating. The Lancashire cotton industry clearly exhibited an unusually high degree of redundant capacity. Declining demand and chronic surplus capacity were reflected in a growing loss of confidence in the industry. Tattersall's index of cotton share prices and the Annual Abstract of Statistics' index of industrial share prices are compared in Table 7.7. Lancashire share prices showed no improvement between 1950 and 1960, while those of British industry as a whole more than doubled in price. In these adverse circumstances

Table 7.7

Cotton textile share prices, 1950-64.

	Tattersall's index of leading cotton textile share prices (1950 = 100)	Index of of ordinary industrial share prices* (1950 = 100)
1950	100	100
1951	122	103
1952	84	94
1953	120	104
1954	99	136
1955	81	155
1956	72	144
1957	65	151
1958	63	167
1959	101	229
1960	101	278
1961	74	286
1962	67	265
1963	91	282
1964	113	301

* As calculated in the Annual Abstract of Statistics.

Sources: Annual Abstract of Statistics ;
F.W. Tattersall's Annual Cotton Trade Review.

investment in the industry was largely of a defensive nature.

Lamfalussy's theory of defensive investment also predicts that firms, once they have decided to quit the industry, may delay closure for a number of years so that they might maximize the present value of future gross profits. The Labour Party's suggestion that a levy should be charged on firms unwilling to invest stemmed from the fear that this form of activity was rife. High short run profits could be made by firms choosing to hoard rather than to reinvest their depreciation funds, and then abandoning the industry. It is likely that this behaviour was partly responsible for excess capacity in the industry, thereby constituting a disincentive to investment by other companies.(13)

In examining an industry's record of investment, it is necessary to consider the availability of external and internal finance for re-equipment. Lancashire was not a major recipient of assistance from the agencies established during the 1940s to help small and medium firms to obtain finance. It is difficult to find detailed information on the activities of the Industrial and Commercial Finance Corporation and the Finance Corporation for Industry. But it appears that they concentrated on London, where 37 per cent of the I.C.F.C.'s portfolio was held in 1957. But this may have been because there was little demand for assistance in Lancashire. Lord Piercy, chairman of the I.C.F.C., told the Radcliffe Committee that: "We have become very well

established in Birmingham where we seem to take people's fancy. We find it very difficult [to find clients] in Manchester".(14)

Lancashire was not particularly starved of advances from the banks. Between 1950-2 and 1958-60 bank advances to the cotton industry as a proportion of advances to all manufacturing industry increased from 3.0 per cent to 3.4 per cent.(15) The District Bank had very close links with Lancashire and was the main backer of Cyril Lord, in his attempt to expand his business interests in spinning and weaving during the early 1950s. This was greatly to the chagrin of Sir Raymond Streat, who described Lord as the "vulgarest of adventurers".(16)

In December 1957 the Association of British Chambers of Commerce submitted evidence to the Radcliffe Committee on monetary policy, dealing with the effects on investment of changes in interest rates and the availability of credit. Out of 379 textile companies in the survey which had either experienced a contraction in turnover, or had decided to reduce or postpone their investment programmes since September 1957, 48 per cent claimed that this was a result of slack business, increased competition, or altered trading prospects. Only 13 per cent blamed the reductions in turnover and investment on tight money, while a mere three per cent stressed difficulties in obtaining finance, and a further three per cent an increase in the cost of borrowing to the punitive level of seven per cent.(17) Thus it would seem that even during the 1957 credit

squeeze textile producers were not seriously constrained from investing on account of changes in interest rates or the availability of outside finance.

Profits are the major source of finance for re-equipment in British industry. Tables 7.8 and 7.9 show the broad trends in the profitability of firms in the cotton industry during the 1950s and early 1960s. Between 1951 and 1959 the average net profits of the leading combines declined from £694,823 to £81,528 at constant prices. The average dividend to shareholders fell from 19.00 per cent to 9.73 per cent over the same period, suggesting that firms were finding themselves under very great pressure. Such a disastrous loss of profitability must have had a very significant effect on investment decisions in the industry. At the same time there is some tentative evidence to suggest that firms were reluctant to invest those profits which remained. In 1956 the largest firm in the industry, the Lancashire Cotton Corporation, decided to increase dividends at the expense of further investment in fixed capital stock. Perhaps the L.C.C. was tending towards Lamfalussy's policy of delayed contraction.(18)

Further important determinants of the level of investment include the price, availability, and quality of textile machinery. During the late 1940s the supply of new textile machinery had been severely constrained by import restrictions and the government's attempts to channel a large proportion of British production of spindles and looms into export markets. After 1951 the

Table 7.8

Net profits of the leading cotton industry combines,
1950-65.

	Average net profit (current prices) (£)	Average net profit (1950 prices)* (£)	Average dividend (%)
1950	484,371	484,371	16.96
1951	761,526	694,823	19.00
1952	534,004	447,614	17.42
1953	264,180	215,130	11.94
1954	431,928	344,440	13.58
1955	333,213	254,945	14.99
1956	224,904	163,805	13.23
1957	354,919	249,241	12.72
1958	235,716	160,679	10.79
1959	120,254	81,528	9.73
1960	375,425	251,963	12.48
1961	470,799	305,515	14.82
1962	250,317	155,864	12.83
1963	139,597	85,224	8.09
1964	147,669	81,365	12.68
1965	178,095	100,505	14.27

* i.e deflated by retail price index.

N.B. Figures are after deductions have been made for depreciation and include subsidiary firms. The firms within the leading group varied from year to year, consequently the results must be treated with care.

Source: F.W. Tattersall's Annual Cotton Trade Review.

Table 7.9

Net profits of independent cotton textile companies,
1950-65.

	Spinning firms		Weaving firms	
	average net profits (current prices) (£)	average net profits (1950 prices)* (£)	average net profits (current prices) (£)	average net profits (1950 prices)* (£)
1950	35,166	35,166	n.a.	n.a.
1951	55,541	50,676	n.a.	n.a.
1952	55,154	46,231	87,323	73,196
1953	27,546	22,432	49,821	40,571
1954	31,226	24,901	40,920	32,632
1955	27,745	21,228	42,285	32,353
1956	21,077	15,351	28,090	20,459
1957	26,245	18,430	24,320	17,079
1958	25,099	17,109	25,015	17,052
1959	5,978	4,053	19,073	12,931
1960	31,146	20,903	47,492	31,874
1961	46,050	29,883	57,512	37,321
1962	26,587	16,555	76,073	47,368
1963	6,053	3,695	52,191	31,863
1964	10,752	6,355	46,382	27,413
1965	24,879	14,040	38,444	21,695

* i.e deflated by retail price index.

N.B. Figures are after deductions have been made for tax and depreciation and include subsidiary firms. The firms within these groups varied from year to year, consequently the results must be treated with care.

Source: F.W. Tattersall's Annual Cotton Trade Review.

Conservative government ceased putting pressure on textile machinery manufacturers to maximize exports; nevertheless import controls remained for several years. In 1954 the F.M.C.S.A. complained that imports of machinery continued to be restricted where 'suitable' British products were available, but these controls gradually disappeared.(19) As British textile machinery producers, particularly in the spinning section, assiduously cultivated their reputation for poorly designed and obsolete models, Lancashire increasingly turned to foreign suppliers. Between 1950 and 1959 the volume of imported spindles (for all fibres) increased from 3783 cwt to 27,173 cwt, although there was no significant increase in imports of automatic looms until the 1960s.(20)

Despite the greater availability of textile machinery in the 1950s firms still found plenty to complain about. In 1955 Horrockses, a medium-sized vertically integrated firm, maintained that:

"With the present-day prices for new automatic looms and other textile machinery, the Trade Union regulations forbidding the working of double shifts in excess of 37 1/2 hours per week...and the high wage costs operating not only in textiles, but in various 'supply' industries servicing Lancashire - e.g. nationalised coal, transport and local government etc., no matter how efficient a firm may be, it is just impossible to compete in terms of price with overseas manufacturers".(21)

Table 7.10 reveals the justification for Horrockses' concern. Between 1950 and 1960 the prices of new automatic looms (at current prices) more than

Table 7.10

Export prices of new ring spindles and automatic looms,
1950-60.

	Ring spindles* (£)	Automatic looms+ (£)
1950	5.60	355
1951	5.87	351
1952	6.72	422
1953	7.10	480
1954	8.12	521
1955	9.41	508
1956	9.24	470
1957	10.23	612
1958	11.12	728
1959	10.42	709
1960	9.04	758

* Spindles for cotton and man-made fibres only.

+ Automatic looms for all fibres.

N.B. Trade in second-hand equipment is excluded. Data is at current prices.

Source: Annual Statement of the Trade of the United Kingdom.

doubled, while ring spindle prices rose by 60 per cent. It has already been established that the change in profits relative to the change in machinery prices is a crucial determinant of the incentive to invest.(22) By this criterion there was clearly little reason for firms in Lancashire to re-equip during the 1950s, as profits were collapsing against a background of rising machinery prices.

Horrockses mentioned difficulties relating to the introduction of shift systems as an important factor holding back investment expenditure. In an environment of rising textile machinery prices shift-working would enable high annual capital charges to be spread over a larger volume of output per spindle or per loom.(23) During the 1930s the trade unions had been hostile to shift-working, while in the 1940s the supply of labour was so severely curtailed that shift systems were impractical. But after 1950 the trade unions became increasingly willing to encourage shift-working, and between 1954 and 1964 the number of cotton operatives participating in shift systems increased from ten per cent to 32 per cent, although this proportion remained low by international standards.(24) In view of the general co-operativeness of the unions on this issue, it was perhaps a case of Britain's slow rate of modernization reducing the need for shift-working, rather than opposition to shift-working constraining re-equipment.

Technical inter-relatedness continued to retard

re-equipment in the cotton industry. In 1958 the Department of Scientific and Industrial Research commissioned a study of innovation in cotton spinning, which concentrated on the rate of adoption of high-drafting equipment in the card-room. The survey discovered that modernization of the preparatory processes frequently led to a reduction in yarn quality unless ring frames were employed at the succeeding stage in the production process. Mule spinning was incompatible with high-drafting in the card-room. Consequently re-equipment had to be carried out simultaneously in the card-room and the spinning room, instead of piecemeal. This greatly increased the financial strain of modernization and dissuaded many smaller firms from attempting improvements. (25)

The survey also claimed that price maintenance agreements, particularly in the spinning section, were detrimental to the drive for modernization. Under the Yarn Spinners' Agreement minimum prices were established to prevent weak selling. It was argued that minimum prices added to the level of surplus capacity by protecting inefficient mills. Firms which had re-equipped were prevented from spreading fixed capital costs over a larger output through a reduction in price. (26)

Given the overall collapse in demand, confidence, and profits during the 1950s, and the existence of an overwhelming degree of excess capacity, it is tempting to depict all investment in the cotton industry as of a

fundamentally defensive nature. (27) Defensive investment can take place for one of two reasons. Firstly, its objective may be to reduce the rate of decline in profits. Even if this policy is successful it will only delay collapse for a few years. Secondly, defensive investment may be based on inadequate information about the future. Firms with a short planning horizon may not realise that a more rational strategy would be to eschew re-equipment and wait for the best moment to quit production. In neither case would re-equipment secure the permanent survival. By slowing the rate of decline of the industry defensive investment increases the misallocation of resources in the economy as a whole.

But perhaps it would be a little unfair to see all investment in Lancashire during this period in such terms. Not all sections of the industry were declining at the same rate. The demand for yarn and cloth for industrial uses, and for rayon and nylon in general, remained comparatively buoyant during the 1950s. (28) Cotton textile companies specializing in these products could still plan for the future with a degree of optimism. For instance, after World War Two James Kenyon and Son of Bury, a medium-sized concern, increasingly concentrated on the production of wet felts for industrial uses. Demand was high, and during the 1950s this firm had no difficulty in justifying the installation of new and larger looms and rebuilding its finishing works. (29) E & E Bottomley of Mossley were

engaged in the lucrative trade of tyre fabric manufacturing and were able to expand into additional premises during the 1950s, while James Nelson continued to prosper on the basis of developing its rayon business.(30)

However, these qualifications aside, by 1958-9 the cotton industry had reached a point of utter demoralisation. It was generally accepted that only government intervention to stimulate investment and to limit foreign competition could enable the industry to continue for much longer. In the following section an account will be given of the industry's attempts to deal with one of the most pressing problems of the later 1950s, that of redundant capacity.

III

Idle looms and spindles were a major deterrent to investment in the cotton industry during the 1950s. The existence of a large measure of spare capacity increased the mood of uncertainty in the industry. Moreover many firms feared that this machinery would be brought back into production, ushering in a period of intense competition or 'weak selling'.(31)

Excess capacity was by no means a new phenomenon in Lancashire in the 1950s. Between 1920 and 1939 this problem had generated great concern in British industry as a whole. One of the main objectives of the 'rationalization movement' had been to eliminate redundant capacity. In the chemical industry Nobel Industries closed 55 per cent of its explosives capacity

in the early 1920s in response to a reduction in demand. After the formation of I.C.I. in 1926 alkali production was concentrated in the most efficient plants and the rest were closed. There were similar movements in the metal and jute industries.(32) The Samuel Commission advocated the closure of inefficient pits in its plan for the regeneration of the coal industry in 1926, but this recommendation was unacceptable to the colliery owners.(33) In the finishing section of the textile industry substantial progress was made towards the reduction of excess capacity. Between 1918 and 1939 the Calico Printers' Association permanently closed 11 of its 29 works. In 1931 the C.P.A., the Bradford Dyers' Association, and the Bleachers' association entered into an agreement which led to the elimination of a further section of the industry's capacity.(34)

The problem of excess capacity in spinning and weaving attracted the attention of Keynes during the late 1920s. In January 1927 he told a meeting of spinning employers in Manchester that "the real trouble - and this is the beginning, the middle and the end of my argument - is surplus capacity - not necessarily permanent but at least prolonged and with no end in sight."(35) By 1930 42 per cent of the spinning section's capacity was standing idle.(36) But between 1930 and 1939 the industry's fixed capital stock was reduced from 63 million to 39 million spindles. Three factors contributed to this contraction. Firstly, a large number of firms left the industry. Secondly,

around 5,000,000 spindles were scrapped by the Lancashire Cotton Corporation. This combine, with an initial capacity of 10,000,000 spindles, had been formed in 1929 at the behest of the Bank of England, with the objective of improving the financial stability of the coarse spinning section by means of rationalization. (37) Thirdly, attempts were made to institute formal schemes for the disposal of excess capacity. In 1934 the F.M.C.S.A. put forward a scheme for a Surplus Spindleage Board, which would purchase 10 million spindles, either for scrapping or to be held in reserve until demand improved. A compulsory levy on firms would provide the Board with the funds for this project. Three quarters of the firms in the industry supported the scheme, although some complained that the larger combines would be guaranteed seats on the Board. In 1936 the government adopted this idea and created a Spindles Board with powers to impose a levy on the industry for the elimination of excess capacity. Its members were appointed by the government after consultation with the industry. By the outbreak of war the Spindles Board had, without compulsion, purchased and scrapped 6,000,000 spindles. (38)

During the late 1930s the government and the industry, through the medium of the Joint Committee of Cotton Trade Organizations, discussed proposals for the comprehensive regulation of cotton textile production. Statutory backing would be provided for redundancy and price maintenance schemes drawn up by each section of

the industry. The price maintenance schemes would be compulsory, but firms would not be forced to scrap equipment. A Cotton Industry Board would supervise and co-ordinate the implementation of these programmes.(39) A number of smaller firms vehemently opposed this initiative, claiming that redundancy levies would constitute an unfair tax on firms, that the combines would manipulate the Cotton Industry Board to increase their monopoly power by securing the closure of smaller competitors, and that redundancy grants paid to the combines would be used to build additional factories overseas.(40) However this opposition was overcome and a Cotton Industry Board was provided for under the 1939 Cotton Industry [Re-organisation] Act. War prevented the Act being put into practice and the idea was quietly shelved.

Serious fears were expressed in the mid 1940s about the recurrence of excess capacity after the war. The Cotton Board Committee to Enquire into Post-War Problems was particularly worried about potential overcapacity in the weaving section, which had received little attention between the wars, and advocated the introduction of a loom scrapping scheme under the auspices of the Cotton Board.(41) The 1946 Board of Trade Cotton Working Party was unable to reach agreement on the need for the elimination of excess capacity. Although the majority recommended a scheme, financed jointly by the industry and the Treasury, for the purchase and non-compulsory scrapping of one eighth of British spindleage, it was

ridiculed by Jewkes: "To carry out a 'surgical operation' before it is known what part, if any, of the patient should be amputated, seems to us a highly precipitate move." (42) Nothing was done to implement any of these proposals, but by the early 1950s the cotton industry knew what to expect from excess capacity.

Tables 7.1 and 7.2 above provide data on rates of capacity utilization in the cotton industry between 1950 and 1965. Between 1951 and 1955 the rate of capacity utilization of spinning capacity fell from 81.6 per cent to 72.0 per cent, while the rate of utilization of weaving capacity fell from 80.2 per cent to 71.4 per cent. This could hardly have gone unnoticed, and was perceived as a major constraint on firms' re-equipment decisions.

By the mid 1950s redundancy schemes were once more an important topic of conversation and speculation in Lancashire. At the 1955 Cotton Board Conference Mr C.E. Harrison of English Sewing Cotton posed the crucial question: "The industry must ask itself whether the problem is to be solved by another 'war of attrition' or whether a more orderly form of contraction is possible". (43) Arising out of a proposal made at this conference, discussions were held with the Bank of England concerning means of raising finance for the purchase and scrapping of surplus capacity. But this initiative came to nothing, as the spinning employers were reluctant to impose a further levy on the industry. (44)

Sir Raymond Streat, chairman of the Cotton Board, identified a number of obstacles to a successful rationalization scheme. No help could be expected from the government, nor would the different sections of the industry agree to subsidise one another's schemes. A levy would reduce the profit margins of firms remaining in the industry, although this could be offset by the likelihood of running to a higher capacity. Finally, tax would have to be paid on compensation received by firms scrapping machinery. But despite these difficulties, individual sections should press on with their own arrangements: "No more obvious moment than the present is likely to arise and...whilst the precise degree of redundancy which may exist cannot be reasonably ascertained, policy may safely be based on the assumption that you cannot go too far".(45) Streat believed that the weaving section had most to gain from eliminating capacity but feared that "the large number of small family firms in the weaving section just won't go out of business with or without a scheme...They prefer to have their managerial incomes, even if these are slightly reduced by bad trade."(46)

During 1956 a proposal was mooted in the press for a scheme covering both spinning and weaving which would avoid the necessity for a levy on firms. Groups of mills would voluntarily join together and submit plans to the Board of Trade for closing some of their factories and re-equipping the rest. They would receive special investment allowances and tax concessions to assist the

installation of new machinery. This was an imaginative scheme, but evidently not one which appealed to the government. (47)

In some quarters the idea of a redundancy scheme aroused considerable suspicion. The chairman of Fine Spinners and Doublers accepted that spinning capacity should be reduced by over one half, but felt that "to achieve a compact and efficient industry of the right size I am convinced we must rely on natural [sic] forces. The alternative solution of an organised redundancy scheme would be in my opinion complicated, unworkable, inadequate and indefinable in its scope." (48) The trade unions were extremely wary about the scrapping proposals, accusing the employers of failing to consider the future of the workers who would lose their jobs and of neglecting the issue of workers' compensation. (49)

Streat was correct in his prediction that weaving would be the first section to draw up a formal scrapping scheme. This originated in the rayon weaving section. In 1955 the R.W.A. concluded that it would be in the interests of the industry for concerted action to be taken to eliminate surplus capacity. Firms with outdated machinery but large reserves tended to delay withdrawal from the industry despite making significant losses: "It is much easier to put it off from month to month until events take the decision for you...in the Micawberish hope that something will turn up." (50) The C.S.M.A. was approached with the objective of establishing a joint

scheme for cotton and rayon weaving. It was argued that firms were being dissuaded from winding up their businesses because of the imposition of 30 per cent distributed profits tax on part of the proceeds of the disposal of the company's assets. This tax could be avoided if the firm was sold to a central agency, to be called Weaving Reorganisation Ltd., for scrapping.(51) This company would be controlled by the R.W.A. and C.S.M.A. and would attempt to raise money from finance corporations such as the I.C.F.C. and the F.C.I.. Weaving companies would be invited to subscribe loan capital, although this would be on a purely voluntary basis. There would be no question of a compulsory levy on firms to provide the company with funds.(52) A small amount of compensation would also be provided for redundant operatives.(53)

Although the weaving employers resolved to proceed with their scrapping scheme, they were overtaken by events. As support for the Conservative Party continued to decline in the wake of the Rochdale by-election in February 1958, the Prime Minister, Harold Macmillan, announced a programme of government assistance for the elimination of surplus capacity. This amounted to a complete abrogation of the government's earlier policy of non-intervention in the industry's affairs, and marked the most significant initiative since the 1939 Cotton Industry (Re-organisation) Act. The aim of the redundancy scheme was to scrap 50 per cent of spinning and 40 per cent of weaving capacity. Two-thirds of the

cost of compensating firms for the elimination of capacity would be borne by the government, with a levy on the surviving firms providing the other third.(54) Employers associations co-operated with the Board of Trade in the construction of detailed plans for the implementation of these proposals. In the event 48 per cent of the spindles and 27 per cent of the looms in place in April 1959 were scrapped by firms under the provisions of the 1959 Cotton Industry Act.(55)

The results of the scrapping phase were quite dramatic. Capacity utilization in the spinning section rose from an average of 69.9 per cent between 1955 and 1959 to 88.4 per cent between 1960 and 1964. In weaving, capacity utilization rose from 72.0 per cent to 87.8 per cent over the same period. This moderated one of the most serious constraints on investment in the cotton industry, although other constraints remained, as will be seen in the next section.

IV

To a very limited extent, the 1959 Cotton Industry Act created new hope that the cotton and allied textiles industry could be restored to viability. But this was relatively short-lived, since although cotton textile shares rose substantially in 1959-60, they fell again in 1961-2. Average net profits at constant 1950 prices of the leading cotton industry combines increased from £81,528 in 1959 to £305,515 in 1961, thereafter falling to £81,365 in 1964. Consequently, in the early sixties the overall level of investment increased: at current

prices fixed capital formation in the textile and clothing industry rose from £66.5 million in 1959 to £105.7 million in 1961, before falling back to £85.2 million in 1962.(56) This section will examine the basis for the sudden rise and fall of investment in the early 1960s, and consider the wider costs and benefits of modernization in the cotton industry during the 1960s.

When Mr Macmillan announced his plan for a subsidised scrapping scheme in 1958 he had no intention of supplementing this by a system of re-equipment grants. The underlying purpose was to help the industry to decline gracefully, while relieving the political pressure on the government. But Lancashire saw that this was an excellent opportunity to twist the government's arm. During the winter of 1958-9 the employers and the Cotton Board demanded that assistance be given to firms to proceed with re-equipment. For instance, weaving employers asked the Board of Trade for a 50 per cent re-equipment subsidy, which would also be available retrospectively to firms which had already modernized. This caused some consternation in government circles. On 5 Mar. 1959 the Permanent Secretary to the Board of Trade said that a re-equipment grant might be possible, although 50 per cent was out of the question. A week later the President of the Board of Trade, David Eccles, made it clear that there would be no retrospective grants, but reluctantly promised to give further thought to a re-equipment subsidy. Eventually the government agreed to offer a 25 per cent re-equipment subsidy to

spinning and weaving firms, to be paid for by the taxpayer. (57)

Under the provisions of the re-equipment phase of the 1959 Act, 678,000 new ring spindles were installed, constituting 12.8 per cent of total spindleage in Oct. 1965. In weaving 11,000 automatic looms were installed, representing 8.8 per cent of the industry's capacity in Oct. 1965. (58) Fine Spinners and Doublers alone scrapped 1,500,000 spindles and over 1,000 looms under the Act and purchased 130,000 new ring spindles and 650 automatic looms. (59) However, modernization did not go as far as had been hoped. The industry had expected that the Act would stimulate re-equipment costing £80 - £90 million, but in the event eligible re-equipment expenditure did not exceed £53.5 million. (60)

Mr A. Ormerod, managing director of Ashton Brothers, a large weaving concern, viewed the whole affair with undisguised cynicism: "Under the [1948] Cotton Re-organisation Subsidy Act, a re-equipment subsidy was paid to spinners...In 1959, the Cotton Industry Act authorised payment to the proprietors of this equipment for breaking it up!" (61) Ormerod complained that high tariffs on imported textile machinery meant that the re-equipment grants only temporarily left the Treasury's coffers, and believed that the assistance offered was quite inadequate to make the industry competitive. (62) The failure of modernization under the 1959 Act to meet the industry's expectations was primarily due to renewed uncertainty

about imports. Voluntary quota agreements with the Asian producers during the late 1950s had no more than a transitory effect on the level of imports. Many firms were afraid to invest in view of the continuing threat to the industry of overseas competition. Caroline Miles estimated that in total the Act cost the government £24.7 million, equivalent to an effective rate of protection of five per cent for a mere two years. In 1961 the Estimates Committee of the House of Commons reviewed the 1959 Act and concluded that: "Failing a speedy and satisfactory solution to the related problems of imports, marketing, and the fuller use of plant and machinery, much of the expenditure will have been to no purpose".(63) Mr Philip Lees, president of the F.M.C.S.A., argued that the industry would not have required scrapping and re-equipment subsidies had it been offered a fair measure of protection.(64) Courtaulds' analysis of the situation was similarly uncompromising:

"Because of the unsatisfactory position into which the industry has been brought by past policies, it would be necessary to accept that the well-established case for giving protection to 'infant industries' must be valid for the newly equipped, potentially viable plants, at least for a sufficient period to overcome teething troubles and initial losses."(65)

Between 1960 and 1965 total yarn output fell from 640 million lbs. to 528 million lbs, while cloth production declined from 2007 million square yards to 1722 million square yards.(66) The 1959 Act could do little to prevent the increase in foreign competition.

In a market environment of this nature, the failure of the 1959 measures was inevitable. To the extent that the Act did stimulate investment for a brief period, it was plainly pernicious, because it encouraged firms to remain in the industry longer than they would otherwise have done. Few employers or trade union officials could regard the industry with the detachment of Caroline Miles, who thought that it was a "useful laboratory for economists" trying to explain why firms still invest despite adverse circumstances. (67)

The technology which has so far been considered was by no means new in the 1950s and 1960s. Both ring frames and automatic looms had been invented in the nineteenth century. Fortunately evidence also exists regarding Lancashire's rate of adoption of more recent techniques, notably ancillary equipment in the weaving industry and shuttleless looms.

Lancashire's foremost cotton industry research organization, the Shirley Institute devoted considerable energy to the development of new machinery. Evidence is available on the diffusion of three of the Shirley Institute's inventions: the electrical hygrometer, the accelerated drying hood, and the automatic size box. These devices appeared between the mid 1930s and early 1950s and aimed to improve the efficiency of warp preparation in the weaving section. All three attachments were used in conjunction with a machine called a tape frame. Of the firms in Lancashire employing tape frames and possessing at least 200 looms,

Table 7.11

Shuttleless looms as a percentage of all looms in selected cotton industries, 1958-68.

	France	W. Germany (percentages)	Italy	Sweden	U.K.
1958	0.3	0.5	0.0	0.9	0.1
1960	0.4	0.8	0.2	1.0	n.a.
1962	0.8	1.3	0.6	1.0	n.a.
1964	1.1	1.9	0.7	0.9	n.a.
1966	1.4	2.4	0.5	1.1	1.0
1968	n.a.	3.1	1.1	1.3	2.0

Source: G.F. Ray, 'The Diffusion of New Technology: A Study of Ten Processes in Nine Industries', N.I.E.R., 48 (1969), Table 27, p. 63.

by 1966 35 per cent had introduced the electrical hygrometer, 27 per cent the accelerated drying hood, and 10 per cent the automatic size box. As might be expected, the size of firm influenced the rate of diffusion. Nineteen per cent of those firms with at least 2,000 looms adopted the automatic size box, compared with only six per cent of the firms with between 400 and 800 looms. Larger firms also proved to be the first to install the new devices, while vertically integrated firms were more willing to innovate than single process firms.(68) This study lends support to the widely-held thesis that the cotton industry was hampered by an industrial structure composed of small, single-process firms.(69)

Shuttleless looms were potentially of far greater importance to the industry. Developed in Europe during the 1920s and 1930s, the shuttleless loom uses jets of water or air to pass the weft through the warp, resulting in a significant saving in time. Comparative rates of diffusion of shuttleless looms in Britain and other western nations have been calculated by the National Institute of Economic and Social Research.(70) Table 7.11 shows that British firms were relatively slow to introduce the shuttleless loom until the latter half of the 1960s. A small sample of British firms was interviewed to discover their reasons for failing to install shuttleless looms. Twenty one firms considered that the shuttleless loom was unsuitable for the type of fabric which they were weaving. Twelve reported that

they had been deterred from installation by the price of the looms, and four claimed that they were unable to raise sufficient funds for investment. A further four firms blamed uncertainty and low profits for their failure to adopt the new technology, while six remarked that their existing machinery was adequate.(71) In Britain, although the sample size was small, it appeared that vertically integrated firms were the most likely to invest in shuttleless looms. The survey suggests vertically integrated firms may have been able to ensure a more stable market for their cloth through the control of capacity in the converting and making-up sections. Vertically integrated companies also tended to be more flexible than single-process firms.(72) After 1966 the rate of diffusion of shuttleless looms in Britain improved. By 1980 22 per cent of British looms were shuttleless, a proportion exceeded only by Sweden, the Netherlands, and the U.S.S.R.(73) The obvious conclusion is that this was a consequence of the rapid increase in concentration and vertical integration in the British textile industry after the early sixties.

During the 1960s cotton became an increasingly capital intensive industry. In 1957 Barna estimated that the replacement cost of a cotton or wool mill was £2710 per operative (£1240 in buildings plus £1550 in machinery), compared with an average replacement cost of £1830 per operative in U.K. manufacturing as a whole.(74) As textile machinery became more sophisticated and innovations such as shuttleless looms

and break spinning (technically superior to ring spinning) became available, the costs of re-equipment increased. The O.E.C.D. calculated that in 1965 it required a capital investment of \$15,000 - \$25,000 per work place to build and equip a modern vertically integrated cotton mill.(75) In the late 1960s Ormerod estimated that a capital investment of £16,000 per worker (at 1965 prices excluding building costs) was needed to equip a new cotton mill with the latest ring spindles, shuttleless looms, automatic looms, and finishing machinery on a single shift basis, compared with £5000 per worker on a three-shift basis. The installation of Sulzer shuttleless looms would entail investment per worker of £30,500 under a single-shift regime or £10,167 if three shifts were to be worked.(76)

Ormerod ridiculed the methods of investment appraisal used by most firms in the industry. Many investment decisions were still made by rule-of-thumb, while firms which attempted to employ more precise techniques were led astray by faulty data. A large number of firms made the elementary error of not contemplating re-equipment until their existing machinery was fully depreciated. Ormerod advocated closer collaboration between accountants and technical experts to overcome this problem.(77) It is difficult to find hard evidence on methods of investment appraisal in the cotton industry. But when it is observed that even Courtaulds did not begin to consider discounted cash flow (D.C.F.) techniques until 1961, the position in the

Table 7.12

The case for re-equipment in spinning, 1968.

Conversion costs of 20s carded cotton, including winding costs of ring spun rayon, using capital of different vintages.

Installed in:	RING SPINNING				BREAK SPINNING
	(1950	1960	1960*	1968	1968
Weekly hours	75	75	168	168	168
Spinning costs:	Figures are in old pence per lb.				
Opg. costs+	11.66	8.66	7.94	7.93	6.60
Capital costs	0.00	0.00	0.29	1.96	3.58
TOTAL	11.66	8.76	8.23	9.89	10.18
Cone winding++	2.36	2.36	2.54	2.54	0.00
GRAND TOTAL	14.02	11.12	10.77	12.43	10.18

* As partially modernized; card and draw frames on 168 hours, remaining machines on 75 hours.

+ Operating costs, primarily labour.

++ Winding charges are based on the following assumptions:
1950 and 1960 mills - manual winding excluding capital charges.

1960 modernized and 1968 ring mill - automatic winding including capital charges.

N.B. Cost of raw cotton excluded. For new equipment, prices are those ruling in Jan. 1968 and allow for a D.C.F. rate of return of nine per cent over ten years.

Source: Textile Council, Cotton and Allied Textiles: A Report on Present Performance and Future Prospects (Manchester: Textile Council, 1969), Table 3, p. 66.

Table 7.13

The case for re-equipment in weaving, 1968.

Conversion costs of producing 42" polyester/cotton shirting using different types of machinery.

