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The Rt Hon
Margaret Thatcher MP
10 Downing Street
LONDON SW1

Dear Mrs Thatcher,

I am sorry there has been a misunderstanding about work on Unit Labour Costs. I am, indeed, working on presentational aspects of this matter with Sir Keith Joseph, but had not so far produced a proper study.

However the matter can be brought together without too much difficulty and I have drawn up for you the attached interim study of the basic facts. The technical excerpt from "Economic Trends" is enclosed, not because you need to read it, but in order to indicate the status of the underlying statistical work.

Yours sincerely

Peter Cropper
P J Cropper

ENCS

UNIT LABOUR COSTS

There are various ways of measuring a country's international trade competitiveness. The share of world trade might be said to be an indicator of competitiveness; when it increases, the nation must have become more competitive by one means or another. However this is a slightly circular argument.

A different approach is to look at costs rather than prices, and within this to concentrate on the largest element, labour costs. This is done in a series of statistics for relative unit labour costs produced by the IMF. Research by the Bank of England and the Treasury has found these series to be a good explanatory variable for changes in exports and manufactures.

The attached tables provide, from 1975, series on unit labour costs for the UK alone and, converted to a standard dollar basis, for five leading industrial countries.

Exchange rates account for a significant part of the variations in UK relative unit labour costs over the past six years. A fall in the index (i.e. a movement towards greater competitiveness) took place in 1976. A peak was reached in the first quarter of 1981.

However the long term trend of UK unit labour costs over this period has been highly disadvantageous. At 1981 (i), the UK index - with a 1975 base of 100 - had reached 216. At that time the USA figure was 142, the Japanese 147 and the West German 139.

The IMF figures are not available for periods later than the first quarter of 1981. Estimates can be made, however, and these indicate a sharp recovery in UK competitiveness accompanying the recent fall in the sterling exchange rate. The estimated figures for 1981 (ii) and (iii) on the attached table must be checked up to the moment before being publicly used.

PJC

P J CROPPER

29 October 1981

Unit Labour costs index+

		UK	USA	Japan	France	W.Germany
1975		100	100	100	100	100
6		91	101	100	94	96
7		96	107	115	100	110
8		120	114	144	117	130
9		152	122	135	132	146
1980		204	136	131	151	158
1977	i	90	106	106	94	104
	ii	93	107	112	98	108
	iii	97	108	117	102	111
	iv	105	110	126	106	117
1978	i	115	114	129	109	123
	ii	113	114	137	113	127
	iii	122	114	155	122	130
	iv	132	116	156	125	140
1979	i	137	119	147	131	145
	ii	144	122	135	127	139
	iii	162	123	134	131	146
	iv	164	125	122	140	153
1980	i	181	129	118	145	154
	ii	197	136	126	148	156
	iii	216	140	138	158	165
	iv	222	139	144	154	157
1981	i	216	142	147		139
	ii		144			

Source: Economic Trends

+ All the indices are in terms of the US dollar

<u>IMF index of relative unit labour costs*</u>

		UK
1975		100.0
6		93.6
7		89.9
8		97.9
9		113.0
1980		138.9
1977	i	89.1
	ii	88.3
	iii	88.7
	iv	93.3
1978	i	97.3
	ii	95.7
	iii	98.4
	iv	100.3
1979	i	102.4
	ii	112.0
	iii	118.7
	iv	119.0
1980	i	126.4
	ii	136.0
	iii	143.4
	iv	149.7
1981	i	156.2
	ii	152 (estimate)
	iii	135 (estimate)

Source: IMF

* A downwards movement indicates greater competitiveness

Aspects of United Kingdom trade competitiveness

E. A. DOGGETT and J. C. CRESSWELL, Central Statistical Office

In the last year or two there has been an increasing interest in ways of measuring the competitiveness of nations in international trade. Many institutions, including the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD) now publish indicators of trade competitiveness.[1,2,3,4] The reasons for this interest are clear. Variations in the rate of inflation and fluctuations in exchange rates make it difficult to assess a country's competitive position at a time when the slow rate of growth in world trade is making competitiveness crucial. For the United Kingdom, which exports about a third of the net output of its manufacturing industry, trade competitiveness is clearly important. This article introduces a new table of indicators which is to be published regularly among the standing tables in *Economic Trends* from next month.