Loom type	Old Lancs	New Battery	New Unifil	New Elitex	New Sulzer
Weekly hours	40	134.5	134.5	134.5	168
Figures in old pence per yard.					
Opg. costs*	5.80	3.89	3.82	3.26	2.28
Capital costs	0.00	1.18	1.53	1.32	1.98
TOTAL	5.80	5.07	5.35	4.58	4.26

N.B. Cost of yarn excluded. For new equipment, prices are those ruling in Jan. 1968 and allow for a nine per cent rate of return on capital on a D.C.F. basis over ten years.

* Operating costs, primarily labour.

Source: Textile Council, Cotton and Allied Textiles: A Report on Present Performance and Future Prospects (Manchester: Textile Council, 1969), Table 5, p. 68.

rest of the industry can all too easily be imagined. (78)

Tables 7.12 and 7.13 show figures, collated by the Textile Council in 1967-8, suggesting that conversion costs in both spinning and weaving could be reduced by the installation of new machinery in existing buildings. According to the Textile Council's data, firms which re-equipped would also enjoy very high rates of return. For instance, firms replacing fully written down ring-spinning equipment of 1950 vintage with break spinning machinery, would achieve a D.C.F. rate of return of 23 per cent over ten years. A D.C.F. rate of return of 14 per cent over ten years would accrue to a company substituting break spinning equipment for 1960 vintage ring spindles. In weaving, a shirting producer replacing old Lancashire looms with new Sulzer shuttleless looms could expect to earn a D.C.F. rate of return of 22 per cent over ten years. (79) These hypothetical rates of return were remarkable. Courtaulds' director of finance regarded a rate of return (on a D.C.F. basis) of 10 per cent over ten years as the minimum acceptable for a project. (80)

What prevented Lancashire from taking advantage of these opportunities? The Textile Council presented re-equipment in the most favourable light possible. It assumed that firms would have no difficulty finding workers to operate multi-shift systems, that firms could produce to a high level of capacity, and that there was no tendency for foreign competition to bring about further reductions in demand and price. When these

factors are taken into account re-equipment appears a considerably more risky proposition.

Asian cotton textile producers had an overwhelming advantage over Lancashire firms in labour costs.(81) Cotton mills in Britain were forced into the adoption of increasingly capital intensive techniques in an attempt to remain competitive. But despite extremely high levels of fixed capital per worker they were unable decisively to overcome the cost advantage of their Asian competitors and the industry continued to contract.

V

Investment in the U.K. cotton industry remained at a relatively low level between 1950 and 1965, largely as a result of declining demand, falling profitability, a low rate of capacity utilization, and brittle confidence. During the 1950s investment was largely of a defensive nature. Its objective was to limit the decline of profits rather than to increase profits. In the early 1960s there was a short revival in investment expenditure, as a result of the 1959 Cotton Industry Act which eliminated much surplus capacity and offered subsidies to firms intending to re-equip. The larger firms entertained the hope that they could restore competitiveness by introducing labour-saving machinery. But, in the absence of a protected home market, there was little prospect of this strategy succeeding. In retrospect it is difficult to avoid the conclusion that all investment in cotton after 1950 was misguided, for it tied up valuable resources in a doomed industry.

Notes to Chapter 7.

- (1) See above, Ch. 5., pp. 185-92.
- (2) A. Lamfalussy, Investment and Growth in Mature Economies (London: Macmillan, 1961), pp. 79-94.
- (3) Ibid, pp. 185-6.
- (4) Cotton Spinning Productivity Team, Report of a Visit to the U.S.A. in 1949 of a Productivity Team Representing the Cotton Spinning Industry (London: Anglo-American Council on Productivity, 1950), p. xi. The other major report is: Cotton Weaving Productivity Team, Report... (London: Anglo-American Council on Productivity, 1950).
- (5) L.R.O., F.M.C.S.A., Annual Report, 1952, p. 20.
- (6) L.R.O., F.M.C.S.A., Annual Report, 1953, p. 92.
- (7) Street Diaries, XV (1954-5), 18-9 Aug. 1954.
- (8) U.T.F.W.A., Plan for Cotton (Ashton under Lyne: U.T.F.W.A., 1957), p. 16.
- (9) Ibid, pp. 37-8.
- (10) J. Murray, Plan for Cotton (London: Fabian Society, 1956), p. 15.
- (11) See above, Tables 6.2, 6.3, pp. 227-8.
- (12) M. Panic, Capacity Utilization in U.K. Manufacturing Industry (London: N.E.D.O., 1978), pp. 21-30, 36. Panic's results are calculated from official figures for industrial production and capital stock and are therefore only broadly comparable with Tables 7.1 and 7.2.
- (13) The Board of Trade Working Party had predicted this type of activity: Board of Trade, Working Party

Reports: Cotton (London: H.M.S.O., 1946), p. 69. Firms adopting this policy could survive for many years providing their machinery remained servicable. In 1974 five steam driven weaving mills were operating between Nelson and Skipton and two Victorian condenser spinning mills remained in 1980. See: S. Graham, 'The Lancashire Textile Project: A Description of the Work and Some of the Techniques Involved', Oral History 18 (1980), pp. 48-51.

(14) W.A. Thomas, The Finance of British Industry, 1918-1976 (London: Methuen, 1978), pp. 138-9; H.B. Rose, The Economic Background to Investment (Cambridge: Cambridge University Press, 1963), pp. 278-82; Report of the Committee on the Working of the Monetary System: Minutes of Evidence, Cmnd. 827 (London: H.M.S.O., 1960), p. 882.

(15) Monthly Digest of Statistics No. 96 (Dec. 1953), Table 139, p. 112; No. 205 (Jan. 1963), Table 145, p. 119.

(16) Street Diaries, XIV (1951-3), 19 Mar. 1952.

(17) Association of British Chambers of Commerce, 'Survey of the Effects of the Credit Squeeze since September 1957' (Dec. 1957).

(18) S.R. Dennison, 'The Cotton Industry', in B. Tew and R.F. Henderson (eds.), Studies in Company Finance (Cambridge: Cambridge University Press, 1959), p. 176.

(19) L.R.O., F.M.C.S.A., Annual Report, 1954, p. 17.

(20) These figures are drawn from: Annual Statement of the Trade of the United Kingdom. For an analysis of the textile machinery industry see: R. Rothwell, 'Innovation in Textile Machinery', in K. Pavitt (ed.), Technical Innovation and British Export Performance (London: Macmillan, 1980), pp. 125-41.

(21) L.S.E. Seminar on Problems in Industrial Administration, 1954-5, Paper No. 174: 'The Development and Organisation of Horrockses, Crewdson and Company Ltd'.

(22) See above, Ch. 5, pp. 188, 201-2.

(23) See below, Ch. 8, pp. 340-3.

(24) Ministry of Labour Gazette LXII (1954), pp. 337-42; LXXIII (1965), pp. 148-55; G.A.T.T., A Study on Cotton Textiles (Geneva: G.A.T.T., 1966), Tables D,E, pp. 187-97.

(25) A. Sutherland, 'The Diffusion of an Innovation in Cotton Spinning', J.I.E., 7 (1959), pp. 118-35.

(26) Ibid, pp. 128-30. The Yarn Spinners Agreement is discussed below, Ch. 9, pp. 394-404.

(27) Unfortunately the defensive investment thesis is difficult to verify because of the absence of useful information on scrap prices in the cotton industry.

(28) A.H. Irving, 'Changes in the Distribution of Cotton Manufacturing in an Area of South East Lancashire since 1936' (unpublished M.Sc thesis, University of London, 1964), p. 129.

(29) A. Muir, The Kenyon Tradition: The History of James Kenyon and Son Ltd. (Cambridge: W. Heffer and

Sons, 1964), pp. 93-110.

(30) A. Hess, Some British Industries: Their Expansion and Achievements, 1936-1956 (London: Information for Industry, 1957), pp. 35-7, 180-3.

(31) R.W. Shaw and C.J. Sutton, Industry and Competition: Industrial Case Studies (London: Macmillan, 1976), pp. 168-70.

(32) L. Hannah, The Rise of the Corporate Economy (London: Methuen, second edition, 1983), pp. 104-10.

(33) G.A. Phillips, The General Strike: The Politics of Industrial Conflict (London: Weidenfeld and Nicolson, 1976), pp. 75-9.

(34) Calico Printers Association, Fifty Years of Calico Printing: A Jubilee History of the C.P.A. (Manchester: Calico Printers Association, 1949), p. 30; A.F. Ewing, Planning and Policies in the Textile Finishing Industry (Bradford: Bradford University Press, 1972), pp. 40-60.

(35) J.M. Keynes, The Collected Writings of John Maynard Keynes, Vol. XIX, Part II, Activities, 1922-1929: The Return to Gold and Industrial Policy (London: Methuen, 1981), p. 604.

(36) R. Robson, The Cotton Industry in Britain (London: Macmillan, 1957), p. 228.

(37) Hannah, The Rise of the Corporate Economy, pp. 75-6, 104-6.

(38) L.R.O., Barber-Lomax Collection, F.M.C.S.A., 'The Cotton Spinning Industry' (Oct. 1934); 'The Cotton Spinning Industry: Report and Draft Scheme for Dealing

with Surplus Capacity' (Oct. 1934); 'Cotton Spinning Industry Bill, 1935: The Industry's Case for the Bill' (July 1935). These matters are discussed in: J.H. Bamberg, 'The Government, the Banks and the Lancashire Cotton Industry, 1919-39' (unpublished Ph.D. thesis, University of Cambridge, 1984), pp. 226-96.

(39) L.R.O., Barber-Lomax Collection, J.C.C.T.O., 'Lancashire's Remedy: Proposals for Improving the Position of the Cotton Industry' (Oct. 1937).

(40) L.R.O., Barber-Lomax Collection, J.C.C.T.O., 'Cotton Industry (Reorganisation) Bill: A Plain Statement for Voters' (1939); Committee of Independent Manufacturers, Merchants, and Shippers, 'Cotton Industry Enabling Bill: Danger to Independent Firms - A Case for Amendment' (1939).

(41) Cotton Board, Report of the Cotton Board Committee to Enquire into Post-War Problems (Manchester: Cotton Board, 1944), pp. 6-7.

(42) Board of Trade, Working Party Report, pp. 176, 222.

(43) C.E. Harrison, 'A Company's Policy in the Ten Post War Years', C.B.C. (Oct. 1955), p. 13.

(44) Street Diaries, XVI (1956), 7 Feb. 1956.

(45) Ibid, XV (1954-5), 6 Dec. 1955.

(46) Ibid, XVI (1956), 7 Feb. 1956.

(47) 'Cotton Still Waiting for Modernisation', Manchester Guardian Survey of Industry, Commerce and Finance (Manchester: Manchester Guardian, 1956), p. 102.

(48) W.T. Winterbottom, 'Towards a Prosperous

Cotton Industry', C.B.C. (Oct. 1958), p. 22.

(49) L.R.O., Operative Spinners, Quarterly Report, 31 Oct. 1955, pp. 5-6.

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(53) Operatives' compensation is discussed below, Ch. 8, pp. 368-74.

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(55) See C.S.M.A. minute book for 1958-9 for details; C. Miles, Lancashire Textiles, p. 60.

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(57) G.M.R.O., C.S.M.A., Minutes of a Meeting of Chairmen of Local Associations, 20 Feb. 1959, 24 Mar. 1959; Central Committee Minutes, 17 Apr. 1959.

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(59) The Times, 5 July 1960, p. 22, col. d.

(60) C. Miles, 'Protection of the British Textile Industry', in W.M. Corden and G. Fels (eds.), Public Assistance to Industry: Protection and Subsidies in Britain and Germany (London: Macmillan, 1976), p. 191.

(61) A. Ormerod, 'Integration of the Textile Industry', Investment Analyst, 11 (1965), p. 3.

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(63) Miles, 'Protection of the British Textile Industry', pp. 192, 206.

(64) L.R.O., F.M.C.S.A., Annual Report, 1960, pp. 130-1.

(65) A. Knight, Private Enterprise and Public Intervention: The Courtaulds Experience (London: George Allen and Unwin, 1974), p. 105.

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(67) C. Miles, 'Contraction in Cotton: Some Comments on the 1959 Cotton Industry Act', District Bank Review (June 1965), pp. 20-2.

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(69) See below, Ch. 10, pp. 441-3.

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(71) Smith, 'Shuttleless Looms', p. 269.

(72) Ibid, pp. 267-93.

(73) G.F. Ray, The Diffusion of Mature Technologies (Cambridge: Cambridge University Press, 1984), pp. 44-5.

(74) T. Barna, 'The Replacement Cost of Fixed Capital Assets in British Manufacturing Industry in 1955', J.R.S.S., 120, (1957), p. 17.

(75) O.E.C.D., Modern Cotton Industry: A Capital Intensive Industry (Paris: O.E.C.D., 1965), p. 96.

(76) A. Ormerod, 'Investment and Re-equipment Policy', in Textile Institute, Management in the Textile Industry (London: Longman, 1969), pp. 505, 512.

(77) Ibid, pp. 509-10.

(78) A.M. Alfred and J.B. Evans, Appraisal of Investment Projects by Discounted Cash Flow: Principles and some Short Cut Techniques (London: Chapman and Hall, 1971), p. v.

(79) Textile Council, Cotton and Allied Textiles: A Report on Present Performance and Future Prospects (Manchester: Textile Council, 1969).

(80) Alfred and Evans, Appraisal of Investment, pp. 6-7, 10.

(81) See above, Tables 6.9, 6.10, pp. 260-1.

Chapter 8.

LABOUR IN THE COTTON INDUSTRY, 1950-65.

Employment in the cotton industry steadily contracted after 1951. Between 1951 and 1965 employment in spinning fell by 59 per cent and in weaving by 54 per cent.(1) Fortunately the contraction of the industry was not marked by prolonged bouts of high unemployment or short-time working.(2) The demand for labour remained high in Britain during the 1950s and 1960s and most (although not all) redundant cotton operatives had little difficulty finding alternative employment: indeed the employers frequently complained that too much labour was voluntarily leaving the industry. As Lancashire continued to decline the wages of cotton operatives fell relative to those of workers in other industries.(3)

The present chapter concentrates on three main developments: the growth of shift-working, the continuing spread of work measurement, and the unions' attempts to improve redundancy terms for their members. Section I introduces the topic of shift-working in cotton textiles and outlines the benefits to be derived from its use. Section II examines the rate at which firms in spinning and weaving adopted shift systems in their mills, and considers the role of the trade unions in this process. Section III takes up the issues of workload reassessment and redeployment which were introduced in Chapter 4 and considers their advance during the 1950s and early 1960s. Section IV discusses the attempts of the trade unions to secure improved

terms for redundant operatives.

I

"In many of [the mills]...work, like the stream, never stopped by day or night, and the children who had tended the machines by day crept into beds left vacant by the children who were to tend them through the night."(4)

Such is the Hammonds' portrayal of shift-working among pauper apprentices in Lancashire during the industrial revolution. With the growth of trade unionism and the emergence of factory legislation, which restricted the hours of women and children and prevented them from working at nights, it was possible to reduce shift-working in cotton textiles to a minimum. During the twentieth century a minority of employers started to reintroduce shift-working on newly installed machinery. In most cases the unions vigorously opposed this development on a number of grounds. They believed that shift-working would reduce the incentive for operatives to take good care of their spindles and looms; that it would lead to the concentration of production in the most efficient mills, resulting in rising unemployment in some localities; and that it would disrupt the regular pattern of family life.(5) In August 1938 an A.W.A. survey discovered that at least 26 weaving mills were operating a shift system, and that at least 16 of these mills had commenced shift-working since 1930. In Chorley winders and warpers who were working a two-shift system were expelled from the union, but in some other areas including Hyde the union feared to act at a time of high unemployment.(6)

The main advantage of shift working is that it enables re-equipped firms to reduce unit capital costs. Interest and depreciation charges are key elements of capital costs. Firms installing new machinery incur interest charges: if they use external finance they will have to pay interest to the bank, while if they employ internal finance they will forego the interest, which would have accrued from putting their money in a deposit account. Clearly total interest costs will be independent of the number of hours per week that the new machinery is worked. A shift system which doubles the rate of utilization would halve interest charges per unit of output. Depreciation charges arise from the need to establish a fund to pay for the machine's replacement when it becomes either obsolescent or worn out. Once the expected life of the machine has been estimated, the firm calculates the sum which must be placed in the depreciation fund each year. The introduction of a shift system will reduce unit depreciation costs. Obsolescence is a function of the time it takes to design and develop a more efficient machine, and will be independent of the intensity of utilization of existing machinery. The annual cost of wear and tear remains roughly constant until a machine is fairly old, and therefore unit wear and tear costs fall as machine hours increase.(7) Consequently a firm installing new equipment can expect large savings in unit capital costs if it simultaneously introduces a shift system. But shift-working will not be attractive to firms intending to continue production

with fully depreciated old machinery which can be run without incurring any capital costs, except those arising from wear and tear.

Firms considering the adoption of shift-working must also examine the effects on other costs. There will be an appreciable rise in unit labour costs, as workers demand a combination of shorter hours and higher hourly wage rates in compensation for the inconvenience of working unsocial hours. In the case of night-work the shift premium is likely to be very large. Some of the increase in unit labour costs can be recouped if shorter hours spur workers on to higher productivity, but H.A. Clegg has shown that this did not take place in the cotton industry.(8) Other costs could also be affected by shift-working. Night or evening-shifts may increase the costs of lighting, although this might be offset by the use of off-peak electricity. There could also be savings in unit administrative and management costs. These factors were not of great importance in cotton and the following analysis will concentrate on capital and labour costs.

Shift-working involves a trade-off between lower unit capital costs and increased unit labour costs. Betancourt and Clague have formalised this relationship. Assume two shift systems, denoted by superscripts 1, 2. System 1 is a single-shift regime, while system 2 is a double-shift regime. Output is the same under both systems; therefore less capital is required under the double-shift system. The firm will reduce its overall

unit costs by adopting system 2 if:

$$[1] \quad r.K^1 + w_1.L^1 > r.K^2 + w_1.L_1^2 + w_2.L_2^2$$

Let r denote the cost of owning capital stock for one day. K^1 and K^2 denote the stock of capital under each shift system. Operatives on the single-shift system and on the first shift of the double shift-system receive an hourly wage of w_1 , but those on the second shift of system 2 receive a premium hourly wage of w_2 . L^1 denotes operative hours worked under the single-shift regime, while L_1^2 and L_2^2 are the respective operative hours worked on the first and second shifts of the double-shift system. For convenience it is assumed that $L_1^2 = L_2^2$. The shift differential $[(w_2/w_1) - 1]$ is signified by x . Dividing both sides of [1] by costs under system 1 we obtain:

$$[2] \quad 1 > \frac{L_1^2}{L^1} \left[\frac{(r.K^2)}{(w_1.L_1^2)} + (2 + x) \right] \left[\frac{(r.K^1)}{(w_1.L^1)} + 1 \right]^{-1},$$

where the R.H.S. is the ratio of costs under system 2 to those under system 1. If y is defined as the share of capital costs in total costs under system 1, [i.e. $y = r.K^1 / (r.K^1 + w_1.L^1)$], we obtain:

$$[3] \quad 1 > \frac{L_1^2}{L^1} \left[\frac{(r.K^2)}{(w_1.L_1^2)} + (2 + x) \right] (1 - y)$$

Shift-working will be profitable if the ratio in [3] falls below unity. This condition is more likely to be fulfilled in a situation where capital costs form a large proportion of total costs (i.e. y is large) and shift-work premia are low (i.e. x is small). It would be comparatively easy to derive rules which could be applied to the comparison of the relative

profitabilities of other shift systems.(9)

Only one economist, R.L. Marris, has attempted an analysis of shift-working in Lancashire. Marris suggested that during the 1950s the installation of new cotton textile machinery did not lead to very substantial improvements in productivity. Consequently re-equipment did not offer much opportunity for a significant reduction in costs even when shifts were introduced. Marris put forward this argument to refute the hypothesis that shift-working was being retarded by the high shift premia demanded by the operatives. In essence he claimed that shift premia in Lancashire were not excessive by British standards, and asserted that shift-working in cotton was held back because investment was simply unprofitable.(10) This interpretation will be kept in mind in the following section, which examines the development of shift-working in the Lancashire cotton industry after World War Two.

II

After World War Two re-equipment once more became a major issue in the cotton textile industry. Under these circumstances the shift-working question acquired a new and far greater significance. This section traces the development of shift-working in the cotton industry between 1945 and 1965, and highlights the changing attitude of the trade unions towards shift-working. This evidence will be put into a wider perspective by a comparison of the extent of shift-working in Lancashire, overseas cotton industries, and other British

manufacturing industries. Lancashire's experience requires careful explanation. It will be suggested that shift-working was not a major constraint on investment, but that the low level of investment prevented the more rapid spread of shift-working in the industry. The unions are largely exonerated from the superficially plausible charge that their policies were responsible for the relatively slow spread of shift-working in Lancashire compared with cotton industries abroad.

Some confusion was exhibited by the Board of Trade Cotton Working Party over the issue of shift-working. Its recommendations conflicted with the empirical evidence which it presented. The Working Party confidently asserted that the introduction of double-day shifts would reduce the amount of machinery needed for re-equipment by 40 per cent, and went on to declare that "we cannot escape the conclusion that the Lancashire cotton industry will be unable to support the capital charges of re-equipment and remain competitive with other countries, without going over to a large measure of two-shift working."(11) But these conclusions were at odds with the data collected by the Working Party's Costs Sub-Committee, which had estimated the costs (including raw materials) of spinning and weaving six different sorts of cloth using newly installed ring-spinning equipment and automatic looms. An average saving of 3.2 per cent in total costs per yard of cloth could be made by working the new equipment on double-day shifts of 40 hours each, with a 20 per cent increase in

hourly earnings, instead of on a single shift of 48 hours.(12) However the majority report failed to point out that it would have been still cheaper to produce the cloths with fully depreciated prewar machinery on a single shift system.(13) Longer hours or a smaller shift premium for double-shift workers would have narrowed the gap, but it was patently clear that other factors, notably the existence of an enormous stock of elderly equipment, had a crucial bearing on the re-equipment decision. Thus the adoption of shift-working could help towards making re-equipment profitable, but it was by no means the only factor, or even the most important one.(14)

Sir Stafford Cripps took up these themes and stressed that double-shift working was an essential part of the government's plan to strengthen the industry and maximize production. Although the shortage of operatives would preclude the immediate large-scale adoption of shift-working, the government "attached importance to the formation of groups of mills so that where necessary workers might be transferred so as to concentrate their activities into fewer mills working two shifts".(15) The notion that production should be concentrated in the most efficient mills, which would be assisted to re-equip on the basis of a double or triple-shift system was not acted upon at the time, but it recurred during the 1950s as excess capacity made its fatal reappearance.(16)

Trade union leaders became increasingly aware that

shift-working was not an unmitigated blight and that it could make a significant contribution to the industry's modernization programme. Militants in the Nelson Weavers Association might exclaim that "workers in Lancashire don't want the shift system"(17), but their single mindedness was not shared by the A.W.A.'s general secretary Mr Andrew Naesmith, who:

"[D]id not think night shift working in the weaving sheds was desirable but...did believe the double day shift was essential where employers installed high capital cost machinery. The trade unions were prepared to help and gain the will to co-operation...There was a far better atmosphere in our industry today than there had been for forty or fifty years"(18).

Steady progress was made towards a wider acceptance of the principle of shift-working after the end of the war. In August 1945 the Operative Spinners told the T.U.C. that they were willing seriously to consider any approaches made by the F.M.C.S.A. concerning shift-working.(19) But the employers did not appear particularly eager to act. An F.M.C.S.A. representative told Ernest Bevin's commission on double-day shift working in 1946 that new spinning machinery was cheaper than new weaving equipment; therefore the potential saving in unit capital costs from the introduction of shift-working in spinning mills was comparatively small. Moreover he explained that until sufficient labour could be found to run the industry to full capacity on a single-shift basis, there would be no point in trying to adopt a double-day shift.(20)

Pressure to proceed with shift-working in spinning

primarily emanated from government rather than employer circles. Sir Stafford Cripps demanded that the Operative Spinners and Cardroom Workers should accept the principle of shift-working in re-equipped mills, as a precondition for implementation of his scheme for granting an investment subsidy to the spinning section. After a great deal of soul-searching, in March 1947 the U.T.F.W.A. finally resolved to comply with Cripps' request. In the event the 1948 spinning re-equipment subsidy may not have had much impact on the re-equipment drive, but it clarified the position of the spinning unions towards shift-working.(21) Thereafter the spinning amalgamations were prepared to consider applications for the introduction of double-day shifts from individual mills. During 1947, after a further government initiative, the unions agreed to permit evening-shift working at spinning and weaving mills in Lancashire, in an attempt to attract elderly and married workers into the industry on a part-time basis.(22)

Weaving employers were more anxious to secure an agreement on shift-working with the unions than were their counterparts in the spinning section. Although in 1947 the A.W.A.'s general council had rejected a proposal that attempts should be made to conclude a formal shift-working agreement with the C.S.M.A. for automatic loom sheds, in practice the union's leaders encouraged firms installing automatic looms to introduce double-shift working.(23) Naesmith and his colleagues adopted this semi-clandestine strategy because they were

keen to see the rapid re-equipment of the weaving section; moreover they were acutely aware that many of their members would not take kindly to attempts to prevent them from working shorter hours for the same pay.(24)

Towards the end of the 1940s the C.S.M.A. increased the pressure for a formal agreement on shift-working in the automatic loom section. The employers proposed a double-day shift of 40 hours each, the A.W.A. one of 37 1/2 hours each. After the case was considered by the weaving Conciliation Committee in 1950, a compromise of 38 3/4 hours per shift was reached, with the adjustment of piece-rates to enable double-day shift workers to receive the same earnings as those on the single-shift of 45 hours per week.(25) This agreement undoubtedly made it easier for firms to introduce double-day shifts on automatic looms, but it should be borne in mind that by June 1950 (before the new agreement came into force) 48 per cent of the firms with automatic looms were already operating a double-day shift system, largely as a result of the permissive attitude of the A.W.A leadership.(26)

In theory the A.W.A. was less sympathetic towards double-day shifts on Lancashire looms, but in practice this policy was little more effective than the one on automatic looms. By August 1949 14 firms were running double-day shifts on Lancashire looms, in many cases, as in Preston, with the tacit consent of the local union. Firms producing specialist cloths argued that Lancashire

looms were often more suitable for their purposes, and that they too should be able to introduce shift-working when they installed new machinery. (27)

Between 1946 and 1954 cotton spinning and weaving unions authorised permanent double-shift working at 190 mills and temporary double-day shift working at 18 mills. In August 1954 163 double-shifts were in receipt of formal union authorisation. (28) At Ferguson Brothers in Carlisle double-day shifts had been introduced in the weaving sheds in 1948 and by 1953 the operatives would not return to a single-shift system "for all the tea in China". (29) Hayeshaws successfully introduced double-day shifts at two ring-spinning mills between 1951 and 1953 and found that "many supposed objections of Lancashire cotton operatives to double shifts can be overcome if...a background of confidence has been developed between unions and management." (30)

Such evidence hardly suggests implacable union opposition to the principle of shift-working, but the employers maintained that more firms would have been induced to apply for authorisations had shift-premia been lower. In most cases the unions would only countenance double-shift working if hours were reduced from the usual 45 per week on single shifts to 37 1/2 or 38 3/4 hours on a double-day shift. To maintain earnings, the unions demanded shift-premia of 20 per cent and 16.1 per cent respectively. Ernest Hurst, president of the F.M.C.S.A., spoke for many employers in both spinning and weaving when he complained that even

with a premium of 16.1 per cent "shift working [is] a knife-edge proposition".(31) H.A. Clegg suggested that British premia were far in excess of those offered in cotton textiles overseas: in Japan, for example, the shift premium for double-shift workers was in the order of three per cent.(32) Eels argued that double-day shift premia in cotton were high even by British standards, cement workers receiving less than 7 per cent and asbestos workers 5 per cent; but Marris countered this claim by the assertion that workers in other industries often enjoyed hidden bonuses which were unavailable in the mills.(33) Clearly it would have been unrealistic for textile employers to expect their operatives to accept shift premia which were, in real terms, lower than those in other industries. To do so would have been to drive labour out of the industry at an even faster rate than that at which it was already leaving. In the early 1950s cotton was not sufficiently capital-intensive for large savings to be made from the introduction of double-day shifts; but as the industry became increasingly capital intensive towards the end of the decade, the potential savings in unit capital costs attendant upon shift-working increased to the point where shift-premia were of little consequence.(34)

Several significant developments in trade union recognition of shift-working occurred during the mid 1950s. In 1955 the A.W.A. and C.S.M.A. concluded an agreement setting out the terms on which double-day shifts could be operated on non-automatic looms.

Double-day shifts of up to 40 hours each would be permitted, after a ballot of the operatives, at sheds which had recently installed new Lancashire looms. By December 1959 46 firms had taken advantage of this agreement to operate double-day shift regimes of 37 1/2 or 38 3/4 hours each. (35)

Steps were also taken towards the negotiation of the first formal shift-working agreement in the spinning section. In 1955 the Cardroom Workers approached the F.M.C.S.A. with proposals for an improvement in working conditions, but the employers insisted that the scope of these talks should be extended to cover shift-working. By December 1956 the Cardroom Workers and the F.M.C.S.A. had reached an agreement, which specified that double-day shifts of 38 3/4 hours each could be worked in card and ring rooms, after a favourable ballot of the operatives. A shift premium of 16.1 per cent would be enforced and the union would reserve the right to veto shift-working at mills where working conditions were inadequate. Although double-day shifts in the spinning section had been permitted on a mill by mill basis since 1946, the employers welcomed the 1956 agreement on the grounds that it simplified the process of applying for a shift-work authorisation. (36) Formal agreements on double-day shift working were not extended to the mule-spinning section, where firms had no incentive to increase the intensity of capital utilization. No new mules had been installed since the 1920s; consequently nearly all mules were fully written down and unit

capital costs were already at a minimum.(37)

The trade unions remained implacably opposed to night-working, long after they had accepted the principle of double-day shift working. Moreover firms wishing to introduce night-shifts had to take into account the prohibition of night-work for women workers under the Factory Acts. In 1955 64 per cent of the spinning operatives and 62 per cent of the weaving operatives in the Lancashire cotton industry were female.(38) Women were excluded from mule-spinning and therefore dominated the structure of employment in the ring-room.(39) This was undoubtedly an additional burden on the industry, but it was not insoluble, and during the early 1960s Lancashire increasingly turned to the immigrant community for additional male night-shift workers.(40)

In 1947 the trade unions had been horrified to learn that Stafford Cripps was seriously considering encouraging night-work in cotton, possibly to the extent of relaxing the Factory Acts to enable women to participate. Only nine weaving firms were operating a night-shift in 1949, and in 1950 the A.W.A. and Overlookers Amalgamation called a strike at Horwich which succeeded in forcing one firm to abandon night-work.(41) But, as the price of textile machinery continued to increase, the employers' federations began to argue that three-shift working was essential to secure a sufficient reduction in unit capital costs to justify installation of new equipment such as the

shuttleless loom.(42) In 1955 the C.S.M.A. put these points to the A.W.A. in support of its demand for a formal agreement on night-shift working on automatic and non-automatic weaving machinery. The A.W.A. was prepared to accept that three-shift working was necessary, but negotiations broke down over the union's insistence on the closed shop for night workers. However the A.W.A. agreed to consider three-shift applications from individual mills, and by 1961 62 weaving mills were operating a triple-shift system of 37 1/2 hours per shift.(43) Lewis Wright, Naesmith's successor as general secretary, succinctly expressed the A.W.A.'s new attitude to night-shift working at the Cotton Board Conference in 1958. He commended the situation at one firm which had completely re-equipped its plant at a cost of £800,000 and was running its new machinery on a three-shift system: "If we are to encourage capital investment in new machinery shift working would seem to be a necessity"(44).

During 1958 the F.M.C.S.A. approached the Cardroom Workers concerning the night shift issue. The union replied that it would be prepared to consider individual applications on their own merits, taking into account the extent and cost of re-equipment, working conditions, the views of the operatives, and the firm's attitude towards the closed shop for night-workers.(45) After further discussions, in February 1960 the Cardroom Workers and the employers concluded a general agreement on night-working in the ring-room (but not the card

room). Night-shift workers would work up to 45 hours per week, but would receive overtime pay for work in excess of 40 hours. (46) Spinning employers were delighted with the pace of change in the late 1950s. In 1960 Mr H.C. Owtram of the Bolton Master Cotton Spinners Association paid:

"[T]ribute to the co-operation...received from all the Trade Union officials [in extending shift working in the town]. Chairmen of this Association have been stressing the need for flexibility for a considerable number of years, and it is very gratifying to be able to report that there is a more ready acceptance of this vital necessity". (47)

Cotton textiles became increasingly capital-intensive during the sixties; Ormerod estimated that, at 1965 prices, it cost £16,000 per worker to equip a vertically integrated mill on a single shift system and £5,000 on a triple-shift system. (48) Multiple-shift working was essential in such an environment, and in 1968 a new shift-working agreement was signed covering all sections of cotton spinning and weaving. This agreement was designed to encourage mills to work around the clock for seven days a week and eschewed rigid formulae on shift-premia and hours, which would instead be negotiated at mill level. In return the unions obtained the closed shop for shift-workers. (49)

The pace of cotton's movement towards a wider utilization of shift systems was not unimpressive in comparison with the experience of other British industries. Between 1954 and 1964 the proportion of cotton spinning and doubling operatives participating in shift-working rose from 10 per cent to 31 per cent,

Table 8.1

Shift systems in the British cotton industry, 1954-64.

(Percentages of all shift workers on various systems)

	COTTON SPINNING		COTTON WEAVING		ALL U.K. INDUSTRIES	
	1954	1964	1954	1964	1954	1964
Three-shift	2	12	3	26	46	41
Alternating Day & night	3	4	3	3	24	23
Double-day	60	45	83	58	16	17
Part-time Evening-shift	32	25	8	6	4	7
Other Night-shift	3	14	3	7	10	12
ALL SYSTEMS	100	100	100	100	100	100

N.B. Three-shift systems includes continuous 24 hour a day working, which could involve a fourth shift.

Source: Ministry of Labour Gazette, LXII (1954), pp. 337-42; LXXIII (1954), pp. 148-55.

Table 8.2

Machine hours worked per year in selected cotton industries.

(Maximum: 8760 hours)

	SPINNING			WEAVING		
	1953	1960	1963	1953	1960	1963
France	2541	3665	4100	2139	3111	3367
W. Germany	3224	3807	3506	2492	3404	3339
Hong Kong	n.a.	8400	8160	n.a.	n.a.	7920
India	4563	5099	5412	4409	4794	4795
Italy	2829	3764	3713	2107	3061	3271
Japan	4084	4005	3338	3885	3895	4206
U.K.	1645	2478	2595	1817	2707	2585
U.S.A.	5513	6216	6091	5530	6153	6191

Source: G.A.T.T., A Study on Cotton Textiles (Geneva: G.A.T.T., 1966), pp. 187-97.

while the proportion of weaving operatives working shift systems increased from 10 per cent to 32 per cent. Over the same period the percentage of shift workers in British industry as a whole rose from 12 per cent to 18 per cent. (50) But this picture needs qualifying by a consideration of different types of shift system. Table 8.1 shows that the double-day shift was the norm in the cotton industry. In fact only the metal box industry had a higher proportion of its shift workers on the double-day shift than cotton. On the other hand the proportion of shift-workers in Lancashire operating a three-shift system was considerably below the average for other industries. This disparity was particularly marked in the spinning section. Table 8.2 provides an international perspective and shows that machine hours per annum in the British cotton textile industry were well below those prevailing in competitor nations.

These figures require careful interpretation. Is it true that outmoded attitudes in the cotton unions were responsible for the slow growth of shift-working in Lancashire? Probably not, for the spread of shift-working in the cotton textile industry proceeded at faster pace than in British industry as a whole. This would surely not have happened had shift premia in Lancashire been excessive by British standards. Was night-shift working seriously hampered by the high proportion of women employed in spinning and weaving? Undoubtedly this was a drawback, but firms found it possible to employ male workers, especially immigrant

workers, on night-shifts. In spinning, the proportion of shift-workers operating a three-shift system appears particularly low, but this was partly the result of the survival of mule-spinning.

Ultimately shift-working was less prevalent in Lancashire than in cotton industries abroad because there was relatively little demand for it in Britain. Lancashire's trade unions showed willingness to adapt their shift-working policies to the changing environment. Trading conditions, excess capacity, and the state of confidence are the primary determinants of investment in manufacturing industry.(51) These factors were responsible for the low rate of investment in Lancashire. There was nothing to be gained from introducing shift-working in mills which had not installed new machinery.

III

Several important reforms in wage systems and methods of labour utilization were made during the late 1940s. Chapter 4 described how the Victorian wage lists in spinning were swept away by the new Evershed and Aronson Lists. Although the Evershed Report did not lead to a radical revision of staffing arrangements, an increasing number of firms obtained permission from the trade unions to introduce alternative wage systems devised at mill level, and based on the results of work measurement studies. Progress towards redeployment in weaving centred around the C.M.C. system: a wage list introduced in 1949 as an alternative to the prevailing

Uniform and More Looms Lists for non-automatic loom weaving. The C.M.C. List established a direct link between workload and earnings and encouraged firms to reform their methods of labour utilization. Work measurement also proceeded in the automatic loom sheds, where wage systems had always been negotiated at mill level.(52) These innovations laid the foundations for the developments discussed in the present section, namely the increasingly widespread use of work measurement techniques in spinning and weaving during the 1950s and 1960s.

During the early fifties the Cotton Board continued to run its successful series of work study courses for managers and union officials. Progress was not dramatic, but its cumulative effects were quite considerable. Between 1949 and 1953 the number of spinning mills employing a system of labour utilization and payment based on work measurement in at least one department increased from 90 to 184 (i.e. 38 per cent of the mills affiliated to the F.M.C.S.A.).(53) Federation leaders were increasingly eager to see the rapid advance of the new systems of labour utilization, arguing that firms would have no incentive to install new machinery unless staffing levels could be altered:

"It is now more than ever necessary to achieve maximum efficiency in production methods, so as to reduce costs and at the same time maintain satisfactory earnings for operatives...One can have a comparatively large, low-paid labour force, or a well-paid labour force using to the best advantage the modern machinery and labour-saving devices put

at its disposal".(54)

Redeployment was an essential part of many firms' modernization programmes. For instance, at Carlisle, Ferguson Brothers discovered that the reduction in average costs consequent upon the introduction of shift-working was in itself insufficient to justify the installation of new equipment. A judicious combination of shift-working (which reduced unit capital costs) and larger machine complements (which reduced unit labour costs) was often necessary to make modernization worthwhile. Although this particular example is taken from the weaving section, the same principle applied to spinning mills.(55)

In 1951 the F.M.C.S.A. succeeded in concluding two formal agreements with the unions on the introduction and recognition of wage systems based on work measurement; these were the first agreements of their kind in the spinning section. One applied to male doublers and gassers in the Stockport area, who were members of the General and Municipal Workers Union. In response to a claim for higher wages the F.M.C.S.A. had recommended the establishment of a wage system grounded in the accurate measurement of workloads. This was accepted by the union and the new wage system was introduced in the summer of 1951. In the other agreement the A.W.A. agreed to the use of work study principles to establish a new wage list for beamers and crossballers in F.M.C.S.A. mills outside the Bolton area. Both agreements, like the C.M.C. system, were introduced on a

permissive rather than compulsory basis.(56)

Neither of the 1951 work study agreements applied to the main groups of spinning operatives; and in 1953 the F.M.C.S.A. concluded that "we are now in a position to negotiate central work study agreements with the operatives' Unions."(57) Inflexible staffing levels had been established by the Evershed and Aronson agreements. The employers argued that spinners working under these agreements would become increasingly underloaded as a result of cumulative technical improvements which made their work easier. A wage system was needed which would allow workloads to be recalculated from time to time. Cardroom Workers leaders were extremely receptive to the employers' initiative. An agreement, dealing with card and ring-room operatives, was reached in December 1956. A ballot would be required at any mill at which it was proposed to introduce the new system. Full work studies would then be held at the mill to establish workloads and piece-rates. Target wages would be determined by collective bargaining at local level, to preserve a degree of similarity in earnings between mills. By 1962 48 per cent of card and ring-rooms were using the new system, while 52 per cent persevered with the Aronson List.(58) Employers were pleased with the progress that was being made: in Bolton it was reported that "the Trade Union officials concerned, once convinced of the equity of the proposals, have done their utmost to secure the co-operation and support of their members".(59)

In sharp contrast, relatively little effort was applied to the search for an equivalent agreement in mule-spinning. Following the minor changes in labour utilization introduced under the Evershed Agreement, the Operative Spinners declared that "the workload is now at a maximum".(60) The F.M.C.S.A. virtually ignored the question of redeployment in the mule-spinning department during the 1950s, a fact which suggests that they tacitly accepted the Operative Spinners' analysis.

Further developments ensued during the early 1960s. A Joint Technical Committee of spinning employers and representatives of the Cardroom Workers Amalgamation was created in 1963 to reinforce the principles of the 1956 agreement.(61) The objective of the Manchester Card and Ring Room Agreement of 1964 was to extend the application of work measurement techniques to all modernized spinning mills. A system of job evaluation would be introduced at mills which chose to work under the new agreement: this would involve the replacement of a rigid target wage with a more flexible wage-band.(62) By 1968 15 per cent of spinners operated under the terms of the Manchester Agreement. Mr R.W. Greenhalgh, president of the British Spinners and Doublers Association (the successor to the F.M.C.S.A.) remarked that the Manchester Agreement "embodies the most up-to-date and rational wage structure in the country".(63) Between 1950 and 1965 the annual output of yarn per operative in the cotton spinning section increased by 25 per cent. Improvements in labour

Table 8.3

Machine complements for Lancashire loom weavers,
1948-55.

	<4 looms	4 looms	5/6 looms (percentage)	>6 looms	CMC looms	total >4 looms
1948	12.4	53.9	26.1	7.6	..	33.7
1950	8.9	47.2	31.9	8.0	4.0	43.9
1951	7.5	43.7	33.8	8.2	6.8	48.8
1952	8.3	46.6	31.9	5.9	7.3	45.1
1953	8.4	41.7	34.2	7.2	8.5	49.9
1954	7.1	38.7	35.7	8.2	10.3	54.2
1955	6.4	40.9	34.7	8.1	9.9	52.7

Source: U.T.F.W.A., Plan for Cotton (Ashton under Lyne: U.T.F.W.A., 1957), Table VIII, p. 44.

utilization, which would not have been possible without the willingness of the trade unions to abandon a uniform wage system, had made a significant contribution to this advance. (64)

Table 8.3 illustrates the progress of the redeployment movement in Lancashire loom weaving between 1948 and 1955. The total number of non-automatic loom weavers operating complements of more than four looms increased from 33.7 per cent to 52.7 per cent over this period. Although this improvement was not insubstantial, the supporters of the C.M.C. List (1949) were deeply disappointed that their system, which encouraged the use of work study techniques, had not been more successful. By 1954 only 10.3 per cent of Lancashire loom weavers were on the C.M.C. List, and the following year this proportion fell to 9.9 per cent.

Resistance to the C.M.C. List was intense in centres, such as Nelson, Colne, and Padiham, which concentrated on the production of fine cotton and rayon cloth. Weavers of these types of cloth were particularly well-paid under the Uniform Lists, and had little incentive to adopt the C.M.C. system. In other areas the Uniform List was less generous; consequently the C.M.C. system appeared more attractive. (65) For instance, in 1950 at the Perseverance Mill Co. Padiham, operatives weaving high-quality cotton aero cloths voted against the introduction of the C.M.C. system, on the grounds that an expected 14 per cent rise in earnings would be inadequate compensation for an increase in loom

complements from six to twelve per weaver. The leaders of the A.W.A. tried to persuade the weavers at Padiham to change their minds, fearing that an early setback for the C.M.C. List would be highly damaging to the further development of the system. When it became clear that the weavers at the Perseverance Mill Co. were not prepared to do his bidding, Andrew Naesmith angrily reacted that he "had never met such blind, biased and unreasonable prejudice".(66) By August 1950 only two mills in the Nelson district had passed the experimental stage of C.M.C. application, despite the A.W.A.'s attempts to put pressure on recalcitrant local officials to promote the new system.(67)

Rayon differentials under the C.M.C. List were less than those offered under the Uniform Lists, dissuading rayon weavers from participating in redeployment. Indeed in 1953 Mr Markwick, a leading representative of the employers in the rayon weaving section, explained that his members "considered the C.M.C. system to be at a dead end".(68) To overcome this obstacle several firms in the Nelson area proposed to amend the C.M.C. List to give extra payments to operatives producing rayon cloth. Other employers described this suggestion as an attempt to "sabotage" the C.M.C. List. The C.M.C. system was based on the establishment of a direct link between effort and earnings: to introduce higher rayon differentials would involve a surrender to the irrational principles of the Uniform List. After a great deal of wrangling the rayon weaving employers agreed to

withdraw their proposals, but the problem which had led to their formulation persisted. (69)

Rayon weaving firms were mistaken in their attempt to reform the C.M.C. List, as the Uniform Lists were the real cause of their troubles. In the 1930s six-loom weavers had been paid a piece-rate which was 11 per cent lower than that for four-loom weavers, but during the labour shortage of the 1940s many firms had paid their six-loom weavers at the higher four-loom piece-rates. In Nelson, in December 1952, five out of nine firms running six-loom complements paid the four-loom piece-rates. These weavers, many of whom also received high rayon differentials, had nothing to gain from the C.M.C. system. (70) By 1954 a number of employers were pressing for a return to the six-loom piece-rates for six-loom weavers, in an attempt to reduce costs in response to growing foreign competition. Naturally the A.W.A. resisted this change and advocated the abolition of the six-loom piece-rates. They maintained that all six-loom weavers should receive the four-loom rates, arguing that this would increase labour costs and encourage firms to adopt the C.M.C. system; however they failed to add that it would also have made the C.M.C. List less attractive to their own members. In 1956 the A.W.A. put its case for abrogation of the six-loom piece-rates before the Conciliation Committee. Lord Terrington, who presided at the hearing, pronounced in favour of the operatives, a decision which was clearly detrimental to the further growth of the C.M.C.

system.(71) The following year the Conciliation Committee took an important step to redress the balance by accepting the employers' case for a gradual reduction in the rayon differentials under the Uniform List. This encouraged rayon weavers to vote in favour of the introduction of the C.M.C. List at their mills.(72)

Firms had to ballot their operatives before introducing the C.M.C. List. In these circumstances there can be little doubt that the anomalies in the Uniform Lists, which enabled weavers of rayon and fine cotton cloths to obtain high wages in return for a relatively small amount of effort, were the main reason for the slow development of the C.M.C. system. A minority of the workforce in weaving continued to be paid under the terms of the Uniform Lists in the mid 1960s. Had the C.M.C. List been more widespread during the 1950s, the cost of weaving on the Lancashire loom system would have been reduced relative to that on the automatic loom system. Consequently fewer firms would have engaged in the installation of automatic looms.(73) Nevertheless, taking into account both automatic and non-automatic loom weaving, output of cloth per operative per annum increased by 23 per cent between 1950 and 1965.(74)

Average labour productivity in the Lancashire cotton industry rose by approximately one quarter between 1950 and 1965. Although the installation of new machinery and the scrapping of obsolete equipment contributed to this process, the increasing use of work

measurement techniques in Lancashire textiles was clearly an important factor. But the magnitude of this improvement ought not to be exaggerated, for unit labour costs in British mills continued to exceed those in competitor nations, including Europe and the United States.(75)

IV

As the cotton textile industry resumed its decline during the 1950s, it was natural that the trade unions should devote more time to the protection of their members' jobs and the negotiation of adequate redundancy payments for those whose jobs could not be saved. But little was achieved until 1959, when the Cotton Industry Act insisted that firms in receipt of scrapping grants should compensate redundant operatives. .

The threat to employment was particularly acute in the mule-spinning section, which was declining relative to ring-spinning.(76) In 1948 the Operative Spinners had foreseen this trend and expressed their concern to the government: "The movement to replace mules by rings is gradually gaining ground which can only result in a corresponding change-over in personnel from male to female. The nett [sic] effect of this development will be that skilled men of long experience will be lost to the industry".(77) More significantly, the Operative Spinners predicted high levels of male unemployment in spinning districts. Men would no longer be the main breadwinners in many families; obviously this would have "unforeseen" and horrifying social consequences. The

Table 8.4.

Unemployment in cotton, 1950-70.

	cotton industry		all industries	
	spinning	weaving	North West	Gt. Britain
	(Percentages unemployed)			
1950	0.6	0.4	1.6	1.5
1951	0.4	0.3	1.2	1.2
1952	32.9	22.3	3.7	2.0
1953	1.5	1.1	2.1	1.6
1954	0.7	0.5	1.5	1.3
1955	5.8	3.4	1.4	1.1
1956	1.9	2.3	1.3	1.2
1957	0.8	1.1	1.6	1.4
1958	9.3	6.2	2.7	2.1
1959	4.7	3.0	2.8	2.2
1960	3.4	2.8	1.9	1.6
1961	2.3	1.3	1.6	1.5
1962	5.2	4.7	2.5	2.0
1963	3.8	3.4	3.1	2.5
1964	2.0	1.4	2.1	1.6
1965	1.6	1.1	1.6	1.4
1966	1.3	1.0	1.5	1.5
1967	4.8	4.9	2.5	2.4
1968	2.7	2.1	2.5	2.5

Unemployment figures for cotton apply to May/June each year; short-time figures to August. Unemployment figures for North West and G.B. are annual averages.

Source: Ministry of Labour Gazette; Annual Abstract of Statistics; British Labour Statistics: Historical Abstract, Table 168, pp. 328-9.

worst fears of the mule spinners were never realised. With the exception of the crisis years of 1952 and 1958, unemployment in cotton spinning did not exceed six per cent between 1950 and 1965.(78) It would appear that the majority of mule spinners had little difficulty finding alternative employment. Table 8.4 shows that unemployment in the North West was not noticeably above the national average in the 1950s and 1960s. At Blackburn, where mule-spinning had been eradicated by March 1953, many operatives were retrained for work in the ring-spinning section.(79) But retraining often involved loss of status, while the most elderly workers had genuine problems obtaining other jobs. "It can be no consolation whatsoever", remarked the Operative Spinners, "for a man after spending the whole of his working life of 40 years or more to be told by implication that it is for the good of the industry that he should resign himself to losing his means of livelihood".(80)

In the manufacturing section the fear of widespread unemployment was equally strong. Under these circumstances the A.W.A. became increasingly reluctant to agree to the use of foreign labour in Lancashire's weaving sheds. During 1956 the British and Italian T.U.C.s asked the A.W.A. to give their views on the prospects for the employment of Italian labour in the industry. They were told, in no uncertain terms, that in a contracting industry it "would be foolish to encourage the importation of foreign labour, much less Italians".(81) Moreover, following the 1956 Hungarian

uprising, the A.W.A. made it clear to the Ministry of Labour that it would not tolerate the employment of refugees in the cotton industry, with the exception of those who were already experienced textile operatives.(82) In 1957 J.C. Hamer Ltd of Radcliffe engaged 20 Indian and Pakistani workers to train as weavers. An A.W.A. deputation interviewed the management: it was agreed that these workers, although from Commonwealth countries, would be the first to lose their jobs if trade slackened.(83)

Possibly the most surprising feature of the unions' campaign to protect their members' jobs was their determination not to launch a campaign against redeployment. The unions were adamant that overseas competition was the primary cause of declining unemployment in the industry. Lewis Wright, general secretary of the A.W.A., argued that Lancashire would become even less competitive if action was not taken to improve the efficiency of labour utilization. Work study must proceed, although it ought to be presented in a more sensitive manner at a time of declining employment.(84)

By the mid 1950s the cotton unions were beginning to press for an organized scheme of redundancy payments to operatives. They resented the fact that, although the employers were discussing plans for subsidising the elimination of excess capacity and the compensation of directors and managers, no thought had been given to the fate of the operatives. Workers losing their jobs

frequently received nothing in compensation for many years of service.(85) An approach was made to the F.M.C.S.A. in 1956 to request that all redundant mule-spinners should have the opportunity to retrain for work in the card and ring-rooms, but the employers rejected this initiative on the grounds that it would result in the disturbance of the existing staff in those sections.(86) Discussions were held between the spinning and weaving unions in March 1957 to consider the possibility of a joint claim for operatives' compensation, but they decided that it would be dangerous to proceed until the pending wage negotiations had been concluded.(87) The joint demand for compensation was put to the spinning and weaving employers in April 1947. Compensation would be administered by a joint committee, and would be financed by a levy on the wage bill. It would be paid according to a sliding scale: workers with less than five years in the industry would receive nothing, but for those with longer service the rate of compensation would increase up to a maximum of 50 weeks' earnings.(88) Those finding other work within the cotton industry would not be eligible for compensation unless their new job involved a loss of grade. The employers' response was firm:

"The protection of workers against the effects of unemployment by the payment of unemployment insurance benefit and National Assistance is a matter for the State; it is not a responsibility of an individual industry...This does not exclude individual firms, which are willing to do so, from making special arrangements regarding redundancy, but the decision must rest entirely in their hands".(89)

Having failed to persuade the employers of the need for redundancy payments, the unions submitted their case to the Ministry of Labour's Industrial Disputes Tribunal (I.D.T.) in March 1959. The I.D.T. refused to make a formal award, but suggested that the issue of operatives' compensation be considered in conjunction with discussions on Mr Macmillan's scheme for a state-financed scrapping subsidy. This recommendation was endorsed by the government, which put pressure on the employers to reopen talks with the unions.(90) After protracted negotiations, agreement was reached with the C.S.M.A. and F.M.C.S.A. in July 1959 on a scheme financed by a levy on the industry. Compensation would be available to workers who had spent more than five years in the industry. The maximum rate of compensation (for those aged 65) would be 30 weeks earnings. In most cases operatives finding alternative employment would still receive some compensation, although this would be at a considerably reduced level.(91)

Although this arrangement represented a significant improvement over existing provisions for compensating redundant operatives, in some ways it was still far from satisfactory. The unions were quick to draw attention to the fact that while the maximum compensation payable to a worker was 30 weeks' wages, directors at one closed firm had received £22,500 each. Moreover compensation was payable only at firms which shed labour under the terms of the 1959 scrapping subsidy.(92) Between October 1961 and October 1962 56 weaving mills ineligible for a

scrapping grant were closed. At 18 of these firms some compensation had been paid to the operatives (although in one case the maximum was 10 weeks' wages), negotiations were proceeding at a further 17, while the employers had no intention of co-operating at the remaining 21 mills.(93)

During the early 1960s employers showed little interest in negotiating a permanent agreement on operatives' compensation. But this did not lead to widespread unrest in the mills. Between 1960 and 1965 2.14 per cent of days lost through strikes in cotton were the result of disputes over terms of redundancy, compared with 5.15 per cent in all industries. The 1965 Redundancy Payments Act introduced a statutory redundancy scheme for British industry. Somewhat surprisingly, this legislation was associated with an increase in the proportion of days lost through strikes due to redundancy: to 3.77 per cent in 1966-9 in cotton, compared with a decline to 1.77 per cent in British industry as a whole.(94)

Union leaders largely failed in their attempt to obtain compensation for operatives made redundant after 1950. Fortunately this was not too disastrous, for few redundant cotton operatives experienced protracted periods of unemployment. Apart from the most elderly workers, those who suffered most from the industry's decline were the leaders of the trade unions. In 1960 the cotton unions were deprived of one of their two seats on the T.U.C. General Council, while from 1968

there was only one seat for all textile workers. (95)

V

Cotton textile unions experienced a large decline in membership during the 1950s and 1960s. At first glance, their lack of militancy during this period appears remarkable. Despite the spread of shift-working and a gradual increase in machine complements there were no major strikes in cotton after World War Two. In fact the unions proved amenable to these developments, recognising that increased labour efficiency was essential to cotton's short-term survival. Lancashire's operatives had little to gain from confronting their employers. Strikes would merely have hastened the industry's demise. Unemployment was low, so that operatives who were unhappy with wages and conditions in the mills could easily find a job elsewhere. Perhaps quitting was less traumatic and risky than striking.

Notes to Chapter 8.

(1) See above, Tables 6.2, 6.3, pp. 227-8.

(2) See above, Table 6.6, p. 237.

(3) Weekly wage rates of male cotton spinning operatives increased by 92 per cent between 1948 and 1965, while women spinners' wages rose by 88.7 per cent. In weaving the weekly wage rates of male and female operatives increased by 95.4 per cent and 89.9 per cent respectively between 1948 and 1965. Over the same period men's wages in all industries rose by 120.9 per cent and women's by 121.9 per cent. E. Devons, J.R. Crossley, and W.F. Maunder, 'Wage Rate Indexes by Industry, 1948-1965', Economica, XXXV (1968), pp. 392-423.

(4) J.L. and B. Hammond, The Town Labourer (London: Longman, 1978), p. 102.

(5) J. Hilton, Are Trade Unions Obstructive? (London: Gollancz, 1935), p. 78.

(6) L.R.O., A.W.A., General File: Questionnaire on Two Shift System, 1938.

(7) R.L. Marris, The Economics of Capacity Utilisation: A Report on Multiple-shift Work (Cambridge: Cambridge University Press, 1964); R.L. Marris, Multiple Shiftwork: A Problem for Decision by Management and Labour (London: H.M.S.O., 1964).

(8) H.A. Clegg, 'Single and Double Day Shift Working in the Cotton Industry', C.B.C. (Oct. 1952), p. 5.

(9) R.R. Betancourt and C.K. Clague, 'An Economic Analysis of Capacity Utilization', Southern Economic

Journal, 42 (1975), pp. 69-78. For a more extended discussion see: R.R. Betancourt and C.K. Clague, Capital Utilization: A Theoretical and Empirical Analysis (Cambridge: Cambridge University Press, 1981).

(10) Marris, Economics of Capacity Utilisation, pp. 52-3.

(11) Board of Trade, Working Party Reports: Cotton (London: H.M.S.O., 1946), pp. 83, 163.

(12) Ibid, p. 254. For similar results see: A. Sidebottom, 'Observations on Weaving Costs, Lancashire and Automatic Type Looms', in Cotton Board, Equipment and Labour Utilisation in the Cotton Industry (Manchester: Cotton Board, 1947), pp. 132-47.

(13) Board of Trade, Working Party Report, p. 277.

(14) See above, Ch. 5, pp. 193-215.

(15) Board of Trade Journal, 153 (1947), pp. 179, 234.

(16) 'Cotton Still Waiting for Modernisation', in Manchester Guardian Survey of Industry, Commerce, and Finance, 1956 (Manchester: Manchester Guardian, 1956), pp. 101-4.

(17) Power Loom, No. 348 (Feb. 1945), p. 4.

(18) Cotton Board, Equipment and Labour Utilisation, p. 69.

(19) L.R.O., Operative Spinners, Executive Committee Minutes, 23 Aug. 1945.

(20) L.R.O., A.W.A., General File: Double Day Shift Commission, 1946-7.

(21) See above, Ch. 5, pp. 207; L.R.O., Operative

Spinners, Quarterly Report, 31 Jan. 1947, p. 6; Report of Special Representative Meeting, 8 Feb. 1947; Quarterly Report to 30 Apr. 1947, p. 4.

(22) See above, Ch. 3, p. 107.

(23) L.R.O., A.W.A., Central Committee Minutes, 8 Apr. 1948.

(24) In 1938 Padiham Weavers reported that at one mill: "General Franco couldn't bomb them out". L.R.O., A.W.A., General File: Questionnaire on Two Shift System, 1938.

(25) E. Hopwood, The Lancashire Weavers' Story: A History of the Lancashire Cotton Industry and the Amalgamated Weavers Association (Manchester: A.W.A., 1969), p. 159.

(26) The figures exclude Nelson which did not co-operate with the survey. L.R.O., A.W.A., General File: Questionnaire on Automatic Looms, June 1950.

(27) L.R.O., A.W.A., General File: Shift Work Questionnaire, August 1949.

(28) Marris, Economics of Capacity Utilisation, pp. 163-4.

(29) R.S. Geogehan, 'Double Day Shift Working in Weaving', C.B.C. (Feb. 1953), p. 42.

(30) W.A. Grierson, 'Double-day Shifts in Spinning Mills', in Manchester Guardian Review of Industry, Commerce and Finance, (Manchester: Manchester Guardian, 1953), p. 72.

(31) L.R.O., F.M.C.S.A., Annual Report, 1958, p. 83.

(32) Clegg, 'Shift Working', p. 16.

(33) F.R. Eels, 'The Economics of Shift Working', J.I.E., 5 (1956), p. 58; Marris, Economics of Capacity Utilisation, p. 52.

(34) See above, Ch. 7, pp. 324-5.

(35) The procedure for consulting the operatives on the introduction of shift-working on Lancashire looms was more rigorous than that for automatic loom weaving, where a ballot was only necessary if the firm wanted to run a system of 40 hours per shift. Hopwood, The Lancashire Weavers Story, p. 160; L.R.O., A.W.A., General File: Double Day Shifts on Non-automatic looms, 1960.

(36) L.R.O., F.M.C.S.A., Annual Report, 1956, pp. 13-4.

(37) See above, Ch. 5, p. 172.

(38) C.B.Q.S.R., No. 49 (Mar. 1958), pp. 3, 5.

(39) See above, Ch. 3, pp. 101-2.

(40) See above, Ch. 6, p. 247.

(41) L.R.O., A.W.A., Central Committee Minutes, 28 Feb. 1947, 11 Aug. 1950; General File: Shift Work Questionnaire, August 1949.

(42) See above, Ch. 7, pp. 324-5.

(43) L.R.O., A.W.A., Central Committee Minutes, 25 Nov. 1955; General File: Shift Working Census, 1961.

(44) L. Wright, 'Patterns of Productivity', C.B.C. (May, 1958), pp. 9-10.

(45) L.R.O., F.M.C.S.A., Annual Report, 1958, pp. 17-8.

(46) L.R.O., Operative Spinners, Executive Council Minutes, 16 Oct. 1958.

(47) L.R.O., Barber-Lomax Collection, Bolton Master Cotton Spinners Association, Report of a Speech by the Chairman, Mr H.C. Owtram, at the Annual Meeting in February 1960.

(48) A. Ormerod, 'Investment and Re-equipment Policy', in Textile Institute, Management in the Textile Industry (London: Longman, 1969), p. 505.

(49) L.R.O., B.S.D.A., Annual Report, 1968, p. 84.

(50) These figures are based on two Ministry of Labour Surveys covering 70 per cent of U.K. manufacturing and non-manufacturing industry. Flax and man-made fibre spinning, and linen and man-made fibre weaving are classed as cotton in the 1964 data. Ministry of Labour Gazette, LXII (1954), pp. 337-42; LXXIII (1965), pp. 148-55.

(51) See above, Ch. 7, pp. 297-329.

(52) See above, Ch. 4, p. 150.

(53) L.R.O., F.M.C.S.A, Annual Report, 1951, p. 21; Annual Report, 1953, p. 20.

(54) L.R.O., F.M.C.S.A., Annual Report, 1952, p. 17.

(55) Geogehan, 'Double Day Shift', pp. 47-8.

(56) L.R.O., F.M.C.S.A, Annual Report, 1951, pp. 19-20; Annual Report, 1952, pp. 52-3.

(57) L.R.O., F.M.C.S.A, Annual Report, 1954, p. 66.

(58) L.R.O., F.M.C.S.A, Annual Report, 1956, pp. 56-7; S.P.S. Pruthi, 'A Study of Productivity Problems

in the Cotton Textile Industries of the U.K. (Lancashire) and India (Bombay and Ahmedabad) since the Second World War', (unpublished Ph.D thesis, University of London, 1962), p. 150.

(59) L.R.O., Barber-Lomax Collection, Bolton Master Cotton Spinners Association, Report of a Speech by the Chairman, Mr W.A.M. Hesketh, at the Annual Meeting in February 1962.

(60) L.R.O., Operative Spinners, Quarterly Report, 31 Oct. 1949, p. 5.

(61) L.R.O., B.S.D.A., Annual Report, 1964, p. 24.

(62) L.R.O., Barber-Lomax Collection, Manchester Card and Ring Room Agreement, 1965; B.S.D.A., Annual Report, 1965, p. 26.

(63) L.R.O., B.S.D.A., Annual Report, 1966, p. 87; National Board for Prices and Incomes, Job Evaluation (Supplement) (London: H.M.S.O., 1968), Cmnd. 3772-I, pp. 17-8.

(64) See above, Table 6.2, p. 227; National Board for Prices and Incomes, Payment by Results Systems (Supplement) (London: H.M.S.O., 1968), Cmnd. 3627-I, pp. 91-7.

(65) See above, Ch. 4, p. 161.

(66) G.M.R.O., C.S.M.A., Sub-committee on the C.M.C. System Minutes, 31 Jan. 1953; L.R.O., A.W.A., Minutes of an Informal Joint Meeting with the C.S.M.A., 27 Oct. 1950.

(67) Power Loom, No. 417 (August, 1951), p. 1.

(68) G.M.R.O., C.S.M.A., Sub-committee on the

C.M.C. System Minutes, 19 Jan. 1954.

(69) L.R.O., A.W.A., General File: Employers' Application for Reduction in Rayon Percentages, 1957; G.M.R.O., C.S.M.A., Sub-Committee on the C.M.C. System Minutes, 13 Nov. 1953, 11 Mar. 1954, 19 Mar. 1954.

(70) L.R.O., A.W.A., General File: Abrogation of the Six Looms List, 1956.