Competitiveness is essentially a relative concept. No absolute standard of competitiveness exists. The indicators are constructed by compiling an index to show how some relevant characteristic of the UK economy has changed over time, and then comparing the index with the corresponding indices for other countries. A practical consequence of this is that the indicators of competitiveness are restricted by the availability of comparable data for other countries.

There can be no single comprehensive index of competitiveness because of the variety of possible contributory factors. The share of world trade at constant prices might be said to be an indicator of competitiveness; when it increases the nation must have become more competitive by one means or another. However, it does not help to determine by what means competitiveness has increased. The first step in such an analysis is to distinguish between price and non-price aspects.

Non-price competitiveness consists of factors such as quality, product design, reliability, salesmanship, delivery times and after sales service. These factors are important, but are intangible and difficult to measure. For example, though delivery times are in principle measurable, it would be difficult and expensive to do so in practice, and even harder to establish comparable statistics for other countries. The indicators that are published here and elsewhere are therefore of price, and of cost, competitiveness. Nevertheless, the price and non-price factors are interdependent; high profitability can stimulate improvement of the non-price factors, and improvement in quality, etc., can usually be obtained at a cost.

When comparing prices or costs, coverage should ideally be confined to tradable items. Many of the indices available for international comparison of price changes are too wide in scope. The implied deflators for gross domestic product and consumer prices are widely used as indicators of inflation, but they include large elements which are not directly relevant to international trade, for example housing and other construction work and the provision of many services. It is not possible to avoid these difficulties completely, but many of the problems of comparability can be eliminated by confining consideration to manufactured goods*. These comprise about two thirds of UK exports and about half of UK imports of goods and services. Limiting the coverage in this way also facilitates comparability of cost and price indices for the United Kingdom and statistics for other countries generally, although the comparability is not perfect.

A major factor in competitiveness is the exchange rate. The rates at which settlements take place are often determined by long term contracts, or by forward currency market transactions. Nevertheless, movements in the spot rate which is used in compiling the indices are a guide to the effect on competitiveness. The basic indicators of costs and prices have been converted to US dollars and therefore reflect changes in the exchange rate of the domestic currency with the dollar, but comparing the corresponding series for different countries will give an indication of changes in their relative trade competitiveness. The summary measures, being ratios, are independent of the currency employed in the calculation.

For some time now *Economic Trends* has published an index of relative export prices, and this is to be continued in the new table. This index would appear to be the natural measure of competitiveness and it is readily defined and compiled. Nevertheless it has certain limitations; it takes no account of goods which are not exported because their prices are too high; and it is based on unit values as a proxy for price. It also reflects changes in profitability and costs, and does not cover the competition with domestic production in the countries to which the United Kingdom exports nor the competition with imports in the UK domestic market. To cover these points a range of indicators is to be published.

To broaden the scope of the price competitiveness measures, an index of relative wholesale prices has been constructed. For the commodities covered, it reflects the prices of all goods rather than merely those that were actually sold abroad. Its weaknesses are that the coverage is not restricted to export sales, and therefore does not allow for the possibility of manufacturers taking a different margin of profit on exports or producing to different specifications for the export market. In fact, the UK index relates strictly to home sales, and an index of profitability of exports relative to home sales based on movements in the export unit value index and the wholesale price index is also shown in the table. The coverage and methods of calculation of wholesale price

* Defined as in sections 5 to 8 of the Standard International Trade Classification, Revision 2 (SITC Rev 2). Food, drink, tobacco and fuels are the principal exclusions

indices vary from country to country. For the United Kingdom, the index covers the output of all manufacturing industry, which, apart from including the food, drink and tobacco and fuels industries, is broadly comparable with the coverage of the SITC definition of manufactured goods.