(71) L.R.O., A.W.A., Central Committee Minutes, 19 Oct. 1956.

(72) L.R.O., A.W.A., General File: Employers' Application for Reduction in Rayon Percentages, 1957.

(73) L.H.C. Tippett, A Portrait of the Lancashire Textile Industry (London: Oxford University Press, 1969), p. 102. For details of investment in automatic looms during the 1950s see above, Table 7.6, p. 293.

(74) See above, Table 6.3, p. 228.

(75) See above, Tables 6.9, 6.10, pp. 260-1.

(76) Between 1950 and 1960 the number of running mule spindles fell from 15 million to 3 million, while the number of running ring spindles fell from 8 million to 6 million. See above, Table 7.1, p. 283.

(77) L.R.O., Operative Spinners, Executive Council Minutes, 25 Sep. 1948; Annual Report, 1948, pp. 4-5.

(78) See above, Ch. 6, pp. 236-8, 244.

(79) L.R.O., Operative Spinners, Executive Council Minutes, 28 Mar. 1953.

(80) L.R.O., Operative Spinners, Quarterly Report, 31 Oct. 1955, p. 6; Executive Council Minutes, 16 Nov. 1955.

(81) L.R.O., A.W.A., Central Committee Minutes, 13

Feb. 1956.

(82) Ibid, 16 Nov. 1956.

(83) Ibid, 17 Jan. 1958.

(84) L. Wright, 'Patterns of Productivity', pp. 7-8.

(85) L.R.O., Operative Spinners, Quarterly Report, 31 Oct. 1955, pp. 5-6.

(86) L.R.O., Operative Spinners, Executive Council Minutes, 5 July 1956.

(87) L.R.O., Operative Spinners, Minutes of a Joint Meeting with the Cardroom Workers and the Northern Counties Textile Trades Federation, 29 Mar. 1957, 24 May 1957.

(88) L.R.O., Operative Spinners, Executive Council Minutes, 17 Apr. 1958.

(89) L.R.O., A.W.A., Central Committee Minutes, 1 Aug. 1958.

(90) L.R.O., Operatives Spinners, Executive Council Minutes, 21 Mar. 1959; Quarterly Report, 30 Apr. 1959.

(91) L.R.O., Operative Spinners, Quarterly Report, 31 July 1959, pp. 3-4.

(92) L.R.O., Operative Spinners, Quarterly Report, 31 Jan. 1960, p. 3.

(93) L.R.O., A.W.A., General File: Compensation for Redundancy due to Mill Closure, Oct. 1962.

(94) S.R. Parker, C.G. Thomas, N.D. Ellis, and W.E.J. McCarthy, Effects of the Redundancy Payments Act (London: H.M.S.O., 1971), p. 13.

(95) T.U.C., Report of Proceedings at the 94th

Annual Trade Union Congress (London: T.U.C., 1962), p. 509.

Chapter 9.

IN RESTRAINT OF TRADE: THE COTTON INDUSTRY, PRICE-FIXING
AND THE CAMPAIGN FOR PROTECTION, 1950-65.

An industry which is struggling to survive in a climate of increasing foreign competition has two options. Either it can attempt to reduce costs by modernizing its fixed capital stock and labour practices, or else it can retreat behind a wall of restrictive agreements and protectionist rhetoric. Most industries adopt a combination of these responses, but the gravity of the difficulties confronting Lancashire in the interwar decades, and again during the 1950s, forced the cotton industry increasingly to concentrate on defensive measures.

This chapter examines various schemes for the maintenance of prices and margins which were discussed (and occasionally implemented) by the cotton industry during the 1940s and 1950s. Consideration will also be given to Lancashire's vociferous campaign for the protection of domestic and colonial markets during the fifties and sixties. The chapter will be divided into four sections. Section I looks at the rationale for the collective regulation of prices and margins, and examines a number of unsuccessful experiments in price maintenance in the cotton industry between 1920 and 1945. Section II considers postwar price-fixing agreements in the spinning section, notably the Yarn Spinners' Association (Y.S.A.), which fell foul of the Restrictive Practices Court in the late 1950s. Section III examines the abortive attempts to establish an

equivalent to the Y.S.A. in the weaving section, and provides a brief consideration of price control in the finishing section. Section IV discusses the growing protectionist movement in Lancashire after World War Two, while Section V contains some concluding comments.

I

During the 1950s and 1960s the study of restrictive practices attained a temporary popularity. A wealth of literature was published dealing with price-fixing agreements and the activities of the Restrictive Practices Court.(1)

In the absence of a price maintenance agreement, a fall in demand could lead to an uncontrollable spiral of price-cutting, resulting in serious damage to the financial structure of the industry. Firms would undercut one another in a desperate scramble to obtain orders. Wholesalers, retailers, and export merchants would deliberately delay orders to effect further reductions in price. Elementary micro-economic theory suggests that, in the short-term, firms would be prepared to trade at a loss, namely at prices between average total costs and average variable costs.(2) Some firms, expecting an early revival of trade, and wishing to retain the goodwill of their customers, would even offer goods at prices below average variable costs. This behaviour, known as 'weak selling', was prevalent in the cotton industry during the 1920s and 1930s. Competitive price-cutting creates immense financial difficulties for firms. Marginal producers would exhaust their credit

during a prolonged recession and be forced to abandon the industry. Losses sustained during the price-war would also significantly reduce the financial reserves of the remaining firms.

The primary function of a price maintenance scheme is to avoid panic during periods of slack demand. Price instability leads to chronic uncertainty and deters investment.(3) An organized pricing scheme would not eliminate losses, but it would ensure that they were less than those accompanying an unrestrained price-war. Moreover, wholesalers would not engage in ploys to intensify the reduction in demand if they were convinced that the pricing agreement would hold. Consequently the financial pressure on firms would be brought under control, and the capacity of marginal producers would be preserved to enable the satisfaction of demand during the recovery.(4) But, as with all forms of cartel, individual firms have an incentive to undercut the agreed price to acquire greater orders.(5) Consequently, price-fixing schemes have a greater chance of success where cheaters can be penalised, either by joint action to put them out of business, or through a regime of legally enforceable fines.

However price maintenance schemes are not a panacea. They assist industries to protect their productive capacity and financial reserves during temporary fluctuations in demand, but are ineffective in cases where the fall in demand is permanent. If the main pressure to cut prices is from outsiders, such as

low-cost overseas producers, price maintenance agreements can do nothing to limit the losses of domestic firms. Under these circumstances price regulation would only succeed if it had the backing of import controls.

The remainder of this section will consider price maintenance schemes in Lancashire before 1945. Calamitous declines were experienced in all Britain's staple industries, cotton, steel, shipbuilding, and coal, during the interwar period. Lancashire's cotton textile employers reacted to the collapse in demand by attempting to introduce minimum price schemes, with the intention of limiting the damage caused by 'weak selling'. But defensive price schemes were not confined to the cotton industry. For instance, the Coal Mines Act of 1930 established district boards of colliery owners with powers to fix minimum prices; while there were also important agreements for regulating prices in the iron and steel, chemicals, sheet-glass, and tinsplate industries.(6)

In the early 1920s the coarse spinners introduced short-time working, an expedient which had been a popular remedy for temporary reductions in demand before 1914. By cutting hours it was hoped that supply could be brought into equilibrium with demand without the necessity for a major reduction in price. Short-time working was supported by the unions, as it involved underemployment rather than outright unemployment for their members. But as poor trading conditions persisted,

the disadvantages of the short-time system were accorded greater attention. A uniform reduction in hours made it difficult for the spinning section to adjust to secular changes in the demand for different types of yarn. Lower rates of machinery utilization resulted in higher unit fixed costs. Moreover short-time working forced efficient producers to reduce their output at the same rate as marginal firms. Efficient firms and those spinning specialist yarns for which demand remained strong had an incentive to cheat; consequently the short-time system collapsed in 1926.(7)

In November 1926 J.M. Keynes approached the F.M.C.S.A. with a scheme for establishing a 'cartel' in the coarse spinning section.(8) Similar proposals had been under discussion within the Federation since the abandonment of short-time working. In fact a Cotton Yarn Association (C.Y.A.) was formed to fix production quotas and set minimum prices, but it failed to gain the support of more than three-quarters of the coarse spinning companies. Demand continued to fall during 1927. Outsiders succeeded in undercutting the C.Y.A. and its functions were terminated. Keynes complained that the C.Y.A had set prices too high in a misguided attempt to guarantee the profits of the least efficient firms. He argued that voluntary agreements were difficult to enforce and suggested that it might be necessary to seek Board of Trade authority for a compulsory minimum price and quota scheme, or else implement retaliatory measures against firms who broke ranks.(9)

While Britain was in the depths of the depression between 1928 and 1933, it proved impossible for firms in the cotton industry to reach any agreement on minimum prices, and weak selling became the norm.(10) But towards the end of 1933 a number of 'Gentlemens' Agreements' were reached, primarily at the behest of the industry's largest firm, the Lancashire Cotton Corporation, whereby companies undertook not to sell yarn at a price below average total cost. When the coarse weft agreement collapsed in 1934, many firms realised that only a legally enforceable scheme could survive. A number of coarse spinners combined to establish the 'Royton Agreement', which was legally binding upon the signatories. Similar schemes were set up in the Egyptian section and proved remarkably resilient during the renewed downward pressure on prices in 1938.(11)

In July 1937, amid general surprise, the President of the Board of Trade, Oliver Stanley, suggested that the cotton industry should draw up proposals for a comprehensive new price-fixing scheme. Stanley hinted that legislation might be forthcoming to enforce such an agreement.(12) The Joint Committee of Cotton Trade Organisations (J.C.C.T.O.) responded by proposing that each sub-section of the industry should be responsible for devising a price maintenance scheme. Each scheme would be administered by a 'board', consisting largely of employers, which would be answerable to the government. The J.C.C.T.O. warned that there should be

no attempt to supplement minimum price schemes with production quotas, as this would be unpopular in the industry.(13) These proposals were provisionally accepted by the government, which began to draft an Enabling Bill to give them effect.

It was agreed that the legislation should extend to the weaving and finishing sections. The inability of the weaving industry to develop a voluntary minimum price scheme during the 1920s and 1930s was the result of the variety of its output and the large number of very small firms in the section. In 1934 the C.S.M.A. produced a list of uniform costings to serve as guidelines to the industry, while a survey by the Burnley and District Cotton Industry Study Group showed that there was moderate support for a legally enforceable 'insurance' scheme. This would have involved firms paying a levy into a pool for the compensation of companies with idle looms. It was argued that access to these compensatory payments would make it unnecessary for firms to engage in 'weak selling'. But nothing came of these preliminary discussions. Indeed a statutory scheme offered the only realistic hope of price maintenance in weaving.(14)

Over 70 per cent of spinning and weaving firms expressed themselves satisfied with the government's plans, although a vocal 'opposition' movement emerged, claiming that the boards administering the price schemes would be puppets of the larger firms.(15) Despite these doubts the Cotton Industry (Re-organization) Act came onto the statute book in 1939. This Act authorised each

subsection of the industry to draw up a minimum price scheme for submission to a Cotton Industry Board (which was dominated by employers). If the Cotton Industry Board accepted the proposals it would seek the Board of Trade's approval for introduction of the schemes.

The outbreak of World War Two prevented the implementation of the 1939 Act. Weak selling was no longer a problem and the government's main concern was to avoid a rapid rise in the price of textiles. Between 1940 and 1942 the government established procedures for controlling the price of raw cotton and the margins for yarn and cloth production, largely through the offices of the Cotton Control.(16) Price controls were retained for a period at the end of the war, although it was always the government's intention to remove them once the economic situation had improved, and the price of grey cloth for export was freed from control in June 1948.(17) Then, in April 1949, after gaining assurances from the industry that prices would not be raised, the Board of Trade secured the abolition of price and margin controls on all yarn and cloth, except cloth used in the production of Utility clothing.(18) The state-owned Raw Cotton Commission continued to control raw cotton prices until the Conservative government permitted the resumption of private trading in September 1952.(19) The period of price control during the 1940s was an interesting interlude, although it bore little relation, either to what had gone on before, or to what has since transpired.

During the war the industry gave consideration to the form of price maintenance which would be most desirable once peacetime conditions returned, as there was no guarantee that the provisions of the 1939 Act would be implemented. In 1944 the Cotton Board Committee to Enquire into Post War Problems reported that price management was essential to the stability of all sections of the industry and would be one of the cornerstones of any programme for Lancashire's recovery. The Committee recommended that such schemes should be administered under the auspices of the Cotton Board. (20) These proposals met with an extremely frosty response from the Board of Trade, where the President, Hugh Dalton, feared that price maintenance would merely serve to protect inefficient firms. In view of this reaction the industry did not press the government to provide legislative backing for price support schemes. (21) When the Board of Trade established a Tripartite Working Party in 1945 to discuss the future of the industry, only one member of the commission was prepared openly to advocate a system of statutorily enforceable minimum prices. (22)

By the end of the war the 1939 Act and its principle of the statutory enforcement of price maintenance schemes had been abandoned. This did not imply a lack of support among firms for price regulation through legally binding agreements at the industry level, merely extreme reluctance on the part of the government to become embroiled in such escapades. The

next section will consider the fortunes of the movement for price maintenance in the spinning section, while section III examines developments in weaving and finishing.

II

This section will analyze price maintenance in cotton and staple rayon spinning between 1945 and 1960. Detailed consideration will be given to the controversial scheme of the Yarn Spinners' Association (Y.S.A.), which was brought to an unceremonious conclusion by the Restrictive Practices Court in 1959.

As preparations were made during 1948 and early 1949 for the abolition of statutory price controls on yarn and cloth, the industry began the search for an alternative policy. In June 1948 Cotton Board officials met representatives of the Board of Trade to discuss the possibilities. Sir Raymond Streat expressed an interest in a regime of maximum and minimum prices instead of fixed prices, but the Board of Trade had little time for this idea.(23) Nevertheless both sides accepted that the existing system was too inflexible. Bureaucratic inertia prevented margins and prices from adjusting at a sufficient pace to enable Lancashire to take advantage of changing patterns of demand.(24)

In the absence of any positive state involvement in planning for a new price maintenance scheme, the matter devolved upon the spinning masters themselves. By April 1949, when statutory price control was abolished, the Yarn Spinners' Association had been established to take

over responsibility for regulating the price of cotton yarn. The Y.S.A. had an initial membership of 195 firms, representing over three quarters of U.K. spindleage. (25) Rayon yarn prices were effectively controlled by the major man-made fibre producers, Courtaulds and British Celanese. (26)

From the outset the Y.S.A. promised to become one of the most powerful organizations in the cotton industry. Some spinners feared that it would usurp the functions of the F.M.C.S.A.. To avoid conflict a demarcation agreement was reached between the two associations, in which the Y.S.A. pledged itself not to participate in any negotiations with the trade unions over wages and conditions, while the Federation abandoned any ambitions to intervene in the sphere of price regulation. (27)

The Y.S.A. was divided into six sectional committees dealing with different types of yarn: coarse American, medium American, ring American, condenser, waste, and Egyptian. Each sectional committee set a minimum spinning margin to be added to the cost of raw cotton, subject to ratification by the central committee. (28) The Y.S.A. claimed that its procedures for establishing minimum margins were based upon those specified in the abortive 1939 Act. A detailed questionnaire had been sent out to spinning firms to obtain accurate data on conversion costs. (29) Given this information it was possible to rank mills in each section according to conversion cost. The figures for

the costliest third of mills were disregarded, and the median mill of the remaining two-thirds was chosen as representing the minimum allowable margin. Every Friday the Y.S.A.'s Co-ordinating Committee would study the raw cotton market and set a price for each type of cotton. These 'official' raw cotton prices were added to the minimum margin to give the minimum price for each class of yarn, although special concessions could be made for exporters. Once the scheme was in operation the Y.S.A. was at liberty to alter its minimum margins to take account of changes in costs and the state of trade. Further detailed costings were carried out in 1950 and 1953. Firms caught cheating were fined six times the difference between the sale price and the Y.S.A. minimum price per unit sold. If they were unwilling to be judged by their peers they had the right to opt for an appearance before a civil court.(30)

Controversy surrounded the Y.S.A.'s scheme from the moment of its birth. During the 1950s many weaving concerns believed that their profits were being squeezed between the spinners' cartel and the finishers' cartel (which will be discussed in section III). Although the weavers were reluctant to speak out in public, their resentment was fuelled by the events of 1951-3, when the cotton industry experienced its first violent trade cycle since the 1930s. The year from mid-1950 to mid-1951 had been marked by a level of sales and profitability unequalled since 1920. But this prosperity was rapidly succeeded by recession, and 1952 brought a

Table 9.1.

Prices of raw cotton, yarn, and cloth, 1946-64.

(Averages for 1938 = 100)

	AMERICAN COTTON	AMERICAN YARN	CLOTH
Jun 30 1946	280	241	244
Dec 31 1946	409	303	296
Jun 30 1947	409	303	296
Dec 31 1947	449	320	310
Jun 30 1948	538	364	370
Dec 31 1948	455	360	346
Jun 30 1949	476	392	391
Dec 31 1949	600	478	444
Jun 30 1950	671	537	552
Dec 31 1950	968	726	694
Jun 30 1951	972	792	775
Dec 31 1951	921	779	635
Jun 30 1952	810	614	502
Dec 31 1952	622	535	454
Jun 30 1953	619	526	436
Dec 31 1953	603	527	472
Jun 30 1954	665	543	485
Dec 31 1954	667	560	489
Jun 30 1955	619	551	472
Dec 31 1955	617	545	466
Jun 30 1956	648	555	501
Dec 31 1956	602	535	514
Jun 30 1957	602	537	521
Dec 31 1957	602	559	539
Jun 30 1958	536	546	514
Dec 31 1958	509	523	474
Jun 30 1959	473	466	454
Dec 31 1959	471	492	514
Jun 30 1960	459	554	554
Dec 31 1960	467	580	579
Jun 30 1961	488	572	581
Dec 31 1961	490	517	537
Jun 30 1962	490	486	509
Dec 31 1962	486	488	510
Jun 30 1963	480	488	510
Dec 31 1963	474	490	531
Jun 30 1964	476	511	566
Dec 31 1964	473	535	599

N.B. The index is on the basis of current prices.

Source: F.W. Tattersall's Cotton Trade Review.

devastating collapse in both the domestic and export markets for cotton textiles. An examination of Tattersall's series of company trading results suggests that the spinners weathered the storm far better than the weavers. The average net profit of independent weaving firms fell from £120,000 in 1951 to £80,000 in 1952, while the average net profit of independent spinners remained constant at £55,000. This evidence is all the more remarkable, given the fact that during recessions the decline in orders was invariably accentuated in the spinning section. Between mid-1951 and mid-1952 employment fell by 48.5 per cent in spinning and doubling compared with 26.4 per cent in weaving.(31) Shaw and Turner and Smith attributed the resilience of spinners' profits to the maintenance of yarn prices and spinning margins under the Y.S.A. scheme. Shaw used Board of Trade data to show that, although weaving margins began to fall in August 1951, spinning margins remained at record levels until October 1951.(32) Employing information obtained from an unspecified private source, Turner and Smith calculated that cotton spinners' margins fell by a mere 30 per cent between mid-1951 and mid-1952, while weavers' margins fell by 56 per cent over the same period.(33) The data on American raw cotton, yarn, and cloth prices in Table 9.1 support this interpretation. Between 30 June 1951 and 31 Dec. 1952 cloth prices fell by 41 per cent, and American raw cotton prices fell by 36 per cent, while American yarn prices declined by 32 per cent. It would

appear that the high Y.S.A. margins secured adequate profits for the spinners despite the large fall in orders, and forced the weaving section, which lacked a price maintenance scheme, to bear the brunt of the recession.

Indeed the volume of criticism of the Y.S.A. grew with the passage of time. In 1955 the C.S.M.A. accused the Y.S.A. of artificially increasing prices by debasing the quality of the cotton used to produce each class of yarn. They also complained that the Y.S.A. did not reduce its official raw cotton prices in line with reductions in the market price at Liverpool, and warned that their members were considering using more imported yarn. (34)

Tension in the industry mounted as the Monopolies Commission, having secured the abrogation of a price ring in the calico printing section in 1954, asked the C.S.M.A. for its views on the operation of the Y.S.A. scheme. The C.S.M.A. set up a special sub-committee to consider this issue. Although there was considerable support for the principle of price maintenance, as a safeguard against 'weak selling', serious doubts were expressed about the way in which the Y.S.A. scheme was functioning. It was felt that the Y.S.A. should consult the C.S.M.A. before it fixed margins; that margins should be more flexible during periods of bad trade; that changes should be made in the method of calculating spinners' costs; and that 'official' raw cotton prices should automatically respond to changes in prices on the

Liverpool market.(35) It was resolved that these points should be put to the Y.S.A. at an informal meeting. Little of value came out of these discussions, although the spinners did agree to give the C.S.M.A. a token representation on the Y.S.A.'s Co-ordinating Committee.(36) In July 1958 the C.S.M.A.'s Central Committee concluded that on balance the Y.S.A. exerted a stabilising influence on the trade. But although "the theoretical basis of the scheme purports to yield no more than would provide reasonably efficient spinning firms with adequate funds for machinery replacement and profit...financial results...achieved by most spinning firms - even including some with low machinery activity - appear to be disproportionately high".(37) The C.S.M.A. resolved to provide written evidence showing broad support for the Y.S.A. at the forthcoming Restrictive Practices case. However, it was expected that individual weaving employers would present their views in a less diplomatic fashion. The C.S.M.A.'s reluctance publicly to condemn the Y.S.A. was the result of a genuine belief that, without some sort of price maintenance scheme, 'weak selling' would return to haunt the industry, especially during the depressed market conditions of the mid to late 1950s. Lacking the unity to introduce a countervailing scheme, the C.S.M.A. felt that there was no alternative to tolerating the high-handed attitude of the spinners.

After a lengthy period of uncertainty, the Yarn Spinners Association was brought before the Restrictive

Practices Court in October 1958. The Registrar maintained that the scheme led to high prices, the loss of export markets, and a dangerous misallocation of national resources through the preservation of a large measure of excess capacity in a declining industry. Under the provisions of the Restrictive Trade Practices Act, 1956, it was the responsibility of defendants to prove that their agreement was beneficial to the general public interest. The Y.S.A. contended that their agreement:

(a) Prevented the permanent loss to the industry of labour and productive capacity during recessions. These factors of production would be needed to meet consumers' requirements when trade improved, and would be essential during a 'national emergency'.

(b) Gave firms the confidence to re-equip, thereby leading to the production of cheaper goods of improved quality in the future.

(c) Dissuaded struggling firms from trying to produce yarn of counts ill-suited to their machinery and skills. This phenomenon, known as 'price invasion' would spread overcapacity to other count ranges.

(d) Encouraged spinners to produce yarn for stock in times of poor trade, preventing large price rises during the recovery.

(e) Led to an increase in quality and non-price competition.

(f) Prevented the emergence of a monopolistic or oligopolistic market structure. The spinners argued that

without the Y.S.A. firms would be forced to amalgamate to survive.

(g) Led to stable prices.

(h) Was necessary to prevent a serious and long-term increase in unemployment in certain areas of South Lancashire. (38)

Two economists, G. Prys Williams (British Celanese Ltd.) and D.T. Jacks (University of Newcastle) put the Yarn Spinners' case. They maintained that the spinners' scheme had been instrumental in moderating the effects of recessions. In a horizontally organized industry, such as cotton textiles, there was a tendency for buyers at each stage of production to hold back orders in the expectation of further price reductions, behaviour which served to amplify the effects of any fall in demand. Under these circumstances a fall in price could easily lead to a speculative reduction in demand. However, they argued, the industry now had confidence in the Y.S.A.'s determination not to reduce margins during a slump. Consequently demand was maintained at a higher level than would otherwise have been the case, minimizing the severity of the recession. (39)

A number of spinning masters were produced to proclaim their belief in the system. For example, the Bolton employer, Mr J.G. Barber-Lomax claimed that "if the Yarn Spinners' Agreement is abolished, we will earn a good deal less in profit...and we are doubtful whether expenditure...on new machinery [will be] justifiable". (40) But their evidence was counteracted by

an equally impressive display from angry manufacturers. Mr. Barker, the managing director of a company weaving heavy canvas, claimed to have lost a large Danish order to a German supplier because, although weaving costs had been pared to the bone, the price of yarn had made it impossible for him to quote a competitive price.(41)

S.R. Dennison (Cambridge University) was the main academic witness for the Registrar. He argued that price maintenance schemes enabled inefficient units to survive, forcing all firms in the industry to work at a comparatively low level of capacity utilization. Firms would be reluctant to increase their fixed costs by installing expensive new machinery if there was little opportunity of running it to capacity. Moreover, Dennison claimed that there was little possibility of long-term unemployment resulting from the abrogation of the Yarn Spinners Agreement, as the Lancashire economy was becoming increasingly diversified.(42)

The court awarded against the Y.S.A., maintaining that it offered no substantial benefits to the public. Although the Court ruled that abolition of the scheme would lead to a minor increase in unemployment, this was considered less harmful than the chronic misallocation of resources which would result from its retention.

This decision was not as disastrous for the spinners as they had feared. By 1959 the Yarn Spinners' Agreement was largely irrelevant. The Y.S.A. had provided spinners with no more than a temporary advantage at the expense of weavers' margins. Minimum

price schemes stabilised prices during recessions and helped dissuade producers from an early resort to 'weak selling', but in the long-term they were worthless in the face of the inexorable growth of foreign competition. After 1952 Lancashire's markets increasingly succumbed to cheap Asian wares. The Y.S.A. soon realised that it would be suicidal to maintain the price of British yarn, and between 1952 and 1958 acquiesced in the gradual reduction of yarn prices (see Table 9.1). A survey conducted by J.B. Heath in 1959-60 suggested that 87.5 per cent of textile firms (i.e. not just cotton spinners) believed that the revocation of price maintenance agreements had no effect on prices. The evidence suggests that the Yarn Spinners' Agreement was outdated long before it was abolished.(43)

III

This section examines attempts to establish price maintenance schemes in the cotton weaving, rayon weaving, and printing sections. Comparatively low concentration levels in the weaving section presented particular difficulties. In 1946 the seven largest weaving firms controlled a mere one-tenth of cotton and rayon loomage, while the seven largest spinning combines controlled 38 per cent of the industry's spindleage.(44) The proliferation of small weaving firms made the formulation of a mutually acceptable pricing policy extremely difficult. In this respect conditions in the weaving section mirrored those in spinning during the 1920s, before the creation of the major combines.

The C.S.M.A. exerted considerable energy in the futile search for a workable price maintenance scheme for the cotton weaving section. In 1947 the weavers gave consideration to the formation of a price maintenance scheme (like the Y.S.A.), which they hoped would be allowed to take over the administration of the Board of Trade's Open Quota Licensing System (O.Q.L.S.), which set maximum prices for certain classes of cloth exports. Nothing came of these plans. Members could not agree on an appropriate regime of fines, while the Rayon Weaving Association (R.W.A.) was reluctant to co-operate for fear of becoming a satellite of the C.S.M.A.. Moreover, the Board of Trade insisted that it would only hand over responsibility for the O.Q.L.S. to a body representing all weaving firms. It was impossible for the C.S.M.A. to guarantee such a level of support and plans for the cloth association were shelved. (45)

Following the abolition of non-Utility price controls in 1949, the cotton weavers began to reconsider the possibility of starting a minimum price scheme. A leading employer remarked that "manufacturers could not afford to be pocketed between well-organized sections of trade", i.e. spinning and finishing, both of which operated a price-fixing scheme. Others regarded price maintenance as an essential bulwark against the re-emergence of 'weak selling'. (46) Although the C.S.M.A.'s local committees favoured such a departure, doubts were expressed about the problem of vertically integrated firms. Weaving companies with capacity in

converting and retailing, were in a position to evade any scheme for regulating cloth prices, because it was not possible for the cloth association to fix prices at later stages of production. If the weaving firm and the converter were formally independent, but controlled by the same interests, the minimum price scheme could be evaded by the use of transfer pricing.(47) Nevertheless a questionnaire was sent to member firms to ask their views concerning price regulation. Firms owning 13 per cent of looms in the industry did not reply, while those owning a further 19 per cent of capacity were opposed to any scheme. As a result the proposals were quietly shelved.(48) This issue was revived during the crisis of 1952 and also in the run up to the Monopolies Commission's successful case against the Federation of Calico Printers in 1954, but with similar results.(49)

As fears of increasing foreign competition continued to grip the industry during the mid 1950s, a further ballot of C.S.M.A. members was held. This time only 17 firms said that they were opposed to the formation of a cloth association, and the Central Committee resolved to draw up detailed proposals.(50) In 1956 a scheme for setting minimum prices for cotton cloth was floated, but failed to obtain sufficient support for implementation. It had proved extremely difficult to establish accurate costings for the multiplicity of different cloth constructions produced in Lancashire; the output of the weaving section was considerably more diverse than that of the spinning

section. Some manufacturers claimed that the proposed prices were too high and would make British cloth increasingly uncompetitive, while others argued that the prices would be too low to enable firms to make a reasonable profit. The C.S.M.A. resolved that the prices contained in the proposed scheme should be available for firms to use as costing guidelines.(51) This was the final attempt to establish a minimum price scheme in cotton weaving. The C.S.M.A. had been defeated by the inability of its extremely diverse membership to agree on a common programme, and in the later 1950s the industry turned its attention towards devising schemes for eliminating excess capacity.

By contrast the R.W.A. was able to impose a modest minimum price regime in the rayon weaving section during the 1940s and early 1950s. Far fewer firms were engaged in rayon than in cotton weaving, making it much easier for a widely accepted policy to emerge, although this too broke down during the difficult economic conditions of the 1950s. In 1941 the R.W.A. had secured almost unanimous support for the formation of a Rayon Cloth Agreement (R.C.A.) and a Minimum Margin Price Plan for filament rayon cloth (M.M.M.P.). In 1943 this scheme was extended to cover spun rayon fabrics.(52) One of the original functions of the agreement was to secure an improved bargaining position vis-a-vis the government in relation to official contracts. Although rayon cloth prices were controlled by the state during the war, the Board of Trade's Central Price Regulation Committee used

the R.W.A.'s Minimum Margin Plan as a basis for calculating statutory cloth prices.

At the end of the war the rayon weavers appeared far better prepared to pursue a policy of price regulation than either the cotton spinners or weavers. Yet problems were already on the horizon. Courtaulds and British Celanese, the largest British man-made fibre producers, both possessed rayon weaving capacity, enjoyed membership of the R.W.A., and were parties to the R.C.A.'s price agreements. Under this scheme, and the related Rayon Producers' Agreement, the man-made fibre producers would fulfil an important policing function for the R.W.A. once official price controls were relaxed in 1948-50. Any weaving firm suspected of reneging on the price agreements would be liable to find its yarn supply discontinued. However Courtaulds and British Celanese had not bargained for the creation in 1948 of a Monopolies and Restrictive Practices Commission. They feared that their activities would fall foul of this new legislation and withdrew from the Rayon Cloth Agreement in 1949.(53) Consequently the R.W.A. faced the abolition of statutory price control in a seriously weakened condition, as there were no other provisions for the punishment of recalcitrant firms. Indeed the absence of effective support from Courtaulds and British Celanese hastened the collapse of the R.W.A.'s price maintenance schemes.

Panic set in among the rayon weavers during the 1952 recession. Members of the R.W.A. complained that

Table 9.2.
Rayon cloth prices, 1952-64.

(JUNE 1949 = 100)

Jan. 1952	129.0	Dec. 1958	117.7
June 1952	123.7	June 1959	117.7
Dec. 1952	115.6	Dec. 1959	126.4
June 1953	115.1	June 1960	133.2
Dec. 1953	117.1	Dec. 1960	142.7
June 1954	117.0	June 1961	133.7
Dec. 1954	113.3	Dec. 1961	133.7
June 1955	112.8	June 1962	132.2
Dec. 1955	112.0	Dec. 1962	130.6
June 1956	113.5	June 1963	129.4
Dec. 1956	113.6	Dec. 1963	130.8
June 1957	117.0	June 1964	133.8
Dec. 1957	117.7	Dec. 1964	139.0
June 1958	117.7		

N.B. The index is on the basis of current prices.

Source: F.W. Tattersall's Cotton Trade Review.

they were being undercut by vertically integrated firms, and warned that the system could not survive unless prices were reduced.(54) Eight more firms gave notice of withdrawal from the R.C.A. in the summer of 1952, and an accountant was appointed to produce a report on the future of price maintenance in filament rayon weaving. This report recommended the replacement of the prevailing regime of minimum prices by a price-formula. Each firm would apply the formula to its costs to derive an appropriate minimum price. It was hoped that this would provide greater flexibility. Firms insisted that use of the price formula should not be compulsory. After interminable discussions the price formula, which applied to both automatic and Lancashire loom weaving, came into operation in July 1953.(55) It was clear that a voluntary agreement would have no impact and by early 1954 R.W.A. leaders were warning that "the present situation was dangerously reminiscent of the prewar days".(56) A final attempt was made to devise a minimum price scheme for filament weaving with adequate sanctions during 1954 and 1955, but this failed to achieve widespread support. After 1952 the R.W.A.'s schemes for regulating both filament and spun rayon cloth prices gradually disintegrated, and by 1956 they were little more than lists of recommended prices.(57) Table 9.2 outlines the course of rayon cloth prices during the period from 1952 to 1956, showing that the R.W.A. was unable to prevent a general price reduction. The R.W.A.'s failure to find a stable price maintenance

policy was partly the result of unfavourable economic circumstances, and partly the result of the withdrawal of the man-made fibre producers. In the long run the R.W.A. had achieved little more success than the C.S.M.A., and as the decade progressed it too became primarily concerned with schemes for the elimination of surplus capacity.

A frequent complaint made by the weaving employers was that they were being sandwiched between restrictive price agreements in both the spinning and the finishing sections. The Federation of Calico Printers (F.C.P.), which was dominated by a large combine, the Calico Printers' Association (C.P.A.). During the interwar decades the calico printing section had suffered from the same problems as the rest of the industry. A minimum price scheme had been introduced in 1922, but its collapse in 1931 was followed by an extended period of 'weak selling' and financial chaos.(58)

After World War Two the calico printing industry was determined not to allow these difficulties to return. With the abolition of statutory price controls in 1949 the F.C.P.'s minimum price scheme came into force. This system of price maintenance was supported by a programme for purchasing and scrapping redundant capacity, and a Percentage Quantum (P.Q.) scheme, which allocated a percentage of the domestic market to each company. Firms exceeding their quota paid 20 per cent of their excess turnover into a pool, and producers unable to fulfill their quota received a subsidy from the pool.

In other words, successful firms were penalised for increasing their market share on the grounds that they were contributing to over-production, while unsuccessful firms were guaranteed a reasonable income without having to resort to 'weak selling'. The whole system was overseen by the massive presence of the C.P.A., which was in a position to exert immense damage on smaller firms in a situation of competitive price reductions. (59)

In 1951 the case of the calico printers was referred to the Monopolies Commission. The printers argued that their scheme was necessary to maintain an orderly market and to reduce the risks associated with new processes and designs, but the Commission declared that the agreements were not in the public interest. Its report, published in 1954, stated that although the prices charged by F.C.P. members were no higher than the European average, British calico printing prices were higher than they would have been in the absence of restrictive practices. (60) This led to a storm of protest from the printers themselves, but brought relief to the weaving section, which felt that the F.C.P.'s pricing policy had been far more detrimental to their interests than that operated by the spinners'. (61)

If the weaving section had been able to find sufficient common purpose to implement and enforce effective price management arrangements, it would have had little effect on the overall fortunes of the industry. The range of acceptable prices was established

by the world market, so that any increase in weavers' margins would have been at the expense of the spinners and finishers. In a declining industry, the spinning, weaving, and finishing sections were being pitted against one another in the struggle for survival.

IV

Employers and operatives presented a common front in the campaign for the protection of domestic and colonial markets from imports of foreign, and eventually Commonwealth, cotton goods. Protection was regarded as essential for the industry's survival. Most employers and trade union leaders recognised that Lancashire could never compete with Japan and the other Asian producers in an unregulated market, although a few managed to convince themselves that temporary protective measures could be abandoned once the industry had been 'modernized'. In view of the industry's implicit admission that it was beyond redemption, it is hardly surprising that successive governments expressed only a token interest in the issue of protection. Had a significant degree of protection been offered to Lancashire during the 1950s, the industry's price management schemes would have been more numerous and more effective. What is more, the decline of the cotton industry would have been delayed, hampering the transfer of productive resources into expanding industries. (62)

The spectre of foreign competition had haunted Lancashire throughout the prosperous forties. During World War Two both the U.T.F.W.A. and the Cotton Board

produced reports which argued that the future prospects of the industry depended upon effective action to restrict the exports and prices of low-wage textile producers such as Japan. (63) Despite repeated efforts, the Cotton Board was unable to convince either the British government or the Allied authorities in Tokyo of the need for resolute action to restrict the revival of the Japanese industry. Lancashire approached the return of free world markets in the early 1950s in fear and trepidation. The campaign for protection was about to commence. (64)

In terms of the politics of cotton and protectionism, 1952 was an extremely busy time. Coinciding with the first postwar recession, this year was marked by three significant developments: partial success for the advocates of protected colonial markets, an International Cotton Textile Industry Conference to discuss the future of the world market, and a clear statement by the President of the Board of Trade regarding the government's attitude towards protection.

Since the late 1940s the cotton industry had been pressing the Labour government, with little success, to impose increasingly stringent restrictions on Japanese cloth exports to British West Africa and British East Africa. The Conservative government elected in 1951 was more receptive to these requests, and put pressure on the African governments to make concessions. Sterling's weakness during 1952 necessitated measures to restrict imports; by acting against Japanese cloth exports to

Africa, the government combined financial prudence with a valuable sop to its supporters in Lancashire. In July 1952 the Tanganyikan government suspended Japanese cloth imports for six months. Negotiations between the British cotton industry, Nigeria, and the Gold Coast led to further progress. In 1953 Nigeria agreed to reduce its imports of Japanese cloth by 80 per cent, the Gold Coast resolved to cut the value of its foreign cloth imports by one half, and Kenya and Uganda decided to give priority to increasing cloth imports from Britain. (65) These measures were welcomed in Lancashire, but the cotton industry was outraged when they were abandoned under the provisions of the Anglo-Japanese Trade and Payments of 1954, which increased the colonial allocation of Japanese cloth from £17.5 million per annum to £25 million per annum. (66)

The International Cotton Textile Industry Conference, held at Buxton in September 1952, was largely the result of a personal initiative by Sir Raymond Streat, the chairman of the Cotton Board. Streat believed that the world cotton textile industry was heading for a crisis of over-production, which would result in an intensification of export competition, and ultimately a general revival of protectionism. He invited the leaders of the European, Indian, Japanese, and United States textile industries to Britain to discuss ways of avoiding disaster. All parties accepted that world productive capacity was increasing faster than demand, but could not find any solution to this

problem. The Indian delegation attempted to promote a tri-partite agreement between Britain, Japan, and India, establishing a maximum level of exports for each country, but no-one else was prepared to go that far. Indeed the British delegation appears to have been far more intransigent than the Japanese, insisting on an export allocation of 1350 million sq. yds. per annum, approximately 500 million sq. yds. above actual cloth exports at the time. The policy of the British delegation was primarily directed towards proving to their own supporters that they intended to take a tough line. At the end of the Conference it was resolved that each industry would follow a 'responsible' marketing policy.(67)

After the drama and high hopes of the Buxton Conference, the cotton industry was soon brought down to earth by Peter Thorneycroft, the President of the Board of Trade. In October he told Cotton Board members that the government had no intention of introducing protective measures for the benefit of Lancashire: "No Government can in fact sustain your industry unless you yourselves put yourselves into the best competitive situation...the Government has no feather-bed to offer you and very little shelter in the harsh winds of competition which are blowing through the world to-day."(68) Non-interventionism was the basis of government policy towards Lancashire over the following five years. Britain could not afford to exclude imports from the sterling area for fear of retaliation by India,

Pakistan, and Japan against the engineering industry.

As the decade proceeded the protectionist lobby became increasingly vociferous. Between 1950 and 1960 British exports of cotton and rayon cloth declined by 63 per cent, while imports of cotton and rayon cloth, primarily from India, Hong Kong and Pakistan, increased by 130 per cent.(69). The threat of British domestic and export markets being over-run by Japanese and Commonwealth cloth had been made manifest. Cyril Lord, later to achieve fame as a carpet manufacturer and salesman, was the unofficial champion of the extreme protectionists. He regularly criticized the Cotton Board for being too sheepish and condemned Streat for inviting the 'Japs' to the 1952 Conference. As the hopelessness of his cause became apparent, Lord resorted to increasingly flamboyant gestures of protest, describing Thorneycroft as "the hangman of Lancashire", and sending M.P.s gramophone records of "anguished Lancashire operatives declaiming against the injustice of low-priced imports".(70)

Other spokesmen for the industry adopted a more gentlemanly approach, but this too met with rebuff. When Cotton Board delegates met Thorneycroft in February 1954 to complain about the new trading treaty with Japan, they received a lecture from the Minister on the industry's failure to re-equip and the need to extend arrangements for shift-working.(71) As imports of cloth from India increased, a further joint delegation was despatched to visit the Prime Minister. The delegation

called upon the government to impose tariffs on cotton textile imports from the Commonwealth and introduce quotas on all retained imports of grey cloth. Churchill made no significant concessions and succeeded in overawing the employers. Streat described the scene in his diary: "It was all like a charm. The angry anxious spinners and manufacturers were not any longer angry or anxious."(72)

While the Cotton Board was presenting its petitions to Churchill and Thorneycroft, the U.T.F.W.A. and the Labour Party were working towards an even more radical solution of the import problem. Harold Wilson had been commissioned by the trade unions to prepare a plan for the development of the cotton industry. He recommended the establishment of a state buying agency, which would be the exclusive importer of yarn and cloth. This policy was adopted by the Parliamentary Labour Party and the U.T.F.W.A. in March 1955 and became the cornerstone of Labour's policy for cotton.(73) The unions hoped that the threat of such a scheme would be sufficient to force the Asian producers to accept voluntary quotas. Initially these proposals were ridiculed, both by the government and the employers, while Streat described Wilson's scheme as "totalitarian"(74).

Further approaches were made to the Board of Trade in the spring of 1956. This time the Cotton Board attempted to gain wider publicity by publishing its submission to the President. Unfortunately the central thesis of the Cotton Board's pamphlet was

self-defeating: it warned that even a fully modernized Lancashire cotton industry could never compete with the products of cheap Commonwealth labour. These were strange grounds on which to argue for the retention of a major cotton textile industry in Britain. The pamphlet went on to argue that it would be dangerous to rely on India and Hong Kong for textiles, since India was tending towards a centrally planned economy and might adopt a policy of retaining its cloth production for domestic consumption, while Hong Kong was likely to be invaded by China.(75) These puerile defences of the cotton industry were indicative of the panic-stricken state of Lancashire's leaders during the mid 1950s.

Although the government summarily rejected this initiative, the growing rebelliousness of its traditional supporters in the Lancashire constituencies between 1955 and 1958 forced Conservative leaders to reconsider their posture towards the cotton industry. In 1955 Mr and Mrs Taylor, Tory members of Darwen Corporation, resigned from the Party to protest against government policy; while at the North West regional conference of the Conservative Party in 1956 a resolution calling for import controls was overwhelmingly carried, and the government was warned that unless action was taken the Tories might as well "wrap up" in Lancashire.(76) Councillors defected to the Liberals and there were rumours of a new right-wing party being established to put the views of the cotton interest.(77) The Barnoldswick Conservative Club was emboldened to

write to the Prime Minister withdrawing their support from the government, until such time as its "policy is adjusted to meet the needs of Lancashire in such measure as to guarantee a brighter future for the textile industry. (78)

Even the spinning masters, normally staunch supporters of the Conservative Party, were exhibiting signs of increasing impatience. The F.M.C.S.A. issued a strong rebuke to the Government in its annual report for 1957:

"The Federation... is a non-political organization... [but a] modern Government has the duty to protect the standard of living of its own people by putting some check on imports from countries with unduly low living standards... The cotton industry's case against the present Conservative Government is that it has adopted doctrinaire policies which are endangering the very existence of the cotton industry and which will lead to the destruction of valuable capital investments and to unemployment in Lancashire". (79)

In the same report the Federation declared that it would now be necessary to take the Wilson Plan more seriously, for although it contained many impracticalities, it would form the basis of the next Labour Government's policy and at least offered some hope for the industry. (80)

Lancashire was awash with angry Conservatives whom the government could not afford to ignore in the run up to the 1959 general election. During 1957 the Cotton Board had unsuccessfully attempted to negotiate voluntary quota agreements with the leaders of the Asian cotton industries. The Hong Kong cotton masters were implacably opposed to the limitation of their cloth

exports to Britain, while the Indians and Pakistanis were only willing to come to terms if Hong Kong capitulated. British Ministers had distanced themselves from these talks, believing that intervention would damage their standing in the Commonwealth. Consequently stalemate ensued. However, as Lancashire Tories became increasingly irate during the winter of 1957-8, the position of the British government changed. In March 1958 Sir Frank Lee, the Permanent Secretary to the Board of Trade, was despatched to Hong Kong to apply pressure to the colony's textile producers.(81) Negotiations were reopened with India and Pakistan during the summer and agreement was reached in December 1958.

Lancashire had mixed feelings about the terms of the final settlement. Lord Rochdale, chairman of the Cotton Board, described the voluntary ceilings on cloth imports as "substantially higher than any of us had ever contemplated".(82) This was a considerable understatement. Moreover Commonwealth cloth was still imported duty free, and no restriction was applied to imports of yarn or made-up goods. Lancashire resumed its campaign for protection as soon as it became clear that these measures would be inadequate. The continuing increase in imports dissuaded many firms from taking advantage of the re-equipment subsidies offered under the 1959 Cotton Industry Act. Indeed the F.M.C.S.A. argued that re-equipment grants would not have been necessary "if the Government had been prepared to take the responsibility for fixing a definite ceiling on

imports".(83) During the early sixties the existing voluntary agreements were supplemented by a series of official bilateral arrangements, limiting cotton cloth imports from Malaya, Japan, Taiwan, Spain, China, and the Comecon countries. These arrangements were easily evaded: overseas producers could substitute exports of garments for cloth, or send cloth to a third country for re-export to Britain.(84)

In 1963 George Brown promised that Labour would set up an Imports Commission to supervise, and if necessary, regulate imports of cheap cotton textiles, but this commitment was soon forgotten when Labour was returned to power.(85) The cotton industry was no more satisfied with the Labour government than it had been with the previous Conservative administrations. A Courtaulds spokesman criticised the retention of tariff-free imports from the Commonwealth: "We have the ridiculous state of affairs whereby the U.K. cotton industry is the only industry in any developed country of the world to have zero protection against a major supplier".(86) Under the provisions of the G.A.T.T. Long Term Arrangement on cotton textiles, in 1966 the Government introduced a system of global quotas for all Third World imports of cotton yarn, cloth, and made-up goods, but this did little either to reduce imports or to placate Lancashire. Labour was attacked at the 1967 T.U.C. Conference by the leader of the Amalgamated Weavers for following a policy of 'laissez faire' towards the industry.(87) As the decade drew to a close the Textile

Council produced a report advocating the replacement of quotas by tariff protection, but by that time there was hardly any cotton industry left to defend. (88)

Lancashire clearly failed to persuade successive Tory and Labour governments the cotton industry an effective level of protection. Although this left many industrialists and trade union leaders intensely bitter, it was immensely to the credit of the Ministers, who showed great skill in concluding quota agreements which had little impact on the level of imports.

V

Between 1950 and 1965 Lancashire's leaders conducted a belligerent defence of their industry. Initially the employers attempted to hold prices at profitable levels by the implementation of price maintenance agreements. But price management schemes have never been an effective barrier against foreign competition, and it soon became clear that import controls would be necessary to protect those with vested interests in the industry. Although both sides of the industry collaborated in a vigorous campaign for protection, they were unable to elicit more than a token response from the government. The state was singularly unimpressed by proposals for import controls during a period of low unemployment. Price-fixing and protectionism were always forlorn hopes, and the fact that Lancashire was prepared to advance them as serious policies was indicative of the industry's despair.

Notes to Chapter 9.

(1) G.C. Allen, Monopoly and Restrictive Practices (London: George Allen and Unwin, 1968); C. Brock, The Control of Restrictive Practices from 1956 (London: McGraw-Hill, 1966); P.H. Guenault and J.M. Jackson, The Control of Monopoly in the United Kingdom (London: Longman, 1960); F. Livesey, 'The Restrictive Trade Practices Act, 1956: A Review of Certain Judgments', Scottish Journal of Political Economy, 7 (1960), pp. 147-62; C.K. Rowley, The British Monopolies Commission (George Allen and Unwin: London, 1966); R.B. Stevens and B.S. Yamey, The Restrictive Practices Court: A Study of the Judicial Process and Economic Policy (London: Weidenfeld and Nicolson, 1965); A. Sutherland, 'Economics in the Restrictive Practices Court', O.E.P., 17 (1965), pp. 385-431.

(2) If firms are covering average variable costs they will be able to make at least some contribution to the payment of fixed costs. A firm which closed would still have to pay fixed costs in the short run.

(3) G. B. Richardson, 'The Theory of Restrictive Practices', O.E.P., 17 (1965), p. 440; P. Lesley Cook, 'Effects of the Restrictive Trade Practices Act: Analysis of the Effects of Ending Price Agreements', O.E.P., 17 (1965), pp. 450-60.

(4) C.K. Rowley, The British Monopolies Commission, pp. 109-48.

(5) D.A. Hay and D.J. Morris, Industrial Economics: Theory and Practice (Oxford: Oxford University Press,

1979), pp. 173-5.

(6) M.W. Kirby, 'The Control of Competition in the British Coal-Mining Industry in the Thirties', Ec.H.R., XXVI (1973), pp. 273-84; A.F. Lucas, Industrial Reconstruction and the Control of Competition: The British Experience (London: Longmans, Green and Co., 1937), pp. 261-91.

(7) R. Robson, The Cotton Industry in Britain (London: Macmillan, 1957), pp. 221-2.

(8) J.M. Keynes, The Collected Writings of John Maynard Keynes, Vol. XIX, Pt. II, Activities, 1922-1929: The Return to Gold and Industrial Policy (London: Methuen, 1981), pp. 585-6.

(9) Ibid, pp. 602-3, 613-4.

(10) An abortive scheme for the American (i.e. coarse spinning) section, which would have included the establishment of legally binding minimum prices, was discussed in 1930-1. but insufficient support was forthcoming to justify the implementation of these proposals. L.R.O., Barber-Lomax Collection, F.M.C.S.A., 'American Spinners' Convention: The Proposed Cotton Spinners' Scheme, 1931' (1930).

(11) Robson, Cotton Industry, pp. 223-4.

(12) L.R.O., Barber-Lomax Collection, J.C.C.T.O., 'Lancashire's Remedy: Proposals for Improving the Position of the Cotton Industry' (1937), pp. 6-7.

(13) L.R.O., Barber-Lomax Collection, J.C.C.T.O., 'Cotton Industry Enabling Bill: Scope and Effect of Revised Proposals' (1938).

- (14) L.R.O., 'Lancashire's Remedy', pp. 15-6.
- (15) L.R.O., Barber-Lomax Collection, J.C.C.T.O., 'Cotton Industry (Re-organisation) Bill: A Plain Statement for Voters' (1939).
- (16) G.D.N. Worswick, 'British Raw Material Controls', O.E.P., 6 (1954), pp. 11-22.
- (17) Manchester Guardian, A Manchester Guardian Survey: The Government and the Cotton Trade (Manchester: Manchester Guardian, 1949), p. 15.
- (18) At the same time the restrictions on Utility goods prices were relaxed, and the scheme itself was abolished in 1952. Board of Trade Journal, 156 (1949), 23 Apr. 1949, p. 828; 30 Apr. 1949, p. 880.
- (19) J. Wiseman and B.S. Yamey, 'The Raw Cotton Commission, 1948-52', O.E.P., VIII (1956), p. 1.
- (20) Cotton Board, Report of the Cotton Board Committee to Enquire into Post-War Problems (Manchester: Cotton Board, 1944), pp. 18-20.
- (21) P.R.O., BT175/3, Cotton Board Minutes, 112th meeting, 25 Apr. 1944; 113rd meeting, 9 May 1944; Street Diaries, XI (1944-5), 8 Feb. 1944; also see above, Ch. 2, p. 48.
- (22) G.C. Allen, 'The Report of the Working Party on the Cotton Industry', Manchester School, XIV (1946), p. 60.
- (23) P.R.O., BT175/5, Cotton Board Minutes, 4th meeting, 1 June 1948; 5th meeting, 15 June 1948.
- (24) Manchester Guardian, Cotton Trade, pp. 5-10.
- (25) A. Sutherland, 'The Restrictive Practices

Court and Cotton Spinning', J.I.E., VIII (1959), p. 61.

(26) G.M.R.O., R.W.A., Full Committee Minutes, 27 Feb. 1953.

(27) L.R.O., F.M.C.S.A., Annual Report, 1948, pp. 21-2.

(28) Office of Fair Trading, Restrictive Practices Court: Transcript of Yarn Spinners' Agreement Case, 1958 (hereafter Yarn Spinners' Case), Vol. I, First Day, p. 26.

(29) Firms were not asked to make returns regarding interest and depreciation costs on fixed capital, as it was felt that these estimates would be unreliable. Instead, hypothetical interest and depreciation charges were calculated for 'representative mills' in each section, to give a capital cost of x old pence per lb. for each class of yarn. Buildings were depreciated at 0.946 per cent per annum over 40 years to leave a residual value of 20 per cent; machinery was depreciated at 3.26 per cent per annum over 20 years to leave a residual value of 8 per cent; interest was assumed to be charged at 3.5 per cent per annum. Ibid, pp. 40-2.

(30) Ibid, pp. 15-32.

(31) H.A. Turner and R. Smith, 'The Slump in the Cotton Industry, 1952', Bulletin of the Oxford University Institute of Statistics, 15 (1953), pp. 106, 124. Other aspects of the 1952 slump are discussed above, Ch. 6, pp. 236-9.

(32) Weaving margins were particularly difficult to estimate, see: D.C. Shaw, 'Prices and Margins in the

Cotton Industry', Transactions of the Manchester Statistical Society: Statistical Methods and Industrial Groups (1951-2), pp. 11-3.

(33) Turner and Smith, 'Slump', p. 121.

(34) G.M.R.O., C.S.M.A., Central Committee Minutes, 18 Nov. 1955, 9 Dec. 1955.

(35) G.M.R.O., C.S.M.A., Central Committee Minutes, 12 Dec. 1955.

(36) G.M.R.O., C.S.M.A., Minutes of Special Sub-committee on Y.S.A., 20 Aug. 1957; 10 Sep. 1957.

(37) G.M.R.O., C.S.M.A., Central Committee Minutes, 4 July 1958.

(38) All England Law Reports (1959), Vol. I, Restrictive Practices Court, pp. 299-300; Sutherland, Cotton Spinning, pp. 63-6. For further discussions of this case see: Livesey, 'Review of Certain Judgments', pp. 148-52; Brock, The Control of Restrictive Practices; Stevens and Yamey, The Restrictive Practices Court.

(39) Yarn Spinners' Case, Vol. I, Fourth Day, pp 4, 11; Seventh Day, pp. 3-5. The argument that the horizontal structure of cotton textiles tended to amplify the effects of a recession is discussed in H.A. Turner, 'Unemployment in Textiles: A Note and some Conclusions', Bulletin of the Oxford University Institute of Statistics, 15 (1953), , pp. 295-306.

(40) Yarn Spinners' Case, Vol. II, Thirteenth Day, p. 52.

(41) Ibid, Vol III, Sixteenth Day, pp. 19-20.

(42) Ibid, Vol III, Nineteenth Day, pp. 19-47;

Twentieth Day, pp. 26-7.

(43) J.B. Heath, 'Restrictive Practices and After', Manchester School, 29 (1961), p. 180. Although the Y.S.A. case was not crucial to the cotton industry, it represented a clear statement of the Court's intentions towards other industries, and was followed by a general moderation and abandonment of restrictive practices, see: D.P. O'Brien, W.S. Howe, D.M. Wright, R.J. O'Brien, Competition Policy, Profitability, and Growth (London: Macmillan, 1979), pp. 22-3.

(44) Cotton Board, Modernisation in the Cotton Spinning Industry (Manchester: Cotton Board, 1947), p. 11; Cotton Board, Survey of the Machinery in the Weaving Section of the Cotton Industry (Manchester: Cotton Board, 1949), p. 8.

(45) G.M.R.O., C.S.M.A., Central Committee Minutes, 10 June 1947; Chairmens' Committee Minutes, 27 June 1946; Central Committee Minutes, 4 July 1947.

(46) G.M.R.O., Chairmens' Committee Minutes, 3 May 1949.

(47) G.M.R.O., C.S.M.A., Central Committee Minutes, 27 May 1949. The problems of vertical integration and transfer pricing had also been raised by the opponents of the 1939 Cotton Industry Enabling Bill: L.R.O., Barber-Lomax Collection, M. Dyckhoff, 'The Cotton Industry Enabling Bill: My Reply to Mr. Hughes' (1939).

(48) G.M.R.O., C.S.M.A., Central Committee Minutes, 7 Oct. 1949.

(49) G.M.R.O., C.S.M.A., Central Committee Minutes,

5 Mar. 1952; Special Sub-committee on Price Management, 4 May 1954.

(50) It should be added over a third of firms gave no opinion. G.M.R.O., C.S.M.A., Central Committee Minutes, 16 Nov. 1954, 25 Feb. 1955.

(51) G.M.R.O., C.S.M.A., Central Committee Minutes, 3 Apr. 1956, 4 May 1956, 1 June 1956, 3 Aug. 1956.

(52) Filament rayon was supplied to the weaver by the man-made fibre producers. Staple rayon yarn was spun in the cotton industry before being supplied to the weavers. The agreements did not apply to rayon woven on automatic looms. G.M.R.O., R.W.A., Full Committee Minutes, 24 Mar. 1941, 11 Aug. 1941, 8 Feb. 1943.

(53) G.M.R.O., R.W.A., Full Committee Minutes, 8 Nov. 1948, 10 Oct. 1949, 14 Nov. 1949.

(54) G.M.R.O., R.W.A., Full Committee Minutes, 22 Apr. 1952.

(55) There were also discussions on revising the spun rayon cloth scheme, which came to fruition in an extremely attenuated form in 1956. G.M.R.O., R.W.A., Full Committee Minutes, 16 May 1952, 27 Feb. 1953; Executive Committee Minutes, 12 May 1953, 23 June 1953.

(56) G.M.R.O., R.W.A., Executive Committee Minutes, 10 Feb. 1954.

(57) G.M.R.O., R.W.A., Executive Committee Minutes, 17 Dec. 1954, 1 July 1955.

(58) In 1950 the C.P.A. accounted for approximately half of the calico printing conducted in the U.K.. For overviews of the calico printing industry and the operations of the C.P.A. see: Calico Printers'

Association, Fifty Years of Calico Printing (Manchester: Calico Printers Association, 1949); A.F. Ewing, Planning and Policies in the Textile Finishing Industry (Bradford: Bradford University Press, 1972), pp. 40-60; G. Turnbull, A History of the Calico Printing Industry of Great Britain (Altrincham, 1951), esp. Chs. 9-10.

(59) Monopolies Commission, The Calico Printing Industry (London: H.M.S.O., 1954), pp. 27-37.

(60) Ibid, pp. 65-75; The calico printing case is also discussed in: Rowley, The British Monopolies Commission, pp. 114, 123-9, 163-5, 179-80, 272-3, 349-53; C.R. Hargreaves, Some Comments on the Calico Printing Industry and its Relationship to the Cotton and Rayon Textile Industries with Special Reference to the Report by the Monopolies Commission on the Process of Calico Printing (Manchester: Calico Printers Association, 1954).

(61) During the depths of the recession, in February 1952, the printers had increased their prices by 12 per cent, forcing weavers to reduce their margins to preserve their trade. Moreover the calico printers had refused to co-operate with the weavers in a scheme for supplying cloth to West Africa in 1951 at a specially reduced price. G.M.R.O., C.S.M.A., Special Sub-committee on Price Management, 4 May 1954.

(62) For a detailed analysis of the industry's decline between 1950 see above, Ch. 6, pp. 224-81.

(63) U.T.F.W.A., Report of the Legislative Council on Ways and Means of Improving the Economic Stability of

the Cotton Textile Industry (Rochdale: U.T.F.W.A, 1943), p. 95; Cotton Board, Post-War Problems, p. 25.

(64) These talks are described above, Ch. 2, pp. 73-5.

(65) P.R.O., BT175/7, Cotton Board Minutes, 98th meeting, 8 July 1952, 99th meeting; 22 July, 1952, 101st meeting, 19 Aug. 1952; 103rd meeting, 30 Sep. 1952; 118th meeting, 12 May 1953; 124th meeting, 4 Aug. 1953.

(66) The colonies would also receive a further £3 million of Japanese cloth which had been finished in the U.K.. G.M.R.O., C.S.M.A., Central Committee Minutes, 12 Feb. 1954.

(67) J. Broatch, 'Report on the International Cotton Textile Industry Conference', C.B.C. (Oct. 1952); G.M.R.O., C.S.M.A., Central Committee Minutes, 14 Oct. 1952; Streat Diaries, XIV (1951-3), 15 Sep. 1952; 25 Sep. 1952.

(68) P. Thorneycroft, 'An Opening Address', C.B.C. (Oct. 1952), pp. 8-9, 11.

(69) Retained imports of Japanese cloth were not a serious problem, except in the case of the colonies, as they continued to be the subject of postwar controls. See above, Ch 6, Tables 6.2, 6.3, pp. 227-8.

(70) Streat Diaries, XIV, 4 Sep. 1952; XV (1954-5), 28 Oct. 1955; XVII (1957), 8 Feb. 1957.

(71) P.R.O., BT175/7, Cotton Board Minutes, 138th meeting, 16 Feb 1954.

(72) Streat Diaries, XV, 24 Mar. 1955; G.M.R.O., C.S.M.A., Central Committee Minutes, 1 Apr. 1955; 10 May

1955.

(73) U.T.F.W.A., Plan for Cotton (Ashton: U.T.F.W.A., 1957), pp. 31-5.

(74) Street Diaries, XV, 31 Oct. 1955.

(75) Cotton Board, The Cotton Industry and the Consequences of Unlimited Imports: The Case for Protective Action by the Government (Manchester: Cotton Board, 1956).

(76) The Times, 18 Oct. 1955; 16 Apr. 1956.

(77) The Times, 24 Sep. 1957, p. 2, col. a.

(78) The Times, 3 June 1958, p. 7, col. 4.

(79) L.R.O., F.M.C.S.A., Annual Report, 1957, pp. 11-2.

(80) Ibid, p. 21.

(81) Lord Rochdale, 'An Opening Address', C.B.C. (Oct. 1958), pp. 5-14.

(82) The voluntary ceilings were as follows (actual exports to Britain in 1958 are in brackets): Hong Kong, 164 million sq. yds. (119 million sq. yds.); India, 175 million sq. yds. (128 million sq. yds.); Pakistan, 38 million sq. yds. (2 million sq. yds.) Lord Rochdale, 'An Opening Address', C.B.C. (Oct. 1959), pp. 5-6; C.B.Q.S.R.

(83) L.R.O., F.M.C.S.A., Annual Report, 1960, p. 131.

(84) G.A.T.T., A Study on Cotton Textiles (Geneva: G.A.T.T., 1966), p. 83.

(85) An Imports Commission was established in 1968, but this made no pretence at regulation. Economist, 27

July 1963, p. 340; T.U.C., Report of Proceedings at the 99th Trades Union Congress (London: T.U.C., 1967), p. 555.

(86) A.M. Alfred, U.K. Textiles: A Growth Industry (Manchester: Manchester Statistical Society, 1965), p. 8.

(87) T.U.C., Proceedings of 99th Conference, p. 556.

(88) C. Miles, 'Protection of the British Textile Industry', in W.M. Corden and G. Fels (eds.), Public Assistance to Industry: Protection and Subsidies in Britain and Germany (London: Macmillan, 1976), p. 194.

Chapter 10.

CONCENTRATION IN THE COTTON INDUSTRY, 1950-70.

"I saved Viyella by my efforts and the textile industry by my example".(1)

Joe Hyman, Apr. 1966.

"It's just not possible to run a market-orientated company from Wigan".(2)

Joe Hyman, Oct. 1966.

During the nineteenth and early twentieth centuries the Lancashire cotton industry exhibited a highly atomistic industrial structure. A myriad of small firms were engaged in each section of the industry. The processes of spinning, doubling, weaving, finishing, converting, and merchandising were usually carried on by separate firms. Relatively few companies possessed productive capacity at more than one stage of the production process. Concentration levels gradually increased during the twentieth century, but rapid centralization had to await the 1960s, when the man-made fibre producers intervened in Lancashire to secure the market for their products.

This chapter examines the movement towards greater concentration and vertical integration in the postwar cotton industry. Section I considers the reasons for growing concentration and vertical integration in the economy as a whole, providing a conceptual framework for the rest of the chapter. Section II analyzes trends in concentration levels in the cotton industry before the late 1950s. Section III examines the merger boom of the

1960s, a development which was particularly pronounced in the textile industry.

I

Rising levels of concentration are far easier to describe than they are to explain. In the U.K. the share of the largest 100 firms in manufacturing net output increased from 15 per cent in 1907, to 23 per cent in 1939, and 41 per cent in 1978.(3) This section has three objectives: firstly, to set out a theory of increasing industrial concentration; secondly, to examine the empirical evidence on concentration in the U.K. economy; and thirdly, to provide a theoretical perspective for the analysis of vertical integration. It should always be borne in mind that an increase in concentration need not imply a reduction in the number of firms in the industry. The concentration level will also rise where the relative size of the largest companies increases within a constant population of firms.

Conventional static micro-economic theory has comparatively little to say about industrial concentration. As in the analysis of industrial decline, it is necessary to return to the early chapters of The Wealth of Nations for guidance.(4) Adam Smith enunciated the principle that specialization is a function of the extent of the market. The division of labour in the factory proceeds as sales increase. Mechanization becomes technically feasible once the production process has been split into a number of relatively simple tasks. There must be a further growth in the market before the

machinery is installed, as it is beneficial to spread large fixed capital costs over a large output. Where successive stages of the production process are mechanized, the overall size of the firm must increase. But the management in a relatively new industry may not be able to cope with a revolution in the scale of the firm's activities. There will be variations in the lowest level of output associated with minimum costs at each stage of the manufacturing process. Given these managerial constraints, firms will specialize either in a single process or a narrow product range.(5) As specialization proceeds, the technical and commercial skills required by managers at different stages in the production process will diverge. The work of Allyn Young and Nicholas Kaldor is consistent with the view that specialization will be greatest in industries enjoying an extensive demand.(6) One would expect an industry exhibiting a high degree of specialization to be characterised by a large number of firms, each of which, although possibly of a considerable absolute size, is small in relation to the total market.

Rising levels of concentration can be regarded as symptoms of decay. A reduction in the rate of increase in demand restrains further specialization. Firms find themselves unable to work to full capacity. The forces working for stagnation have a cumulative effect: a lower rate of growth in demand results in a reduction in the rate of advance in productivity.(7) In an expanding industry firms did not have to worry about getting

enough orders, but now they are inclined to combine into larger groups, to reduce uncertainty, eliminate excess capacity, maintain prices, and secure a steadier level of work. In an open economy, such as the United Kingdom, rising levels of concentration reflect a defensive response to deteriorating market conditions.

Recent years have seen the publication of a number of important empirical studies dealing with changes in concentration in the British economy. Several interpretations of rising concentration levels have been put forward. These are discussed in a useful survey article by Curry and George, which concludes that concentration has risen fastest in industries exhibiting stagnant or slowly growing demand and low initial levels of concentration; the potential for economies of scale among larger firms was of secondary importance.(8) During the mid twentieth century Lancashire's cotton industry was marked by falling demand, while it had inherited a low initial level of concentration.

S.J. Prais emphasizes financial factors and 'spontaneous growth' in his analysis of the growth of large firms in Britain.(9) Since the mid 1950s financial institutions (i.e. insurance companies, unit trusts, investment companies, and pension funds) have dramatically increased their ownership and control of manufacturing industry. These institutions have been anxious to avoid unnecessary risk, and therefore have largely eschewed involvement with small firms, unless to promote their amalgamation into larger and more

diversified groups. Although Prais makes no mention of it, the role of banks and other financial institutions in increasing the centralization (i.e. concentration) of capital, constitutes a crucial element in the Marxian analysis of the growth of monopoly capitalism.(10)

However Prais maintains that 'spontaneous drift' was the major factor behind the increase in concentration in U.K. manufacturing during the twentieth century. Gibrat's Law introduces a stochastic element into the process of rising concentration. This is a purely statistical phenomenon with no basis in formal economic theory, although it may help to elucidate the process of rising concentration. Consider an industry in which there are no mergers, and all firms are of the same initial size. In any given year, x per cent of firms (chosen at random) grow by r per cent, y per cent of firms (chosen at random) decline in size by s per cent, while z per cent of firms (chosen at random) remain constant in size. Over a number of years it will be discovered that a few lucky firms avoid periods of contraction, and increase their share of the industry's output - hence concentration increases as a result of 'spontaneous drift'.(11)

Hannah and Kay argue that the version of 'spontaneous drift' employed by Prais exaggerates the Gibrat effect: "A more plausibly constrained model of the Gibrat process indicates that...it cannot by itself account for more than a fifth of the concentration increase which has actually occurred".(12) By judiciously

varying r , s , x , y , and z , it is possible to manipulate the model to give a wide variety of outcomes. In place of the Gibrat effect, Hannah and Kay advance the more conventional view that mergers were the primary cause of increasing concentration in the U.K. economy. Indeed for the period from 1957 to 1969, which is particularly relevant to our study of the cotton industry, this interpretation is difficult to challenge. Even Aaronovitch and Sawyer, whose conclusions are more cautious than those of Hannah and Kay, estimate that mergers accounted for 54 per cent of the growth in concentration of the top 100 firms between 1958 and 1967. (13)

Mergers in the British manufacturing sector reached a peak in the late 1960s. Several hypotheses have been advanced to explain the merger movement. Mergers could be regarded as aggressive acts, designed to increase firms' power to exploit the consumer and achieve supernormal profits. But the evidence does not appear to bear out this interpretation. Authors such as Singh and Meeks, who have conducted detailed studies of merging firms, have concluded that amalgamation typically resulted in a decline in profitability. (14) This could be due to managers pursuing a growth maximizing rather than a profit maximizing policy (the salaries and prestige of managers are mainly functions of size), or to the failure of management to develop new structures to cope with running a much larger firm. It could also reflect the possibility that mergers may constitute a

defensive reaction to a deteriorating market environment rather than an attempt to increase firms' stranglehold over an expanding market. Hart , Utton, and Walshe suggest that, in contracting sectors, such as the flax industry, mergers have taken place for primarily defensive purposes: to reduce cut-throat competition and secure the elimination of surplus capacity.(15) Of course the managerial and defensive explanations of merger are not mutually exclusive; indeed the Courtaulds' experience provides a degree of support for both.(16)

Although the evidence is by no means unambiguous, it is possible to come to some tentative conclusions about the causes of rising concentration in mid twentieth century Britain. Mergers appear to have contributed more than internal growth to increasing concentration. As mergers did not lead to improvements in profitability, it is reasonable to assume that many were of a defensive nature. This interpretation is consistent with the theoretical discussion earlier in this section.

Rising concentration levels have been accompanied by increasing vertical integration. This trend was particularly pronounced in cotton during the 1960s, when the man-made fibre producers secured the formation of a number of large multi-process textile groups. Vertical integration has received less attention than industrial concentration from economists and historians. Nevertheless economic theory can shed some light on the

likely advantages of uniting several stages of the production process under the control of a single firm.

R.H. Coase introduced the analysis of transaction costs to the literature during the 1930s.(17) Firms specializing at a particular stage in the production process incur costs when they trade with firms at other stages in the chain of production. It may be costly to obtain accurate information about the state of markets. Contracts may be expensive to negotiate and enforce, and could be rendered inappropriate by unexpected changes in prices. Moreover, one of the parties to the arrangement may use superior information to conclude a deal which is unfair. Firms will choose vertical integration if transaction costs exceed the costs of organizing successive processes within a single firm. Oliver Williamson has extended the Coasian analysis to suggest that transaction costs are likely to be greater in oligopolistic markets, which are characterised by high levels of uncertainty, and therefore offer more opportunities for foul play and bad decision making.(18)

Coasian theory implies that rational employers will combine and divide their operations in accordance with fluctuations in the ratio of transaction costs to the costs of internal organization. But Lazonick argues that such behaviour would be undesirable. Successful firms must follow consistent policies and not react to every transitory change in transaction costs.(19) A further criticism of this type of theory is that it presents a static model, and says little about the causes or

direction of long-term trends in the ratio of transaction costs to the costs of internal organization. G.J. Stigler has provided an interpretation of the dynamics of vertical integration which has many parallels with our previous analysis of industrial concentration. There will be a steady increase in the extent of specialization by process in expanding industries, but "when the industry begins to decline...subsidiary, auxiliary, and complementary industries begin also to decline, and eventually the surviving firms must begin to reappropriate functions which are no longer carried on at a sufficient rate to support independent firms".(20) Similarly, as demand slackens in a declining industry, uncertainty and ungentlemanly behaviour will increase in the markets for intermediate products, impelling firms to adopt a strategy of vertical integration in the hope that this will reduce risk.

The foregoing analysis suggests the forces working for vertical integration and increasing industrial concentration have much in common. Indeed both of these phenomena are symptoms of industrial decline. Horizontal and vertical mergers are stimulated by a reduction in demand. They are defensive responses to the increasing uncertainty and rising transaction costs which prevail in an industry with chronic excess capacity. In fact the links may be even closer. Horizontal amalgamations at each stage of the production process will make intermediate product markets increasingly oligopolistic

and risky; this in turn will act as an incentive for firms to proceed with mergers along vertical lines. Having established a framework for the analysis of industrial concentration, we can proceed to the consideration of concentration in the cotton industry itself.

II

Until the man-made fibre producers became involved in the promotion of mergers and take-overs during the 1960s, the Lancashire cotton industry was characterised by a plethora of small firms. This section traces the emergence of the cotton industry's distinctively atomistic structure in the nineteenth century and analyzes the forces responsible for the gradual increase in concentration levels during the twentieth century.

Taken as a whole, the nineteenth century was a period of increasing specialization in the British cotton industry. The capacity of the average spinning firm in Lancashire increased from 8161 spindles in 1811 to 11,818 spindles in 1850 and 38,618 spindles in 1890. Although this rate of increase is superficially suggestive of rising concentration, it is instructive to note that in 1890 the average cotton spinning company employed a mere 155 workers.(21) In fact there was probably a reduction in concentration in spinning during the nineteenth century: total spindleage increased from 7.0 million in 1819-20 to 44.5 million in 1890, a faster rate of growth than that in the spindleage of the average firm.(22)

The growth in the size of the average firm was slower during the period from 1811 to 1850 than in the following period. Gatrell indicates that between 1825 and 1850 firm size was limited by managerial constraints.(23) After 1850 the development of the joint stock company, and in particular the famous 'Oldham Limiteds', reduced these managerial and financial limitations on the growth of the firm.(24) A further distinction can be made between the pre-1850 and post-1850 eras: the vertical integration of spinning and weaving increased until mid-century and thereafter declined. Between 1819 and 1850 over 75 per cent of the increase in the industry's spinning and weaving capacity can be attributed to vertically integrated firms. But this trend was soon reversed and the number of combined firms fell from 698 in 1860 to 597 in 1878. C.H. Lee argues that spinning firms invested in powerlooms as a defensive reaction to declining rates of profit. In years of good trade firms built extensions to their mills in anticipation of further increases in demand. They intended to await the achievement of full-capacity working in their old buildings before equipping the extensions with mules. However, when trade slackened, the existence of empty buildings led to a substantial increase in average fixed costs. Firms would then install powerlooms (which were relatively cheap) in the extensions, permitting fixed costs to be spread over a larger output.(25) Changes in the popularity of vertical integration seemed to follow changes in the demand for

yarn. Total yarn sales grew at 3.0 per cent per annum between 1827 and 1849, compared with 5.6 per cent per annum between 1850 and 1874.(26) The significant improvement in demand conditions after 1850 could have reduced the proportion of years in which there were surplus buildings in the spinning section, thereby removing the need for spinners to install powerlooms. Indeed one would expect an increase in the rate of growth of demand to result in greater specialization and vertical disintegration.

In the later nineteenth century the rate of growth of demand for Lancashire's products commenced its secular and ultimately irreversible decline. U.K. imports of raw cotton increased by 132 per cent in volume between 1859-61 and 1879-81, while between 1879-81 and 1899-1901 raw cotton imports rose by 109 per cent.(27) Although this was a period of relative rather than absolute decline, it was marked by a very significant departure, namely the emergence of several large spinning and finishing combines. In 1898 over 60 spinning companies united to form the Fine Cotton Spinners and Doublers Association Ltd. The next year 32 English and 14 Scottish companies, comprising 85 per cent of the British calico printing industry, united in the Calico Printers Association (C.P.A.). Both amalgamations followed periods in which firms had been scrambling for a share of dwindling markets. Initially the Fine Spinners and C.P.A. were remarkably loose organizations, in which the constituent firms retained a

substantial degree of independence. In essence they were more like highly formalised cartels than typical modern corporations. However, after 1900 power within the C.P.A. became increasingly centralized and 20 surplus printing works were closed before World War One. (28)

Immediately following World War One the cotton industry was the subject of a brief period of wild financial speculation. The Amalgamated Cotton Mills Trust, one of the largest weaving companies, arrived on the scene in 1919; another important weaving concern, Joshua Hoyle and Sons, came to prominence at this time through the acquisition of six smaller firms; while the medium-sized spinning combine of Crosses and Heatons was formed in 1920. (29)

Falling demand and chronic excess capacity resulted in increased risk and severe financial pressure for firms in the interwar cotton industry. (30) Under these conditions one would expect to observe activity directed towards securing greater horizontal and vertical integration. Such behaviour would be of an explicitly defensive nature, having as its objective the reduction of uncertainty. Records of the interwar decades contain some prominent examples of defensively inspired mergers, but, as shall be seen, the large firm remained the exception rather than the rule throughout this period.

In the late 1920s amalgamations led to the formation of the Lancashire Cotton Corporation (L.C.C.) in the coarse spinning section, and the Combined Egyptian Mills (C.E.M.) in the fine spinning section.

The L.C.C. came into being after pressure from the Bankers Industrial Development Corporation, a creature of the Bank of England and ultimately of the government. Most of the 96 firms (10 million spindles) constituting the L.C.C. owed large sums to the banks and were forced into the amalgamation against their will. (31) C.E.M. was a smaller combine (15 firms) resulting from a private initiative, although this could well have been inspired by the events in the coarse spinning section. (32) These combines pursued programmes of scrapping surplus capacity. Like the C.P.A. in the late 1890s, they were primarily defensive organizations aiming at the management of uncertainty by eradicating competition between constituent firms. Only one major amalgamation took place in the weaving section between 1920 and 1939: in 1929 the highly specialized Quilt Manufacturers Ltd was formed, but this was a much smaller concern than any of the large spinning combines.

In fact it is essential to avoid exaggerating the effect of well-publicised spinning and weaving amalgamations on the structure of the cotton industry. Leak and Maizels have shown that in 1935 there were 33 trades in which the largest three firms employed at least 70 per cent of the total workforce. But the three major cotton spinning and doubling firms in 1935 employed only 22 per cent of the spinning workforce, while the three largest cotton weaving firms employed a mere 4 per cent of the total labour force in that section. (33)

The 1930s generated an increasing volume of talk about structural change in cotton, but this did not lead to a substantial degree of action. In 1930 the Economic Advisory Council's report on cotton advocated the development of larger firms, and stronger vertical links, especially between the merchanting section and the spinners and weavers.(34) Hundreds of small merchants with limited financial resources were competing for the few orders that were available. Hundreds of spinning and weaving firms were helplessly waiting for the merchants to pass on inadequate scraps of business to them. The creation of larger merchanting firms and the development of vertical links between the producing and marketing sections of the industry would reduce uncertainty about orders and enable longer production runs.(35) But very little advance was made towards the vertical integration of spinning and weaving, let alone between marketing and the rest of the industry. Although most of the larger spinning combines, such as the L.C.C., inherited a few looms from their constituent companies, they made no attempt to extend this side of their business. Leak and Maizels suggested that the most important vertical links in the cotton industry before World War Two involved spinning or weaving firms possessing finishing capacity and vice-versa.(36)

It must be concluded that the twenties and thirties exhibited less merger activity than might have been expected in a period of declining demand. Several

factors could have contributed to this outcome. The sheer extent of the disaster facing the industry may simply have created a mood of inertia and resignation. Or it may have been that Lancashire's individualistic employers were unusually reluctant to abandon family businesses to large combines. Lazonick argues that the chaotic nature of the merchanting system dissuaded spinning and weaving firms from amalgamating. In a sense this explanation still begs the question. If the control of marketing was crucial, as indeed it was, why couldn't large combines take over or by-pass the existing merchanting section? Lazonick also claims that Lancashire failed to assimilate the modern management techniques which were necessary to control large enterprises.(37) No doubt there is a certain amount of truth in these hypotheses. But it would be extremely difficult to decide which, if any, of these factors predominated.

During the 1940s governments accepted the view that the centralization of power in the hands of half or dozen or so large firms was one of the preconditions for the revitalization of the cotton industry.(38) Sir Stafford Cripps's scheme in 1948 for subsidising re-equipment in the spinning section stipulated that firms hoping to receive a grant must amalgamate into groups of at least 250,000 spindles.(39) This measure was a complete failure, partly, but not solely, because of firms' reluctance to fulfil the condition that they should combine. Robson somewhat cynically concluded that

"certain directors who had substantial interests in a number of spinning firms were induced to effect an amalgamation, although this may not have meant any change in control...In fact, almost all of the eight groups formed represented previously existing linkages strengthened to qualify for the subsidy".(40)

Ministers were disappointed that their exhortations had no appreciable effect on the structure of the industry. Between 1935 and 1951 the proportion of the cotton spinning labour force employed by the three largest combines increased from 22 per cent to 24 per cent, while the proportion of the weaving workforce engaged in the mills of the three largest manufacturers rose from 4 per cent to 6 per cent.(41) Concentration levels throughout British industry largely stagnated or declined between the thirties and the late 1940s. Leslie Hannah offers two possible explanations for this interlude. Firms may have been preoccupied with the development of management structures capable of the efficient control of the large businesses formed in the 1920s. Alternatively, the absence of highly competitive conditions during the 1940s may have induced companies to delay reorganization.(42)

The 1950s was a decade of renewed contraction in the Lancashire cotton industry.(43) Table 10.1 shows that this was a period of growing concentration in cotton, particularly in the spinning section, where the five largest firms' share of total spindleage increased from 33.8 per cent in 1939 to 40 per cent in 1958. Given

Table 10.1

U.K. cotton industry: size of firm, 1939-58.

(i) SPINNING

firm size ('000 m.e. spindles)	1939		1958	
	firms	% of total spindleage	firms	% of total spindleage
< 20	23	0.7	12	0.7
20-40	38	2.6	21	2.2
40-80	78	11.5	41	8.9
80-200	110	33.2	46	18.9
200-1000	26	18.2	25	29.3
>1000	5	33.8	5	40.0
TOTAL	280	100.0	150	100.0

(ii) WEAVING

firm size (looms)	1939		1958	
	firms	% of total loomage	firms	% of total loomage
<200	438	7.6	320	10.1
200-400	194	11.2	120	12.6
400-800	253	29.2	127	25.9
800-2000	153	35.4	65	26.6
>2000	25	16.6	22	24.8
TOTAL	1063	100.0	654	100.0

m.e. - mule equivalent

Source: J. Worrall, The Lancashire Textile Industry
(Oldham: J. Worrall, 1962), p. 158.

Table 10.2.

Spindles and looms in vertically integrated (spinning-weaving) firms as a percentage of total spinning and weaving capacity, 1939-56.

	% of total m.e. spindleage	% of total loomage
1939	15	23
1953	22	31
1955	23	34
1956	22	40

N.B. These estimates must be treated with caution.

m.e. - mule equivalent.

Sources: R. Robson, The Cotton Industry in Britain (London: Macmillan, 1957), pp. 122, 344; C.B.Q.S.R.

the rapidity of the industry's decline, it might seem that this rate of transformation in the industry's structure was relatively sedate. Moreover it must be borne in mind that some of the increase in concentration may have been accounted for by the elimination of small firms.(44) On the other hand it would appear that changes were beginning to take place. Singh estimated that 26 per cent of the cotton textile companies quoted on the stock exchange in 1948 had disappeared as a result of merger or acquisition by 1960. The equivalent figure for deaths through merger or acquisition over a wide range of British industries between 1948 and 1960 was 20 per cent.(45)

A further indication that the industry was on the brink of a major increase in concentration levels can be observed in the figures on vertical integration in Table 10.2. Between 1939 and 1956 the proportion of spindles controlled by spinner-weavers increased from 15 per cent to 22 per cent of U.K. spindleage, while the proportion of looms controlled by spinner-weavers increased from 23 per cent to 40 per cent of U.K. loomage. This was also a period of growing links between the weaving and merchanting (i.e. converting) sections. The proportion of looms owned by firms engaged in converting increased from 44 per cent to 63 per cent between 1939 and 1956.(46) Some firms, such as the William Birtwistle Group, extended their involvement up to the retail stage.(47) Although weaver-converters operated on a very

small scale, at least they gave the producing sections a slightly greater control over the marketing and finishing of their output. In an uncertain market environment the advantages of vertical integration should have been substantial. Fluctuations in final demand were magnified at each intervening stage between the merchant and the spinner. Hence an increase in vertical integration would result in a steadier level of orders, particularly in those for yarn.(48)

In the early 1960s Mr. Allan Ormerod of Ashton Brothers cast doubt on the viability of the form of vertical integration prevailing during the postwar years. He claimed that small vertically integrated firms were unstable. For instance, it was difficult for them to secure a balance between the output of their spinning and weaving capacity. Such firms might merge and divide several times over a period of a few years.(49) For successful vertical integration it was deemed necessary to have a firm large enough to combine long runs of production in spinning with variety in weaving. In 1952 it was estimated that in New England a vertically integrated operation should have a minimum of 60,000 spindles and 1300 looms, a very large firm by Lancashire standards.(50) Consequently the further progress of vertical integration would have to await the formation of more large firms in the spinning and weaving sections.

Several broad trends in the structure of the cotton industry between its inception and the late 1950s have

been examined in this section. Cotton was still a highly atomistic industry in the 1950s, but change was beginning to gather pace. The evidence is difficult to come by, and therefore its interpretation must be impressionistic, but it would appear that changes in the levels of concentration and vertical integration in the cotton industry depended upon changes in the long-term state of demand. When demand was buoyant there was little incentive for firms to combine. But concentration tended to increase during periods when demand was relatively slack: notably the late nineteenth century, the interwar depression, and the 1950s.

III

Lancashire's cotton industry was effectively annexed by the man-made fibres industry during the 1960s. Although it was easy to differentiate between cotton and the remainder of the U.K. textile industry in 1960, this distinction was no longer important by 1970. The intervening years were marked by a dramatic increase in acquisitions and merger activity.

Changes in five-firm concentration ratios in different sections of cotton textile production between 1958 and 1968 are shown in Table 10.3. In the spinning section the share of the five largest firms (in terms of sales) rose from 31.9 per cent to 50.3 per cent over this period. The five-firm concentration ratio in weaving increased even more rapidly, from 11.6 per cent to 31.2 per cent. Table 10.4 indicates that textiles experienced the fastest growth in concentration of any

Table 10.3.

Five firm concentration ratios in cotton and allied textiles, 1959-68.

	Five largest firms' share of total sales (%)		
	1958	1963	1968
Man-made fibres	n.a.	99.9	100.0
Finished thread for sewing, etc.	n.a.	81.8	87.9
Single cotton or m.m.f spun yarn	31.9	37.2	50.3
Doubled cotton or m.m.f. spun yarn	34.9	41.7	47.1
Woven cotton cloth	11.6	19.3	31.2
Woven m.m.f. cloth	21.1	35.8	51.9

Source: F. Fishwick and R.B. Cornu, A Study of the Evolution of Concentration in the United Kingdom Textile Industry (Luxemburg: Commission of the European Communities, 1975), table 17, p. 30.

Table 10.4.

Concentration in industry groups: shares of five largest firms in manufacturing net output, 1957-69.

	Shares of 5 largest firms		prop. of increase due to mergers (%)
	1957 (%)	1969 (%)	
Food	41.3	52.7	75
Drink	32.7	69.5	98
Tobacco	96.5	100.0	100
Chemicals	71.0	73.7	130+
Metal manufacture*	45.7	59.5	132+
Non-electrical engineering	29.8	25.3	-
Electrical engineering	47.2	68.0	57
Shipbuilding	62.1	74.2	73
Vehicles	50.4	71.0	125+
Textiles	44.2	65.1	128+
Clothing and footwear	63.8	78.4	50
Building materials	53.1	51.1	-
Paper and publishing	47.5	63.2	112+

* excluding the nationalized British Steel Corporation and its constituents.

+ A figure above 100% implies that concentration would have declined but for merger activity.

Source: L. Hannah, The Rise of the Corporate Economy (London: Methuen, second edition, 1983), table 10.1, p. 144.

U.K. manufacturing group, other than the drink industry, between 1957 and 1969. If no mergers had taken place in textiles the concentration ratio would have fallen, for most firms were experiencing negative internal growth. Therefore merger activity was entirely responsible for the increase in concentration during this period. In fact mergers and acquisitions in the textile industry reached a peak in the mid 1960s. Between 1955 and 1968 textiles ranked second among British manufacturing industries in terms of assets acquired through merger, and third in terms of expenditure on acquisitions. More quoted firms were acquired in textiles than in any other industry between 1955 and 1968.(51) At a time of rising concentration throughout British industry, Lancashire was in the forefront of change.

Given the industry's measured reluctance to form large groupings during earlier periods, the reasons for this major switch of direction require careful consideration. No doubt the rate of increase in concentration in textiles can in part be accounted for by the industry's low base, but it is also necessary to look for other causes.

Before proceeding to analyze the role of the man-made fibre producers in the events of the 1960s, it is worthwhile disposing of the argument that the increase in concentration in textiles was primarily a response to the enforcement of restrictive practices legislation. During the Yarn Spinners hearing in 1958 the spinners had told the Restrictive Practices Court

that their price maintenance scheme was essential to the survival of small firms, and that without it the industry would soon be controlled a few monopolistically inclined combines.(52) Events following the abolition of the Yarn Spinners Agreement failed to vindicate the spinners' dire warnings. A survey in 1959-60 revealed that 87.5 per cent believed that the cessation of price-fixing schemes had had no effect on prices, while the remainder thought that prices were higher than they would have been under the agreements.(53) Hence there is little evidence to support the hypothesis that the Restrictive Practices Court forced small firms into submission to the large combines. Work by O' Brien et al has reaffirmed the view that the Restrictive Practices Act had no significant impact on the rate of increase in concentration.(54)

Had the Lancashire cotton industry been left to its own devices it is doubtful whether there would have been a merger movement on such a dramatic scale during the 1960s. Many firms would have been content to do nothing, passively awaiting the inevitable collapse of their markets. The initiative for re-organization came from interests outside Lancashire, notably from the man-made fibre producers. As shall be seen, this activity was largely, although not entirely, of a defensive nature.

Arguments in favour of mergers were not solely couched in terms of the economies of large-scale production. C.F. Pratten estimated that the minimum efficient scale for a modern integrated textile factory

was 60,000 spindles and 1000 looms in the 1960s, equivalent to less than two per cent of the industry's output. (55) Although this was considerably larger than the average size of firm in 1963, roughly 0.3 per cent of total output (56), it still left room for a few dozen firms of optimum size. It was felt that the establishment of large textile groups could lead to more significant savings through the introduction of new management, the co-ordination of different processes, the elimination of surplus capacity, and the creation of a countervailing force to the power of the large retailers. Small producers had long complained about their weakness relative to the major retailers. The retail chains allegedly accentuated the inventory cycle by holding comparatively small stocks themselves, and by using the U.K. textile industry as a marginal source of supply, primarily to supplement imports during periods of high consumer demand. In 1966 retailers with ten or more shops accounted for 25 per cent of the sales of household textiles and soft furnishings, 46 per cent of sales of mens' and boys' wear, and 40 per cent of those of womens', girls', and infants' wear. (57) Large textile producers would, at least in theory, have increased bargaining power relative to these chains.

Courtaulds' involvement in the reorganization of the Lancashire textile industry was crucial. During the 1950s Courtaulds failed either to develop synthetic fibres or successfully to diversify into the production of non-textile goods. Consequently it continued to rely

upon sales of cellulosic fibres, for which the market was becoming increasingly precarious. In particular 30 per cent of Courtaulds' U.K. sales of viscose staple rayon was processed in the Lancashire spinning industry, and the company feared that this vital market could be lost as a result of the erosion of the cotton industry by overseas competition. In 1955 the Courtaulds board appointed a committee to look at the future of the Lancashire weaving section. This committee suggested that Courtaulds should bolster Lancashire's position by supplying it with yarn and fibre at marginal cost, and by increasing the vertical links between man-made fibre production and spinning and weaving. But at the time these recommendations were shelved.(58)

However, as the condition of the cotton industry proceeded to deteriorate during the late 1950s, Courtaulds decided that there was no alternative to intervention. During 1959-60 Courtaulds held talks with English Sewing Cotton and Carrington and Dewhurst about the possible rationalization of the weaving sector. In 1961 a Courtaulds director, D.R.B. Myers told the Cotton Board Conference that Lancashire would have to reduce its reliance on cotton and increase its involvement in man-made fibres if it intended to survive. He advocated the emergence of a structure dominated by large textile groups, which would facilitate the elimination of surplus capacity, the injection of fresh management, and the stabilization of prices.(59)

After I.C.I.'s abortive take-over bid for

Courtaulds in 1962, Courtaulds' new chairman Frank Kearton unveiled the plan for the famous Northern Project. This initiative was warmly encouraged by the Board of Trade, which believed that the man-made fibre producers were the ideal agents to effect structural change and rationalization in Lancashire.(60) Kearton's plan was that five of the leading cotton spinning combines - English Sewing Cotton, Tootals, Fine Spinners and Doublers, L.C.C., and Combined English Mills - should either merge with or be acquired by Courtaulds. It was estimated that this would cost Courtaulds approximately £50 million. All five firms agreed to consider Courtaulds' proposals, and the scheme was lauded in grandiloquent terms by one Courtaulds director: "It is a concept of genius, worthy of England's best days, that the brains of the new fibres should assume the responsibility of putting fresh life into the traditional textiles...if the rescue is not made now the leading cotton companies will soon become candidates for the knacker's yard."(61)

I.C.I., also a major supplier of man-made fibres to Lancashire, regarded the Northern Project as a threat to its own interests in the cotton industry. It was conceivable that Courtaulds would use the Northern Project to deny I.C.I. a market for its products in Lancashire. Consequently I.C.I., which remained a major Courtaulds shareholder despite the failure of its take-over bid, insisted on a 45 per cent interest in the Northern Project. Although Courtaulds acceded to this

demand, the Northern Project collapsed in April 1963 after the man-made fibre producers had failed to come to satisfactory terms with one of the cotton combines.(62)

Thereafter events moved at an astonishing pace. Courtaulds, I.C.I., and several smaller groups, became locked in a dramatic struggle for control of the Lancashire textile industry. In summer 1963 English Sewing Cotton obtained financial backing from Courtaulds and I.C.I. to enable the speedy take-over of Tootals. In return the man-made fibre producers obtained minority stakes in the new combine, which controlled eight per cent of U.K. spindleage by 1968.(63) This was a dramatic move in itself, but few realised what was in store for Lancashire over the following eighteen months. In the words of a leading trade paper: "That the industry's 'blue chips' would be absorbed, leaving virtually no independent spinning combine of any size, would never have been forecast at that time".(64)

Courtaulds' campaign started in decisive fashion in December 1963 with the purchase of James Nelson, a highly respected rayon weaving firm based in Nelson. Between August and September 1964 Courtaulds secured outright control of several large spinning combines, L.C.C., Fine Spinners and Doublers, and Hayeshaws. These acquisitions were prompted by fears that other bidders were about to pounce and deprive Courtaulds of three of its most important customers. As a result of this activity, Courtaulds was able to gain possession of 30 per cent of the Lancashire spinning industry by

1968.(65)

A slightly different, but no less wide-ranging, policy was adopted by I.C.I. Instead of directly acquiring its victims, I.C.I. chose to act through intermediaries, notably Viyella International and Carrington and Dewhurst. Joe Hyman, the ambitious chairman of the relatively small Viyella group, which had its origins in the textile industries of East Anglia and the East Midlands, persuaded I.C.I. that he was the man to revitalize the ailing Lancashire cotton industry. I.C.I. took a 20 per cent stake in Viyella and provided Hyman with the funds to pursue his ambitious scheme. Between late 1963 and September 1964 Viyella's major acquisitions comprised the cotton textile groups of Ferguson Brothers, Clegg and Orr, Bradford Dyers', Combined English Mills, Birtwistle and Leigh, and the shirt manufacturers British Van Heusen. By 1968 Hyman controlled nine per cent of the industry's spindleage.(66) I.C.I. also fostered the growth of the medium-sized filament rayon weaving firm of Carrington and Dewhurst. Using financial backing from I.C.I. (and to a lesser extent from Courtaulds) Carrington and Dewhurst rose to a position of dominance in its section during the mid 1960s.(67)

Consequently, by 1966 Lancashire's cotton industry appeared to be under the control of the four majors: Courtaulds, Viyella International, English Sewing Cotton, and Carrington and Dewhurst. But was this merger activity really a sign of vitality? Obviously

entrepreneurs such as Hyman were trying to forge new empires, but what of Courtaulds and I.C.I.? The evidence suggests that the man-made fibre producers were reluctant to expand their holdings in Lancashire and only did so out of fear that their markets were about to collapse or be usurped. In the words of Courtaulds director Arthur Knight: "The post-1962 development of Courtaulds...can thus be seen as a bid to survive as an independent business in a situation in which the alternatives had, one by one, been eliminated. A move forward into textiles was the only course which was seen still to be open".(68)

One of the distinguishing features of the merger movement in textiles during the 1960s was the emergence of strong vertical linkages in all the main groups. Table 10.4 indicated that the share in net output of the five largest textile concerns increased from 44.2 per cent to 65.1 per cent between 1957 and 1969. The merger movement was clearly not confined to amalgamations among firms within a particular section. In fact the impetus for change originated in the need for the man-made fibre producers to extend their activities into spinning and weaving.

Although Courtaulds' most visible acquisitions were large spinning combines such as L.C.C. and Fine Spinners and Doublers, they also obtained possession of a number of knitwear and hosiery manufacturers, textile wholesalers, finishers, printers, weavers, and garment manufacturers. Forward integration into knitting and

weaving was necessitated by Courtaulds' desire to build up a secure facility for promoting a range of products using its new acrylic fibre 'Courtelle'. The purchase of wholesaling capacity enabled Courtaulds to gain greater control over the distribution of its products.(69) By 1968, in addition to its 30 per cent share in the output of the spinning section, Courtaulds accounted for 12 per cent of the output of the cotton and man-made fibre weaving section. Courtaulds also produced 9 per cent of the output of the finishing section, 7 per cent of that of the merchanting section, and contributed 35 per cent of U.K. warp-knitting production, and 15 per cent of U.K. weft-knitting production.(70)

Increasing levels of vertical integration also marked the progress of the other textile groups. Viyella possessed substantial capacity in the hosiery and knitwear industries before its venture into the traditional cotton industry. Carrington and Dewhurst acquired firms in the merchant-converting, dyeing, finishing, making-up, and knitting sections. When English Sewing Cotton made its successful bid for Tootals, it acquired a group engaged in spinning, weaving, knitting, and the production of menswear and household furnishing. In the ensuing period E.S.C. diversified into household textiles, dress fabrics, fine worsteds, industrial fabrics, and knitted childrens wear. Finding its profits declining during the 1960s, the Calico Printers Association established itself in garment manufacturing and retailing, while the spinning

and weaving group Vantona extended its operations into the production of bedding and bedspreads.(71)

Hyman was quite self-conscious about his intentions: "We are trying to establish the greater part of our business along vertically integrated lines".(72) The development of such a group was central to Viyella's strategy of growth maximisation. But others were less clear about their aims and drifted into vertical integration. Knight sums up Courtaulds' position: "At no stage was the objective of... being a fully-fledged vertical group explicitly enunciated, and an account in retrospect of the development makes it all seem much more logical than it appeared whilst it was going on".(73) In most cases the large textile and man-made fibre producers were impelled to acquire facilities in a variety of sections by the need to secure a reliable market for their products. Vertical integration, except for Viyella, was primarily a defensive response in an increasingly uncertain market environment.

Amalgamation was followed by attempts at reorganization. In Sept. 1964 Courtaulds appointed one of their own men, Mr. G.A. Samuel, to the chair of the new Northern Textile Division (N.T.D.). At this time the N.T.D. comprised 75 mills, approximately 50 of which were cotton spinning units. The N.T.D. was split into three subdivisions. Each group was expected to be profitable in its own right. Mr. W.T. Winterbottom, formerly chairman of Fine Spinners and Doublers, was given responsibility for the cotton spinning mills,

while the former L.C.C. chairman Colonel Whitehead was put in charge of the woollen and worsted section. A third sub-group was established to oversee weaving and converting operations.(74) The much vaunted promises about the injection of new blood came to nothing. Courtaulds lacked expertise in running cotton and woollen plants, and was forced to rely on the old hands whose predecessors had been so viciously pilloried by Keynes in the 1940s.(75)

Despite these inauspicious beginnings Courtaulds pursued a vigorous policy of rationalization and re-equipment. Between 1962 and 1969 it invested £57 million in buildings and machinery for its northern textile business.(76) Plans were hatched for the scrapping of 19 cotton spinning mills. Some areas suffered more than others. For instance, in Aug. 1965 the N.T.D. announced the closure of the Gt. Lever Spinning Mill, near Bolton, and the Wilton Mill, Radcliffe, together with further redundancies at two other Bolton Mills. Around 1000 workers would lose their jobs or be transferred to modernized mills in other districts.(77) Courtaulds also acquired a number of weaving mills during the mid 1960s, but most were ancient constructions which were quite unsuitable for renovation. Consequently a major investment programme was instituted to build brand new weaving mills, equipped with shuttleless looms, at Carlisle, Lillyhall, and Skelmersdale. As a result of these varied efforts Courtaulds was able to increase output per operative in

its cotton spinning mills by 19 per cent per week between 1964 and May 1966. (78)

At Viyella International Hyman adopted a policy of allowing newly-acquired companies a considerable amount of operational leeway. But this approach did not always work. In the case of Viyella's largest take-over victim, Combined English Mills (C.E.M.), Hyman initially underestimated the extent of the firm's problems. C.E.M. already had a rationalization plan, but seemed incapable of closing mills at a satisfactory speed. Moreover C.E.M.'s managers, most of whom had been retained by Viyella, produced an unrealistically optimistic evaluation of future market conditions. In the strictly impartial words of Viyella International magazine: "Mr. Hyman refused to let the situation deteriorate further. He treated the crisis as it truly was, and took pains to ensure that others also recognised the facts". (79) Hyman introduced some new managers, while existing staff were retrained. C.E.M.'s product range was rationalized to enable the group to concentrate on large orders. After reorganization 20 per cent of C.E.M.'s output was supplied to other firms in the Viyella empire. Loss-making activities such as worsted spinning and heating and electrical work were discontinued. C.E.M.'s technical department was closed and research was carried out at Viyella's Pleasley plant near Mansfield. Seven of C.E.M.'s 14 mills were closed between 1964 and 1968, and those remaining open were modernized. Considerable consternation resulted from the closure of Sir John

Holden's Mill at Astley Bridge, Bolton. This factory had been built in 1926 and was electrically driven throughout. But C.E.M. claimed that the introduction of shift-working in the group had reduced the optimum size of unit: Holden's mill was just too large.(80) Spindleage at C.E.M. fell from 404,000 to 221,000 between 1964 and 1968, employment declined from 3983 to 2318, and yarn produced per operative per annum increased by 50 per cent.(81)

Consequently there can be little doubt that genuine efforts were made by the large textile producers to revitalise the Lancashire cotton section. But hard work did not guarantee success and the industry remained uncompetitive. On the positive side of the balance sheet, the Northern Textile Division enabled Courtaulds to maintain its U.K. deliveries of viscose staple fibre at 80-85,000 tons per annum between 1962 and 1971.(82) On the other hand there was no improvement in Courtaulds' profitability. In 1964-5 the Economist estimated that Courtaulds made a rate of return of 19 per cent on its turnover in fibres, compared with a rate of return of four per cent on its sales of textiles. Of course, these figures can take no account of any transfer-pricing which may or may not have been conducted. The Economist thought that Courtaulds should have diversified into new fibres instead of becoming embroiled in Lancashire's problems: "Helping textiles to health always tends to mean that Courtaulds gets the worst companies in the worst sectors, even if it gets

them cheaply".(83) Perhaps it would be better to examine Courtaulds' figures over a longer period. Even so, it would appear that Courtaulds' net profits before tax on all activities declined from 14.6 per cent of sales in 1964 to 6.7 per cent of sales in 1972.(84) Courtaulds had also hoped that the formation of a large vertically integrated multi-fibre group would enable them to put pressure on the government to increase import restrictions on cotton textiles. Once more, they were to be disappointed.(85)

The other groups also ran into serious difficulties. By 1967 Viyella's astonishing growth rate was beginning to slow down: "Buying up companies with under-employed assets, and boosting profits by ruthlessly wielding the surgeon's knife, had been comparatively easy. In future, growth had to come mostly from within - and that took time, especially against a background of cut-throat competition".(86) Hyman freed himself from dependence on I.C.I. and planned to merge Viyella with English Sewing Cotton in 1967. He even had a scheme for purchasing the Liberal Party! Both of these ventures fell through. Although the Liberal Party's reaction is unascertainable, English Sewing Cotton responded by effecting a defensive merger with the ailing Calico Printers Association, forming the English Calico group. When poor trade led to a reduction in profits in Viyella's strongest department, man-made fibres, Hyman's position became untenable and he was deposed in 1969. I.C.I.'s remaining client in the

textile industry, Carrington and Dewhurst (C&D), also found itself on the brink of disaster at this time. Slack demand at home and growing German competition in the European market coincided with an ambitious programme of capital spending. C&D's finances simply could not take the strain. Fearing the collapse of C&D, I.C.I. proposed to acquire Viyella International and merge it with C&D. The Board of Trade, which had recently stepped in to prevent the take-over of English Calico by Courtaulds, warned I.C.I. not to proceed. Eventually a compromise was reached to permit Viyella and C&D to merge. I.C.I.'s share in the new group Carrington Viyella was limited to 35 per cent. (87)

Increasing concentration and vertical integration did not save the Lancashire cotton industry, and neither did they lead to the enjoyment of monopoly profits. As Hannah and Kay so aptly remarked: "Anyone who believes that the British textile industry is in danger of successful monopolisation cannot see beyond the Straits of Dover". (88)

IV

Lancashire's merger mania during the 1960s failed to halt the decline of the traditional cotton textile industry. Although substantial improvements could be made as a result of horizontal and vertical integration, particularly in relation to the co-ordination of production processes and the management of uncertainty, these savings were insufficient to offset the forces working for the industry's contraction. Instead of

regarding increasing concentration as a forward-looking attempt to solve the problem of decline, it is better to think of it as a symptom of decline. Contracting markets resulted in a reduction in productivity growth in Lancashire relative to the growth of productivity overseas. (89) Contraction and an increase in concentration levels ensued.

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(72) Tattersall's Cotton Trade Review, 15 Dec. 1964, p. 1.

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(89) See above, Ch. 6, pp. 257-62.

Chapter 11.

THE END OF THE LINE.

"And why take ye thought for raiment? Consider the lilies of the field, how they grow; they toil not, neither do they spin".

Matthew, Ch. 6, v. 28.

Britain's bread no longer hangs by Lancashire's thread. Little remains of the old Lancashire cotton industry, other than a collection of industrial museums: Helmshore, Quarry Bank, and the Manchester Science Museum. The foregoing chapters have provided an analytical account of the last years of the industry, from the false dawn of the 1940s to the merger movement of the 1960s. In this final chapter I intend to come to some conclusions about the causes of Lancashire's decline, and also to speculate on the relevance of cotton to an understanding of the wider problems of the British economy. Obviously, much of the following text draws upon the earlier discussion of these questions in Chapter 1.

It is not difficult to identify the factors responsible for the British cotton industry's demise. The fortunes of Lancashire were not dissimilar to those of textile industries which had attained pre-eminence in previous centuries. As Phelps Brown remarked:

"The textile industries of Venice, Milan and Genoa, flourishing in 1600, were near extinction a hundred years later. The cause was the loss of foreign markets - through war in Germany and economic decline in Spain, the raising of tariffs in France and England, but above all the competition of the French, the English, and the Dutch manufacturers".(1)

In the nineteenth century Lancashire dominated the world market for cotton textiles, largely as a result of the good fortune of Britain's early industrialization. But Lancashire possessed no unique advantages as a cotton textile producer. It was inevitable that production facilities would be established overseas as other countries industrialized. Consequently, by the late nineteenth century, Lancashire was only one of several major cotton textile producing regions in the world. Growing overseas competition resulted in a slower rate of growth in demand for the products of British mills. Relative stagnation reduced the scope for further division of labour and learning-by-doing. Increased uncertainty about the future depressed the will to innovate and to invest. Productivity growth in Lancashire began to lag behind productivity growth in other countries and this brought about further losses of markets.

In the twentieth century an increasing number of cotton mills were established in the less developed world. Low wages permitted Japan and India to undercut the price of cloth from Europe and North America. To some extent high wage levels in the West could be offset by the installation of labour-saving machinery. British firms, overwhelmed with doubt and uncertainty, failed to respond to this challenge. In 1967 the costs of producing yarn and cloth in the average British mill were still considerably above costs in less developed countries.(2) Even extremely modern mills were only

marginally competitive. It required great courage to invest huge sums for long periods in expensive new mills, when there was every chance that further cost reductions in less developed countries would soon render them unprofitable. Comparative advantage was changing: although Western countries could still just about compete with less developed countries in cotton textile production, it was only at inordinate risk. Moreover, by persevering with cotton textiles, developed countries denied factors of production to industries in which they enjoyed a clear comparative cost advantage.

It should by now be apparent that the Lancashire cotton industry was not worth saving. The grandiose schemes put forward between the 1930s and 1950s for the protection and re-equipment of the industry, largely by the trade unions and the Labour Party, would have led to a further misallocation of resources.(3) In particular, the capital goods industry would have wasted precious capacity in building looms and spinning machinery for an industry that would have been better off without them. After the 1940s, when Lancashire enjoyed a brief renaissance as one of the corner-stones of the export drive, cotton had no conceivable role to play in the British economy.

During the mid 1950s the cotton textile industry provided work for approximately 200,000 operatives. Other industries were complaining about the chronic shortage of labour, yet the cotton industry claimed that it needed even more.(4) Sadly, Lancashire spent most of

the 1950s and 1960s hoarding labour which was sorely needed elsewhere. Indeed the British economy would have benefitted from a speedier rather than a more prolonged period of contraction in the cotton industry.

A policy of subsidising imports would have made more sense than one of import restrictions. The governments of Churchill, Eden, and Macmillan did not go far enough in their neglect of the industry. Naturally individual directors, trade union officials, and managers were unable to assess the situation from such a detached perspective. They had vested interests in the preservation of the cotton industry. For example, many directors of small private firms chose to employ themselves as mill managers. They were content to endure low dividends provided their firms could still afford to pay their salaries.(5) On the other hand, larger concerns were extremely reluctant either to invest abroad or to diversify into other industries such as engineering or electrical goods.(6) I have found no examples of major diversification programmes among cotton textile firms during the postwar period. This phenomenon could be explained by several factors. To a certain extent management skills were specialized, and therefore of little use in other industries. Firms possessed imperfect knowledge of the opportunities for diversification and were reluctant to face the ensuing risk and upheaval. Consequently directors and managers were determined that their firms should survive as cotton textile producers for as long as possible,

irrespective of the opportunity cost which this imposed on the economy as a whole.

In any mature economy structural change is inhibited by uncertainty and vested interests. Perhaps it will be instructive to illustrate this with a parable. Imagine a series of tram-lines each of which represents the lifespan of a particular industry. Tram cars travel along each line, carrying managers and directors and trade union leaders. But all is not well. Some of the tram-lines lead over the edge of a cliff. The people in the tram cars suspect that this might be the case, but they cannot be certain, because a thick fog envelops the scene. It is difficult for the passengers to see either to the front, or to the left, or to the right. They are fond of their tram cars, and know that if they leave them to search for other trams on other lines, they risk losing their way and tumbling into a crater. If they do manage to find another tram there is a reasonable chance that it too will be heading for disaster. Consequently many passengers will be tempted to stay in familiar surroundings and hope that after all their faithful old trams will pull through.

Is there no way of distinguishing between the safe lines and the dangerous lines? Perhaps there are speculators and bankers travelling above the scene in helicopters, but even their searchlights cannot always penetrate the fog. It is almost inevitable that frightened passengers will ask the government for assistance. Civil servants will be sent to the tram

depot to draw up a map of the transport system. However, despite their best efforts, the civil servants may omit to include distant or little used tramlines on the map. Moreover continuing subsidence on the tracks may render the map out of date.

The parable of the tramways should not be taken too far - the point I want to emphasise is that there is no straightforward solution to the problem of Britain's economic backwardness. Neither a free market nor a planning authority can guarantee an optimal allocation of factors of production between industries. Economics will never be an exact science so long as there is uncertainty.

I have digressed in this final chapter. Perhaps I ought briefly to return to the cotton industry. I do not think I have eulogised the past, although I admit that this failing may have determined my initial selection of cotton as an area for research. But I cannot resist closing with a quotation from the work of Mr. B. Bowker, who in 1928 clearly saw what lay in store for Lancashire. It is best to let him speak for himself:

"By some Wellsian magic I was transported into the House of Commons of a future whose date I had no means of fixing. I sat in a great throng in the Strangers' Gallery. Westminster twilight was falling. The President of the Board of Trade was winding up a crucial debate on the Lancashire cotton industry. Just before he made an end my eyes wandered to the Speaker's chair. I started. Ghostlily [sic] I seemed to see behind it the greatest of the old timers who had brought the cotton industry to its hour of unparalleled fortune. Silent the spectral figure stood, intent on the debate. Awhile I gazed as under a spell. The voice of the President of the Board of Trade broke through to me again. 'We must give to

the remnant of the Lancashire industry, whose plight my right honourable friend, the Member for Oldham, has pictured with so much emotion, the fullest measure of protection His Majesty's Government can devise....'. I caught no more. Unseen by the assembled House the ghost of the great old pioneer, no longer able to restrain its fast-rising passion, was turning to depart. As it made ready to go its eerie way, I seemed to catch the words that fell between heartbreak and anger from its lips: 'The men are spent. The machine is broken. The glory is forever departed'.(7)

Notes to Chapter 11.

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(2) See above, Ch. 6, Tables 6.9, 6.10, pp. 260-1.

(3) See above, Ch. 2, pp. 44-59, Ch. 6, pp. 242-4.

(4) See above, Ch. 6, p. 239.

(5) See above, Ch. 7. pp. 287-90, 315-6.

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LANCASHIRE'S LAST STAND: DECLINING
EMPLOYMENT IN THE BRITISH COTTON INDUSTRY,
1950-70

By
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*Lancashire's Last Stand: Declining Employment in the British Cotton Industry, 1950-70*¹

By JOHN SINGLETON

After being one of the mainstays of the Victorian economy, the British cotton industry rapidly slipped into decline during the 1920s and 1930s. Cotton cloth production dwindled from 8,453 million square yards in 1912 to 3,806 million square yards in 1937.² Exports of cotton piece goods fell even more dramatically, from 7,429 million square yards in 1913 to 2,124 million in 1937.³ Unemployment among cotton operatives was endemic, and between 1912 and 1937 employment in cotton spinning, doubling and weaving declined from 621,500 to 359,700.⁴ Productivity was low and new investment miniscule. The number of looms installed fell from 786,000 in 1912 to 485,000 in 1938.⁵ A similar reduction in capacity occurred in the spinning section, where total spindleage dropped from 56.3 million in 1913 to 38.6 million in 1937.⁶ The only bright spot in this dismal catalogue of decline was the development of man-made fibre production. Rayon cloth was woven in the same sheds, on the same looms, as cotton. With the development of rayon staple fibre in the 1930s, it also became possible to spin rayon yarn on ordinary mules and ring frames.⁷ Participation in this trade, for which demand was relatively buoyant, helped many of Lancashire's cotton mills to survive through these difficult years. All this is fairly well known. The objective of the present paper is to bring the story more up to date, by looking at what happened to the industry in the 1950s and 1960s.

Section I will examine the industry's hopes and fears for the future during the 1940s, when Lancashire was temporarily shielded from the pressures of overseas competition. In section II the main trends in output, employment, average labour productivity, exports, and imports in the cotton industry

¹ The author is grateful for the comments of V. N. Balasubramanyam, John Channon, John King, Mary Rose, Jim Taylor, and Oliver Westall on earlier drafts of this paper. Needless to say they are not responsible for any errors of fact or interpretation contained herein.

² R. Robson, *The Cotton Industry in Britain* (1957), p. 343. Throughout this paper Robson's convention of converting linear yards into square yards, by adding 5%, is followed.

³ *Ibid.* p. 333.

⁴ Board of Trade, *Working Party Reports: Cotton* (1946), p. 52.

⁵ Amalgamated Textile Workers' Union, *Eighth Annual Report* (Rochdale, 1982), p. 39.

⁶ L. A. Sandberg, *Lancashire in Decline: A Study in Entrepreneurship, Technology and International Trade* (Columbus, Ohio, 1974), p. 123.

⁷ However, the earlier rayon continuous filament yarn continued to predominate. This could not be spun on cotton-spinning equipment and was supplied direct to the weavers by the man-made fibre producers. For an account of the inter-war rayon industry, see J. Harrop, 'The Growth of the Rayon Industry in the Inter-war Years', *Yorkshire Bulletin of Economic and Social Research*, 20 (1969), pp. 71-84; D. C. Coleman, *Courtaulds: An Economic and Social History* (Oxford, 1969), II, pp. 314-74.

during the fifties and sixties will be outlined. The performance of British cloth in selected major export markets will be analyzed in more detail, and British cloth imports will be broken down according to their countries of origin. This examination of imports and exports is based on data collected from the statistical reports of the Cotton Board. Section III uses an accounting procedure drawn from the economics of trade and development to estimate the relative contribution of trends in exports, imports, domestic demand, and average labour productivity to changes in the level of employment in the industry. The results suggest that the relative impact of these factors on employment varied significantly over the period in question. Between 1950 and 1955 declining exports made the largest contribution to the fall in the employment of cotton operatives. Rising imports were the major factor accounting for declining employment between 1955 and 1960, while falling domestic demand for cloth and yarn was the predominant influence during the 1960s. It should be stressed at the outset that these results are subject to a considerable margin of error, due to the nature of the technique used. The "accounting procedure" is a static technique which is unable to identify any dynamic linkages or interdependencies between the factors analyzed. These limitations will be discussed in more detail in Section III. The reaction in Lancashire to this inexorable decline is described in the final section, which also points to the need for further investigation into the underlying causes of the cotton industry's demise. The present paper cannot give a definitive solution to this wider problem, but it can set the context within which such research could profitably proceed.

I

World War II and the succeeding period of reconstruction gave Lancashire a brief respite from the process of decline. As long ago as 1926 Keynes had identified the growth of Japanese competition and the emergence of indigenous cotton industries in Lancashire's third world markets as the immediate causes of cotton's plight.⁸ These special difficulties were amplified by weak domestic and overseas demand during the interwar depression.

The outbreak of war soon turned a situation of labour surplus in the mill towns into one of acute shortage, as operatives joined the armed forces or went into highly-paid munitions work. Demand for cloth was boosted by military requirements for canvas, denim and balloon cloth⁹, but production was held back by difficulties in obtaining raw cotton as a result of the shipping shortage. In 1941 these shortages of labour and raw materials forced the government to concentrate the industry by shutting down about 40 per cent of its factories.¹⁰ Production planning was introduced in 1942, under which prices were controlled and profits virtually guaranteed.¹¹ Compensation was paid to firms closed under the concentration scheme. Although cotton and rayon cloth production

⁸ J. M. Keynes, 'The Position of the Lancashire Cotton Trade', in D. E. Moggridge, ed. *The Collected Writings of John Maynard Keynes*, XIX, pt. II, *Activities, 1922-9: The Return to Gold and Industrial Policy* (1981), p. 591.

⁹ R. W. Lacey, 'Cotton's War Effort', *Manchester School*, XV (1947), p. 39.

¹⁰ *Ibid.* pp. 38, 56.

¹¹ *Ibid.* pp. 45-8.

fell from 3,806 million square yards in 1937 to 1,928 million in 1944,¹² firms were able to earn satisfactory profits. In spinning the average annual profit per firm in 1942-5 was about £8,000, compared with the £4,000 average annual loss in 1927-34.¹³ Lancashire did not do too badly out of the war.

As the war progressed the government, together with the cotton industry's leaders, began to turn their attention towards planning for Lancashire's future prosperity. Allied bombing was crippling the textile industries of Europe and Japan. It was fairly clear that British cotton textiles would have a free run of the world's export markets in the immediate postwar years while competing nations would be busy rebuilding their mills. This was seen as an excellent opportunity to set Lancashire's industry on a sound economic and financial footing. A new spirit of determination pervaded the industry in place of the defeatism of the thirties. The Cotton Board Committee to Enquire into Post War Problems, meeting in 1943-4, predicted that international demand for cotton textiles would steadily increase as world development resumed its course. Given "a substantial measure of re-equipment"¹⁴ and improvements in the deployment of the workforce, the market should be sufficient to support a British cotton industry with the same spindleage as in 1939. However, the Report stressed that success was dependent upon the government's ensuring that Lancashire's export markets were not flooded with cheap foreign (i.e. Japanese) cloth. This would necessitate a tightening of the Imperial Preference system. "It is clear", said the Committee, "that if the very low labour cost countries are going to enjoy equal terms of access to markets . . . only a limited export trade in specialities will remain to the British cotton industry after the world shortage is overcome."¹⁵

Despite the industry's good intentions,¹⁶ very little was accomplished between 1945 and the recovery of Lancashire's competitors in the early fifties. U.K. cotton and rayon cloth production rose from 2,034 million square yards in 1944¹⁷ to 2,123 million in 1950,¹⁸ but this was still short of the 3,806 million square yards produced in 1937. Similarly, although cotton and rayon cloth exports improved from 568 million square yards in 1945¹⁹ to 1,020 million in 1950,²⁰ the 1937 total of 2,124 million was not approached. This inability to regain prewar levels of production and exports was due in part to the neglect of machine maintenance during the war, but primarily to the continuing shortfall of labour. In January 1946 the Board of Trade Working Party estimated that a further 255,000 operatives were needed before cotton could work to full capacity.²¹ Soldiers and munitions workers were reluctant to return to the mills, for they remembered the low wages and high unemployment in cotton during the thirties. Parents, for similar reasons, attempted to

¹² Robson, *The Cotton Industry in Britain*, p. 343.

¹³ *Ibid.* p. 338.

¹⁴ Cotton Board, *Report of the Committee to Enquire into Postwar Problems* (Manchester, 1944), p. 9.

¹⁵ *Ibid.* p. 24.

¹⁶ Board of Trade, *Working Party Reports: Cotton*, pp. 157-213.

¹⁷ Lacey, 'Cotton's War Effort', p. 64.

¹⁸ See Table 3 below.

¹⁹ B. Vitkovitch, 'The U.K. Cotton Industry, 1937-54', *Journal of Industrial Economics*, III (1955), p. 244.

²⁰ See Table 3 below.

²¹ Board of Trade, *Working Party Reports: Cotton*, p. 54.

dissuade their children from entering such an insecure trade. As a result employment in the industry increased by only 63,000 between 1945 and 1950.²²

With production constrained in this manner, the high levels of domestic and overseas demand ensured exceptional profit margins for Lancashire. Between 1946 and 1950 the average annual profit of spinning companies rose from £8,243 to £35,166.²³ If the industry had used these profits to finance large-scale investment in new machinery, it would have been far better equipped to face the renewed competition in 1950. Yet this is what Lancashire manifestly failed to do. To take spinning as an example, an annual average of 300,000 new ring spindles were installed between 1945 and 1951.²⁴ Although this was six times faster than the rate of installation in the period from 1935 to 1938, it amounted to a comparatively slow process, for in 1946 Britain possessed a total of 38 million mule-equivalent spindles.²⁵ Several factors hampered investment. It took some time for the textile machinery producers to reconvert their factories from armaments production to their peacetime role. In consequence new looms and spindles were both scarce and expensive. Furthermore, to help relieve the dollar crisis, the Labour government put stringent controls on the importation of textile machinery and diverted a large proportion of British production abroad.²⁶

Throughout this period the industry's leaders were constantly looking over their shoulders at the reviving textile industries of Japan. The Federation of Master Cotton Spinners' Associations feared that the Allies, who were opposed to the reconstruction of Japanese heavy industry, would have no option but to assist the recovery of Japan's textile firms.²⁷ It would appear that the Federation guessed the Allies' policy correctly. In late 1948 the Allied authorities in Japan and five Commonwealth nations, including the U.K., signed a trade agreement to exchange essential raw materials for over £16 million worth of Japanese cotton textiles.²⁸ The stated aim of this agreement was to assist the rehabilitation of the Japanese economy. To compound matters, Lancashire's inability to produce enough cloth to satisfy her overseas customers during this period led to quantities of Japanese cloth being shipped to the U.K. for dyeing, bleaching and printing in British finishing works, ready for re-export to the colonies.²⁹ The Japanese were thereby able to gain a bridgehead in the markets of British West Africa. Even when finished in Britain, Japanese cloth was normally cheaper than wholly British cloth, and during the fifties Japan was able to exploit its advantage in these markets to great effect.

²² Board of Trade, *Working Party Reports: Cotton*, p. 52; *Cotton Board Trade Letter: Statistical Supplement*, 25 (Manchester, 1952), p. 3. These figures include the doubling section.

²³ Robson, *The Cotton Industry in Britain*, p. 338.

²⁴ *Ibid.* p. 341.

²⁵ *Cotton Board Trade Letter: Statistical Supplement*, 25, p. 3. There were two types of spindle in use at this time. Ring spindles tended to have approximately 1.5 times the capacity of mule spindles. The term mule-equivalent spindles takes this difference into account to provide an aggregate measure of spinning capacity.

²⁶ *The Times*, 17 Sept. 1947, p. 2, col. 1.

²⁷ Federation of Master Cotton Spinners' Associations Ltd. *Annual Report, 1947* (Manchester, 1948), p. 18.

²⁸ *Board of Trade Journal*, 155 (1948), p. 942.

²⁹ *Board of Trade Journal*, 153 (1947), p. 1164.

By early 1949 Lancashire was becoming seriously worried about what lay ahead. Japan had regained full control over its textile industries from the Allies, and was suspected of deliberately holding down domestic cloth consumption to free more for export. Bearing these developments in mind, the Operative Spinners' Amalgamation warned that although a return to the pre-1939 state of affairs would be "intolerable . . . the signs and portents at present indicate that such a situation is not impossible".³⁰

II

Such fears were well-founded, for after 1950 the long decline of the British cotton industry resumed its course. Yarn production (inclusive of man-made staple fibre yarn) dropped from 944 million pounds in 1950 to 439 million in 1970. Output of cotton and man-made fibre cloth fell from 2,971 to 1,276 million square yards over the same period. Employment declined apace, from 244,000 operatives (excluding doubling) in 1950 to 76,000 in 1970.³¹

As may be imagined, declining output and employment were accompanied by a deteriorating balance of trade in cotton textiles. 1959 was the first year since the industry's foundation in which cloth imports exceeded exports. Once this gap had been opened it continued to widen throughout the succeeding years. British cotton and man-made fibre cloth exports fell from 1,020 to 255 million square yards between 1950 and 1970. Since exports of rayon, nylon and mixture cloth declined by only 80 million square yards, it is apparent that cotton cloth exports plummeted by 685 million over this period. These figures are reflected in the rapid decline in Britain's share of global cotton cloth exports, from 15 per cent in 1950 to under 3 per cent by 1968.

Table 1. *The Share of U.K. Cloth Exports in World Trade (Cotton and Allied Textiles)*

	Total world cotton cloth exports	U.K. share of world cotton cloth exports	Total world man- made fibre and mixture cloth exports	U.K. share of world man-made fibre and mixture cloth exports
	M yd ²	%	M yd ²	%
1937	6,500	29.6	800	10.0
1950	5,500	15.6	900	21.9
1955	4,700	11.8	1,700	7.9
1960	6,030	5.3	2,234	2.4
1965	5,588	3.7	2,893	3.3
1968	5,559	2.8	3,555	2.2

Sources: *Cotton Board Quarterly Statistical Review*; R. Robson, *The Cotton Industry in Britain* (1957), p. 359.

In contrast to the interwar years, Britain's declining exports after 1950 cannot be blamed on a falling world total of cloth exports, for over the 1950s and 1960s world exports showed no overall tendency to decline. As in the thirties, the only encouraging trend was in the man-made sector, where after declining during the fifties and early sixties piece goods exports began to

³⁰ Amalgamation of Operative Cotton Spinners and Twiners, *Report of the Executive Council for the quarter ending 31 Jan. 1949* (Manchester, 1949), p. 6.

³¹ To avoid excessive complication the secondary sections of doubling and waste spinning are excluded from consideration in the remainder of this paper.

Table 2. *The U.K. Spinning Industry (Cotton and Allied Textiles), 1950-70*

	Cotton yarn output	Man-made staple fibre & mixture yarn output	Cotton yarn exports	Man-made staple fibre & mixture yarn exports	Cotton man- made staple fibre & mixture yarn imports	Spinning employment	Yarn output per worker	Yarn consumed by weaving
	M lb	M lb	M lb	M lb	M lb	'000s	lb	M lb
1950	853	91	84	3	14	107	8,820	714
1951	865	103	80	5	32	110	8,820	742
1952	591	91	45	3	7	87	7,850	551
1953	693	151	52	5	3	97	8,750	631
1954	740	147	52	4	11	100	8,840	666
1955	647	125	47	4	14	91	8,450	578
1956	597	139	47	5	17	86	8,550	535
1957	623	141	48	5	15	86	8,840	550
1958	528	144	35	6	15	78	8,660	479
1959	508	145	31	3	21	71	9,190	445
1960	495	145	30	4	39	64	10,060	450
1961	455	126	23	3	44	62	9,340	411
1962	392	113	22	5	33	54	9,390	352
1963	395	121	21	5	37	49	10,440	350
1964	412	139	21	6	43	48	11,510	356
1965	393	135	15	6	32	45	11,780	336
1966	368	127	17	7	36	41	12,010	294
1967	308	117	17	6	46	36	11,930	297
1968	304	141	18	10	47	34	13,130	303
1969	292	154	19	15	48	33	13,460	293
1970	277	162	18	18	49	33	13,470	264

Note: All figures exclude doubling and man-made continuous filament fibre. Export figures include cotton thread.

Sources: *Annual Abstract of Statistics (1955-71)*; *Cotton Board Quarterly Statistical Review*.

regain ground. During the fifties imports of cotton cloth rapidly increased from 287 million square yards in 1950 to 728 million in 1960, while the level of man-made fibre and mixture cloth imports was fairly stable, only rising from 55 million square yards to 58 million. These trends were reversed in the sixties, when it was imports of man-made fibre and mixture cloth that forged ahead to 164 million square yards by 1970. Imports of cotton cloth actually declined, from a peak of 731 million yards in 1961 to 467 million in 1970. This turning of the tide of cotton cloth imports coincided with the imposition of a more comprehensive system of quotas by the British government, which will be described later. It is interesting to note that between 1960 and 1970 the deficit on Britain's trade in man-made and mixtures cloth increased by a comparatively small amount, from four million square yards to 47 million. Britain was almost holding its own in the man-made sector. Exports of yarn spun from man-made staple fibre dramatically increased from 3 million pounds in 1950 to 18 million pounds in 1970. Moreover, despite the rapid increase in world output of man-made staple and continuous filament fibres during these years, Britain's share of global production did not decline at all rapidly, falling from 10.3 per cent in 1950, to 8.1 per cent in 1960, and to 7.2 per cent in 1970.³² British involvement in the initial establishment of man-made fibre producing and processing capacity overseas had been substantial.

³² In 1950 U.K. production of all man-made fibres was 173,400 metric tons out of a world figure of 1,676,000 metric tons. By 1960 U.K. output was 268,560 metric tons, compared with a world production of 3,305,000 metric tons. In 1970 U.K. output was 559,400 metric tons out of a global total of 8,340,000 metric tons *United Nations Statistical Yearbook*, 10 (1958), pp. 199-201; 18 (1967), pp. 263-7; 24 (1973), pp. 256-60.

Table 3. *The U.K. Weaving Industry (Cotton and Allied Textiles), 1950-70*

	Cotton cloth output	Man-made fibre & mixture cloth output	Cotton cloth exports	Man-made fibre & mixture cloth exports	Cotton cloth imports	Man-made fibre & mixture cloth imports	Weaving employment	Cloth output per worker
	<i>M yd²</i>	<i>M yd²</i>	<i>M yd²</i>	<i>M yd²</i>	<i>M yd²</i>	<i>M yd²</i>	'000s	<i>yd²</i>
1950	2,229	742	823	197	287	55	137	21,670
1951	2,312	797	864	218	376	99	140	22,150
1952	1,775	631	711	152	180	29	118	20,330
1953	1,957	807	710	177	99	44	124	22,260
1954	2,094	820	637	175	267	67	127	22,930
1955	1,870	733	555	134	300	65	118	22,070
1956	1,693	737	474	121	306	74	108	22,430
1957	1,710	692	458	112	416	74	104	23,210
1958	1,500	631	384	84	387	47	93	22,990
1959	1,404	620	343	64	537	39	85	23,850
1960	1,359	648	321	54	728	58	81	24,700
1961	1,296	638	282	49	731	70	80	24,250
1962	1,099	594	232	55	575	67	75	22,610
1963	1,065	588	223	80	636	64	68	24,300
1964	1,086	641	210	91	766	93	67	25,930
1965	1,066	656	205	95	588	88	65	26,590
1966	961	647	171	65	587	93	61	26,500
1967	782	556	144	71	659	125	51	26,230
1968	767	583	156	78	707	147	47	28,450
1969	759	618	142	101	545	155	46	29,780
1970	720	556	138	117	467	164	43	29,670

Sources: *Annual Abstract of Statistics* (1955-71); *Cotton Board Quarterly Statistical Review*.

Until the 1930s Courtaulds dominated the world rayon scene and had large subsidiaries in Germany, Italy, France, Switzerland and the U.S.A.³³ It also had strong links with firms in India, Denmark, Spain, Sweden, Poland, the U.S.S.R., Japan, and Holland. However, the pre-eminence of British capital was no longer in evidence after 1945; it was the American firm, Du Pont, that led the way in the development of the world nylon industry.³⁴

Discussion of Lancashire's trading difficulties is illuminated by an examination of particular markets and suppliers. In 1950 the three largest markets for British cotton cloth were the two main West African colonies of the Gold Coast and Nigeria, taking 121 million square yards; South Africa (117 million square yards); and Australia (105 million square yards). British cotton cloth exports to these three areas fell by 430 million square yards over the following 20 years. Thus these markets alone accounted for 63 per cent of the total decline in British cotton cloth exports between 1950 and 1969-70 (Table 4 shows that these losses were not offset by increased exports of man-made fibre cloth). Ultimately Lancashire lost these vital markets because it was unable to produce cloth cheaply enough. For instance, in January 1962 British drill 3110 cloth could be obtained on the domestic market at 23d. per yard. Drill 3110 imported from Hong Kong could be had for 18.75d., that from India at 18.25d., and that from China at 16.75d.³⁵ These prices apply to cloth sold in

³³ R. Robson, *The Man-made Fibres Industry* (1958), pp. 51-4.

³⁴ W. J. Reader, *Imperial Chemicals Industries, II, The First Quarter Century, 1926-1952* (1975), pp. 369-79.

³⁵ Cotton Board, *The Implications for the U.K. Cotton Industry of Britain's Entry into the E.E.C.* (Manchester, 1962), p. 30.

Table 4. *Major Export Markets for U.K. Cloth, 1937-70*

BRITISH WEST AFRICA: Nigeria and the Gold Coast							
(i) Imports of cotton cloth (M yd ²)							
	1937	1938	1950	1955	1960	1965	1969
From U.K.	163	66	121	89	61	17	2
Total	231	100	234	319	314	313	247
(ii) Imports of man-made fibre and mixture cloth (M yd ²)							
	1938	1950	1955	1960	1965	1969	
From U.K.	2	17	6	1	1	2	
Total	9	30	152	140	38	7	
SOUTH AFRICA							
(i) Imports of cotton cloth (M yd ²)							
	1938	1950	1955	1960	1965	1970	
From U.K.	152	117	75	57	27	11	
Total	191	195	197	234	113	52	
(ii) Imports of man-made fibre and mixture cloth (M yd ²)							
	1938	1950	1955	1960	1965	1970	
From U.K.	9	44	20	14	6	3	
Total	27	136	172	138	113	101	
AUSTRALIA							
(i) Imports of cotton cloth (M yd ²)							
	1938	1950	1955	1960	1965	1970	
From U.K.	138	105	100	36	13	10	
Total	209	197	272	355	317	358	
(ii) Imports of man-made fibre and mixture cloth (M yd ²)							
	1938	1950	1955	1960	1965	1970	
From U.K.	20	51	20	5	1	1	
Total	76	71	47	25	45	67	

Source: *Cotton Board Quarterly Statistical Review*.

the British market where transport costs for domestically produced cloth were relatively low. In export markets British cloth was handicapped by much higher transport charges, making its price even less competitive. In west Africa the colonial and successor governments further undermined the British position, by refusing to take part in the system of Imperial Preference. As a result, Japanese and European cloth could enter these markets at the same rate of duty as British cloth, hastening their loss.³⁶ Even in Australia, where Imperial Preference was in operation, the preferential duties did not favour British cloth alone, but also that from other commonwealth countries including India and Hong Kong. In addition, G.A.T.T. and other trade agreements gradually eroded the margin between full and preferential tariffs. Adjustments to the preferential margins usually failed to keep pace with inflation, reducing their effectiveness still further.³⁷ The net result was that British cotton cloth exports to Australia fell from 105 million square yards to 10 million over the period 1950-70, while Japan increased its cotton cloth exports to Australia from 8 million square yards to 102 million. British exports to South Africa were increasingly hampered by protectionism and state subsidies to local firms. In the early 1960s one Lancashire company, Cyril Lord (later to

³⁶ Economist Intelligence Unit, *The Commonwealth and Europe* (1960), p. 17.

³⁷ D. MacDougall and R. Hutt, 'Imperial Preference: A Quantitative Analysis', *Economic Journal*, LXIV (1954), pp. 233-57.

manufacture carpets), responded to this situation by closing two of its British mills and setting up production at East London in the Cape.³⁸

Table 5. *U.K. Cloth Imports, 1938-69*

	(i) Imports of cotton cloth (M yd ²)					
	1938	1950	1955	1960	1965	1969
Hong Kong	—	5	51	123	123	97
India	1	76	137	231	157	119
Japan	19	91	64	52	28	10
Pakistan	—	—	—	40	43	76
People's Rep. of China	—	—	5	25	35	48
Others	32	115	43	257	203	195
Total	52	287	300	728	589	545

Note: Figures include imports for re-export after finishing.

	(ii) Imports of man-made fibre and mixture cloth (M yd ²)					
	1938	1950	1955	1960	1965	1969
Austria	—	5	13	1	3	22
Germany (West)	6	4	6	10	11	10
Hong Kong	—	—	—	—	—	13
Italy	3	22	15	11	16	15
Portugal	2	—	—	—	3	14
Switzerland	2	4	—	—	2	14
U.S.A.	—	1	—	15	14	13
Others	11	19	31	21	40	54
Total	24	55	65	58	89	155

Note: Figures include imports for re-export after finishing.

Source: *Cotton Board Quarterly Statistical Review*.

India, Hong Kong and Pakistan were the main suppliers of cotton cloth to Britain between 1950 and 1970.³⁹ The alarm caused in Lancashire by the rapid advance of these imports led to the conclusion of voluntary quota agreements in 1959. However, these were not very restrictive; Hong Kong acquired a ceiling of 164 million square yards per annum, over 40 million more than its exports to Britain in 1958.⁴⁰ In fact the liberality of these quotas was the main reason for their acceptance by the Asian producers. In the early sixties these voluntary industry-level arrangements were extended and supplemented by official bilateral agreements, limiting cotton cloth imports, with Malaya, Japan, Taiwan, Spain, China, and the East European countries.⁴¹ The trend was now to evade these controls by supplying made-up articles. Weaving firms in Hong Kong, China, Japan, and Taiwan sent amounts of cloth to Macao to be made-up and re-exported to the U.K.⁴² Under the provisions of the 1962 G.A.T.T. Long Term Arrangement, designed to manage the developed world's imports of cheap cotton textiles, Britain introduced a global quota for cotton cloth imports in 1966. Only India and Hong Kong retained separate quotas.⁴³ Global quotas had been advocated by the industry's planning body, the Cotton Board, for several years and by the end

³⁸ *Economist*, 15 Sept. 1962, p. 1038.

³⁹ The overwhelming majority of cloth imported from Japan in the fifties was for finishing and re-export.

⁴⁰ Cotton Board, *Cotton Board Conference Papers, 1959* (Manchester, 1959), pp. 5-6.

⁴¹ G.A.T.T., *A Study on Cotton Textiles* (Geneva, 1966), p. 83.

⁴² *Economist*, 12 Mar. 1966, pp. 1039-40.

⁴³ Economics Advisory Group, *The Cotton and Allied Textiles Industry: An E.A.G. Profile* (1973), p.

of the decade cotton cloth imports appeared to have been brought under control, although Lancashire's industrialists argued that by then the damage had been done. Even these apparently more stringent controls were quite easily evaded. During the latter half of the 1960s Hong Kong began to develop a trade in man-made cloth.⁴⁴ Table 5 shows that British imports of man-made and mixtures cloth increased from a negligible quantity in 1965 to 13 million square yards in 1969.

III

Employment in the spinning section fell by 74,380, and that in the weaving section fell by 94,050, between 1950 and 1970. It would be useful to possess some means of measuring the relative contributions to this reduction in employment of such factors as rising imports, falling exports, increasing labour productivity, and declining home demand. This is what the accounting procedure seeks to estimate. The procedure can be used to examine changes in employment within a single industry or over a group of industries. The variant of the technique used here is similar to that applied by Cable to the analysis of declining employment in the British textile and clothing industries during the 1970s.⁴⁵ It is based on the following identities:

$$(1) D \equiv Q - X + M$$

$$(2) P \equiv Q/E$$

$$(3) \text{ therefore } E \equiv (1/P)[D + X - M]$$

$$(4) \Delta E \equiv f[\Delta P, \Delta D, \Delta X, \Delta M]$$

$$(5) \Delta E \equiv (1/P_0)[\Delta D + \Delta X - \Delta M - E_t \cdot \Delta P]$$

where D is domestic demand

E is employment

M is imports

P is average labour productivity

Q is output

X is exports

O and t are the beginning and end years of the exercise.

The first identity defines domestic demand (D) as output (Q) minus exports (X) plus imports (M). Identity (2) defines average labour productivity (P) as output divided by employment (E). Combining (1) and (2) we derive identity (3), which defines employment in terms of domestic demand, exports, imports, and average labour productivity. In identity (4) we see that the change in employment over a discrete interval of time (t years) depends upon changes in these same factors: domestic demand, exports, imports, and average labour productivity. Identity (5) gives the final form of the procedure.⁴⁶

⁴⁴ T. Geiger and F. M. Geiger, *The Development Progress of Hong Kong and Singapore* (1975), p. 71.

⁴⁵ See V. Cable, '“Cheap” Imports and Jobs: The Impact of Competing Manufactured Imports from Low Labour Cost Countries on U.K. Employment', in P. Maunder, ed. *Case Studies in Development Economics* (1982), pp. 54-83; and 'British Protectionism and L.D.C. Imports', *Overseas Development Institute Review*, 2 (1977), pp. 29-48. For an application of the principle to German textiles, see F. Frobel *et al.* *The New International Division of Labour* (Cambridge, 1980); and for the United States, A. O. Krueger, 'The Impact of Foreign Trade on Employment in United States Industry', in J. Black and B. Hindley, eds. *Current Issues in Commercial Policy and Diplomacy* (1980), pp. 73-98.

⁴⁶ A more detailed algebraic exposition of the technique can be supplied on application to the author, at the Department of Economics, Gillow House, University of Lancaster, Lancaster.

Data collected by the Cotton Board enable the changes in E , X , M , and P to be calculated, which leaves D as a residual. The next step is to take each of X , M , P , and D in turn and, holding the other three elements constant, calculate the number of jobs lost over the period in question as a result of the variation in that factor. For weaving this is relatively straightforward, but when applying the technique to spinning it is necessary to take into account the effects of changes in exports, imports, and domestic demand for cloth on the demand for yarn and consequently the employment of spinning operatives. The weight of yarn consumed by the weaving section in each year can be obtained from Cotton Board statistics. Since the output of cloth is already known, the weight of yarn required to produce one square yard of cloth in a given year can be calculated. Holding this quantity constant over the period to be examined, it becomes possible to measure the effect of changes in exports, imports, and home demand for cloth on the consumption of yarn, and consequently upon employment in the spinning sector.⁴⁷ Once this has been done the analysis is complete.

At this point it is worth mentioning some of the defects of this technique. Martin and Evans have criticized the accounting procedure on several important grounds.⁴⁸ They suggest that the choice of D (or indeed of X , M , or P) as the residual term is in essence an arbitrary one. Furthermore, the technique is unable to measure the proportion of employment decline due to the interaction of X , M , P , and D . The procedure assumes that these four factors are strictly independent. In the real world this is almost certainly not the case. For instance, although employment in cotton will be directly reduced by an increase in imports, there are likely to be further ramifications in succeeding time periods. Increased competition from imports will induce surviving firms to reduce their costs by installing new equipment. As this will raise labour productivity it will (at least in the short term) result in a second crop of redundancies. With a static model this problem is insoluble. One answer would be to develop a dynamic model capable of incorporating these effects, but this may lead to further problems in estimating the best form of time lag. In practice, the shorter the period of the exercise, the less importance these inter-relationships will have, particularly in an industry such as cotton, which was not renowned for its speed of adaptation.

The results in Table 6 suggest that the fifties and sixties can be divided into three distinct phases: 1950 to 1955, 1955 to 1960, and 1960 to 1970.⁴⁹ From 1950 to 1955 employment in spinning and weaving fell by 34,820. Given the assumptions of the accounting procedure specified above, the main factor accounting for this decline was falling exports of yarn and cloth. If exports

⁴⁷ The quantity of yarn required to produce a given length of cloth introduces a further factor to the model, and the effect on employment of variations in it must be measured. Holding exports, imports, and domestic demand for cloth constant, the effect on employment in spinning of changes in the weight of yarn needed to produce a unit of cloth is calculated. As there were no major technical developments to influence this factor over the relevant period, any consequent variation in employment can be put down to changes in the use of cotton and man-made staple fibres relative to that of man-made continuous filament fibre yarn.

⁴⁸ J. P. Martin and J. M. Evans, 'Notes on Measuring the Employment Displacement Effects of Trade by the Accounting Procedure', *Oxford Economic Papers*, 33 (1981), pp. 154-64.

⁴⁹ The rows in the tables do not add up to the final (1950-70) column, because of the use of separate base years for each five-year period.

Table 6. *Factors Accounting for the Decline in Employment in the U.K. Cotton and Allied Textiles Industry, 1950-70*

Change in:	Effect on employment in spinning				
	1950-5	1955-60	1960-5	1965-70	(1950-70)
Yarn and thread exports	-4,143	-2,010	-1,315	1,307	(-5,822)
Yarn imports	54	-2,917	646	-1,409	(-3,880)
Labour productivity (spinning)	3,851	-12,108	-7,682	-4,690	(-17,213)
Cloth exports	-9,015	-8,248	-1,673	-746	(-20,836)
Cloth imports	-624	-11,063	2,456	745	(-7,869)
Use of man-made continuous filament fibre yarn in weaving	-5,402	570	-5,035	1,257	(-4,878)
Home demand for cloth woven in U.K.	-381	3,643	-7,132	-7,372	(-17,451)
Home demand for yarn spun in U.K. (except yarn used in weaving)	-40	4,493	865	-1,262	(3,569)
Total change in employment in spinning	-15,700	-27,640	-18,870	-12,170	(-74,380)

Change in:	Effect on employment in weaving				
	1950-5	1955-60	1960-5	1965-70	(1950-70)
Cloth exports	-15,272	-14,229	-3,037	-1,692	(-35,296)
Cloth imports	-1,057	-19,087	4,485	1,692	(-13,329)
Labour productivity (weaving)	-2,139	-9,677	-4,975	-4,973	(-15,865)
Home demand for cloth woven in U.K.	-642	6,283	-12,973	-16,727	(-29,560)
Total change in employment in weaving	-19,110	-36,710	-16,500	-21,700	(-94,050)

had remained at their 1950 level, there would have been 28,430 more jobs in the British cotton industry in 1955 than in the event was the case. Changes in employment due to imports and home demand were relatively slight, and labour productivity in spinning actually declined. The second period, from 1955 to 1960, saw rising imports become the major element in employment decline, although by a less decisive margin. Employment fell by 64,350 between 1955 and 1960. The level of employment in 1960 would have been 33,067 higher if imports had not risen over the previous five years, 24,487 higher if exports had not fallen, and 21,785 higher if productivity had not increased. During the 1960s declining home demand for cloth and yarn took over as the main contributory factor in employment decline. Between 1960 and 1965 employment in spinning and weaving fell by 35,370. The 1965 figure for employment would have been 19,240 higher if home demand had not declined, 12,657 higher if productivity had not risen, and 6,025 higher if exports had not fallen between 1960 and 1965. Declining home demand was by far the largest single factor in the later 1960s. The net reduction in spinning and weaving employment was 33,870 between 1965 and 1970, with falling home demand for yarn and cloth accounting for 25,361 job losses over this period.

It appears, under the restrictive assumption that X , M , P , and D are wholly independent of one another, that the loss of Lancashire's export markets was the most important factor accounting for declining employment in British cotton and allied textiles between 1950 and 1955; the rising tide of imports was the major element between 1955 and 1960; while falling home demand dominated the sixties.

Several special factors come into play in the discussion of home demand. First, some of the decline in domestic demand for domestically produced cloth was due to competition from the rapidly expanding warp-knitting

industry. U.K. production of warp-knitted fabric increased from 8 million kg in 1961 to 35 million kg in 1970.⁵⁰ This impressive rate of growth was mainly at the expense of woven cloth, and was primarily the result of the technical superiority of warp-knitting over weaving, especially after the introduction of double-jersey knitting in 1954. Continuous filament fibre yarn did not weave very well, but it knitted excellently, so that warp-knitting firms were at an advantage in the production of man-made fabric for use in the clothing industry.⁵¹ Warp-knitting also produced fabric at a higher speed than weaving. In 1970 warp-knitted shirtings could be made 25 per cent cheaper than similar quality woven shirtings. As a result by 1969 50 per cent of men's shirts and 80 per cent of women's lingerie and nightwear were made using fabric produced by warp-knitting.⁵² A second factor determining the demand for British cloth was the state of the clothing industry. Between 1958 and 1963 British imports of cotton dresses rose from 727,000 to 2,768,000, while imports of cotton shirts increased from 529,000 to 1,264,000.⁵³ Yet despite increasing import penetration in these and other lines, and rising imports of such items as cotton/polyester shirts as overseas producers attempted to circumvent quotas on cotton cloth imports, it would not be accurate to describe clothing as an industry in retreat. Indeed, production of stockings and socks (from all types of fabric) increased from 33.5 to 50.5 thousand dozen pairs between 1958 and 1966. Over the same interval the output of underwear and shirts rose from 14.6 to 17.3 thousand dozen items, and outerwear production increased from 7.7 to 9.1 thousand dozen items.⁵⁴ Thus the decline in home demand for cloth during the 1960s cannot be attributed to the difficulties of the clothing industry, and is accounted for by clothing manufacturers substituting warp-knitted fabrics for woven fabrics and imported cloth for British cloth.

It is interesting to compare the results derived from the present application of the accounting procedure with those obtained in similar studies. For the West German textile industry between 1960 and 1975, Frobel has suggested that increasing labour productivity was the main factor accounting for declining employment. Krueger's study concludes that the net trade balance in textiles had a positive effect on the level of employment in the U.S. textile industry between 1970 and 1976. However, Cable posits that in Britain between 1970 and 1976 the increase in net imports was the primary factor behind the reduction in numbers employed in cotton cloth production.⁵⁵ Cable's results are particularly interesting, for they raise the possibility that the dominance of declining home demand as an explanation of falling employment in the British cotton industry during the 1960s might only have

⁵⁰ J. A. Blackburn, 'The Vanishing U.K. Cotton Industry', *National Westminster Bank Quarterly Review* (Nov. 1982), p. 49.

⁵¹ A. C. Parsonage, 'An Economic and Technological Study of the Competition between Knitting and Weaving in the United Kingdom Textile Industry' (unpublished Ph.D. thesis, University of Surrey, 1973), pp. 16-7, 68.

⁵² F. A. Wells *The British Hosiery and Knitwear Industry: Its History and Organization* (Newton Abbot, 1972), pp. 181-2.

⁵³ *Cotton Board Quarterly Statistical Review*, 72 (1964), p. 14.

⁵⁴ Wells, *British Hosiery and Knitwear Industry*, p. 179.

⁵⁵ Greater Manchester Record Office, Cotton Spinners' and Manufacturers' Association, Minutes of Central Committee, 1 Apr. 1955.

been an aberration; that in the long run a deteriorating trade balance in cotton textiles might still have been the major factor.

IV

The foregoing analysis suggests that a key question arising from the observed decline of the industry during the postwar decades is whether the industry's obsession with the threat of higher imports was justified.

Although the 1940s had seen a certain amount of renewed faith in cotton among Lancashire's employers and trade union leaders, their hopes for prosperity were soon dashed. The fifties and sixties, like the twenties and thirties, were decades of falling demand, production, and exports, but they were also marred by the new problem of rapidly increasing imports. Once again mill closures were an everyday occurrence, the only difference being that alternative employment was far more readily available than it was between the wars.

Lancashire's response to these difficulties was persistently to lobby for protection. Numerous delegations journeyed from Manchester to Whitehall to put the case for action to save jobs and prevent mills from closing. In 1955, for instance, the Cotton Board Standing Conference on Overseas Trade petitioned Winston Churchill, then Prime Minister, for the introduction of quotas and eventually tariffs on imports of yarn and retained grey cloth from the Commonwealth. When the government failed to respond, the Cotton Board angrily issued a statement expressing its "profound dismay".⁵⁶ Others reacted more belligerently to what they regarded as the government's plain indifference to Lancashire's plight. During the late fifties there was a spate of resignations from the Conservative Party by angry cotton manufacturers and even talk of a new party being formed to put their views more forcefully.⁵⁷ Barnoldswick Conservative Club wrote to the Prime Minister in 1958 to withdraw support from the government until its "policy is adjusted to meet the needs of Lancashire in such measure as to guarantee a brighter future for the industry."⁵⁸ The measures introduced to restrain imports during the early sixties were generally regarded as being too little and too late.

Union leaders viewed the Labour Party's commitment to cotton with equal mistrust. In 1963 George Brown had promised that a Labour administration would set up an Imports Commission to supervise and, if necessary, regulate the importation of cheap cotton textiles. He would also reopen negotiations with G.A.T.T. to persuade other developed countries to take a larger share of the Third World's cloth exports.⁵⁹ At the 1967 T.U.C. Conference, Lewis Wright of the Amalgamated Weavers complained that these promises had not been adequately fulfilled. Instead, the government was pursuing a wholly "laissez-faire" policy towards Lancashire, which was resulting in the "undisciplined rout" of the cotton industry.⁶⁰ A resolution was carried, calling upon the government to mend its ways.

⁵⁶ *The Times*, 5 May 1955, p. 7, col. 1.

⁵⁷ *The Times*, 24 Sept. 1957, p. 4, col. 1.

⁵⁸ *The Times*, 3 June 1958, p. 7, col. 4.

⁵⁹ *Economist*, 27 July 1963, p. 340.

⁶⁰ Trades Union Congress, *Report of Proceedings at the 99th Annual Trades Union Congress* (1967), p. 556.

It is abundantly clear that, rightly or wrongly, Lancashire felt betrayed by successive postwar governments. The industry's campaign singled out imports as the major immediate threat to jobs. The results of the accounting procedure used in this paper suggest that this concentration on imports was not wholly justified, although it can be explained by the fact that imports were the only element that Lancashire felt able to affect through political lobbying. Imports were the main factor accounting for the decline in employment in the industry during the period from 1955 to 1960. But in the earlier period between 1950 and 1955 declining exports made the major contribution to job losses in cotton, and during the 1960s the employment reducing effects of falling domestic demand for yarn and cloth predominated.

This paper has sought to analyse the immediate causes of declining employment in the British cotton industry during the 1950s and 1960s. It is not suggested that the accounting procedure can provide definitive answers to the broader questions posed by the industry's overall decline. The value of this approach is its ability to identify the main source of Lancashire's weakness at any given time, whether poor export performance, depressed home demand or an inability to compete with imported products.

Decline was not arrested by any of the factors which are often assumed to have given Lancashire renewed hope in the early sixties, namely the employment of immigrant labour, the use of computers, and the increasing involvement of the man-made fibre producers in the industry. Net immigration from India and Pakistan rose from 8,350 per annum between 1955 and 1960 to 34,812 per annum between 1961 and 1966.⁶¹ In 1965 Asians comprised 7 per cent of the labour force in the U.K. cotton industry, and by 1968 59 per cent of operatives on night shifts in spinning and 36 per cent on night shifts in weaving were immigrants.⁶² It has been estimated that as late as 1975 46.9 per cent of all Gujaratis of working age in Bolton were employed in the textile and clothing industries, mainly as spinners, weavers, and doffers.⁶³ But it should not be imagined that these Asian operatives bid down wages or took the jobs of indigenous workers. They merely filled vacancies, especially on night shifts, that nobody else wanted. Most Asian workers joined the unions, indeed trade union membership on night shifts was often compulsory. As membership of the main cotton unions increased from 58 per cent to 62 per cent of the industry's workforce between 1960 and 1969, the bargaining strength of the unions cannot have been weakened by the influx of New Commonwealth workers.⁶⁴

Even the growing use of computers was unable to halt Lancashire's decline. A survey conducted by the National Computing Centre in 1968 estimated that 12 per cent of textile and clothing firms either owned or had access to a computer, primarily for stock control and general management purposes. About 90 per cent of these firms had started using computers over the previous five years. But there is little evidence that computers were applied to the

⁶¹ G. C. K. Peach and S. W. C. Winchester, 'Birthplace, Ethnicity, and the Under-enumeration of West Indians, Indians, and Pakistanis in the Censuses of 1966 and 1971', *New Community*, III (1974), p. 389.

⁶² L. Briscoe, *The Textile and Clothing Industries of the United Kingdom* (Manchester, 1971), p. 176.

⁶³ K. G. Hahlo, 'Profile of a Gujarati Community in Bolton', *New Com.* VIII (1980), pp. 305-6.

⁶⁴ Amalgamated Textile Workers' Union, *Eighth Annual Report*, pp. 38-41.

control of the production process itself, hence their contribution to the overall reduction of costs was marginal.⁶⁵

The increasing involvement of Courtaulds and I.C.I. in the cotton industry during the 1960s is well known. Courtaulds acquired the large rayon weaving concern of James Nelson Ltd. in 1963, and in the following year took over three of the major spinning combines: Fine Spinners' and Doublers', the Lancashire Cotton Corporation, and Hayeshaws.⁶⁶ This policy was designed to secure the market for Courtauld's product and was accompanied by large-scale investment in the industry. Between 1962 and 1969 Courtaulds spent £57 million re-equipping its fibre-using operations, and even building some new mills.⁶⁷ Similarly, I.C.I. made loans to Viyella and to Carrington and Dewhurst to buy into the industry by proxy. However, this increased concentration of the industry did not succeed in turning the tide. Frank Kearton of Courtaulds described the results of this policy as "a little disappointing".⁶⁸ Recently Geoffrey Shepherd has suggested that the heavy-handed strategy of Courtaulds and I.C.I. may ultimately have failed because it diverted attention from the issues of product design and the need for flexibility in production in a market subject to rapid shifts in tastes. He contrasts the experience of the British cotton industry during the sixties with that of the much more successful Italian industry, where design and marketing were to the fore.⁶⁹ British industry in general appears to have had a poor reputation for design and quality in this era.⁷⁰

Alternatively, it might be that the efforts of the man-made fibre producers were too late. Cotton's investment performance in the 1950s was lamentable. In 1954 British cotton firms made new investments of \$80 per worker (including the hosiery and knitwear industry), compared with \$114 in France (excluding new buildings) and \$191 in Holland.⁷¹ Why was Britain lagging so far behind comparable nations in the race to convert cotton into an increasingly capital intensive industry? No monocausal explanation will suffice. Lancashire was hampered by a number of factors: a workforce that viewed redeployment with suspicion, poor management, outmoded marketing arrangements, deficiencies in product design, and an atomistic industrial structure which militated against the co-ordination of the different stages in the production process. All these factors combined to produce a lack of dynamism in the industry. But a further crucial influence can be identified. Keynes regarded confidence as the primary determinant of the decision to invest. One might speculate that in an industry such as cotton, where the disasters of the interwar years were still fresh in the collective memory, confidence would have been rather brittle. Perhaps that confidence snapped at the first signs of renewed trouble.

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⁶⁵ National Computing Centre, *Computers in Textiles: A Survey of Computer Applications in the Textile and Clothing Industries* (Manchester, 1968), pp. 4, 11.

⁶⁶ Coleman, *Courtaulds*, III, p. 271.

⁶⁷ Blackburn, 'The Vanishing U.K. Cotton Industry', p. 46.

⁶⁸ Coleman, *Courtaulds*, III, p. 280.

⁶⁹ G. Shepherd, *Textile Industry Adjustment in Developed Countries* (1981), pp. 36-8.

⁷⁰ A. Singh, 'U. K. Industry and the World Economy: A Case of De-industrialization', *Cambridge Journal of Economics*, I (1977), pp. 131-2.

⁷¹ O.E.C.D., *Modern Cotton Industry: A Capital-intensive Industry* (Paris, 1965), p. 110.

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