A different approach is to look at costs rather than prices. Data limitations restrict the comparison to labour costs, and this will usually overstate the amplitude of movements in total costs. Nevertheless, the IMF index of relative normal unit labour costs which is included in the new table has been found in research by the Bank of England† and the Treasury to be a good explanatory variable for changes in exports of manufactures.

Further discussion of the relative merits of the different indices can be found in the *Bank of England Quarterly Bulletin* for June 1978[3], and the Treasury's *Economic Progress Report* for February 1978[4].

The table shows five summary measures of UK trade competitiveness together with sets of indices of three of the relevant factors for the United Kingdom and four other countries.

The following are brief descriptions of the methodology used in the construction of the summary indices, together with notes on sources of the data.

Summary measures of the relative position of the United Kingdom

The index of *relative export prices* is the unit value index of UK exports of manufactured goods divided by a weighted average of competitors' export price indices for manufactures, all expressed in US dollars. The index is prepared by the Department of Trade using, in addition to the unit value index for the United Kingdom, indices published by the United Nations for the other main manufacturing countries‡. The index is chain weighted. The weight given to each country reflects the relative importance of that country in the United Kingdom's overseas markets weighted by the importance of that market to the United Kingdom.§ A table showing for each country the unit value index and the overall weight given is published quarterly in *Trade and Industry*[5].

The index of *relative wholesale prices* is the UK wholesale price index for home sales of manufactures (including products of the food, drink and tobacco industries) divided by a weighted average of the indices of competitors' wholesale prices all expressed in US dollars. The index is prepared by the Department of Trade using national indices made available by the IMF. With three exceptions they refer to the manufacturing or industry component of the wholesale or producer price index. For Italy the 'finished goods' component and for Switzerland the 'home goods' component of the wholesale price index is used. The French index is not a true wholesale price index but is the manufactured goods component of their consumer price index. The competitor countries included in calculating the index, and the weighting given to each, are the same as for the relative export prices index.

The index of *relative normal unit labour costs* is an index of normal labour costs per unit of output in the United Kingdom divided by a weighted geometric average of competitors' normal unit labour costs adjusted for exchange rate changes. The normalisation of the basic indices is an attempt to allow for short term variations in productivity from its long term potential.‖ The index, which relates to manufacturing industry, is calculated by the research department of the International Monetary Fund. The weighting used by the IMF in constructing the indices for relative normal unit labour costs is somewhat different from that used in the relative export price and relative wholesale price indices described above, in that it attempts to take account of competition with domestic production in particular markets as well as competition with third countries.

The index of *relative profitability of exports* is the ratio of the UK export unit value index for manufactured goods (sections 5 to 8 of the Standard International Trade Classification, Revision 2) to the UK wholesale price index for home market sales of the products of manufacturing industries, other than the food, drink and tobacco manufacturing industries. Although the range of products covered by the two indices is much the same, the weighting pattern of the wholesale price index reflects the net sales in the base year of the constituent industries, whereas the weighting of the export unit value index reflects the export pattern in the base year. There is also a difference in timing, in that wholesale prices relate largely to quotations for orders in the period, while unit values reflect the price of goods leaving the country in the period. These differences may on occasion lead to movements in the index which do not reflect changes in profitability.

The index of *import price competitiveness* is the UK wholesale price index for home market sales of manufactures other than products of the food, drink and tobacco industries, divided by the unit value index of imports of finished manufactures (sections 7 to 8 of Standard International Trade Classification, Revision 2). There are problems of weighting and timing, similar to those for the index of relative profitability of exports. Semi-manufactured goods have been excluded from the import unit value index because they form a large part of imports of manufactures but only a small part of the net sales of manufacturing industry, on which the wholesale price index is based. In the case of exports the disparity is much smaller. The effect of tariff changes has not been taken into the calculation.

Sets of indices for competing nations

Export price index for manufactures

The export unit value index for the United Kingdom is calculated by taking a wide selection of closely defined

† The relative normal unit labour costs index was compared with the index of relative export prices, relative profitability, unnormalised relative unit labour costs, and other measures of trade competitiveness over the period 1967 to 1977 (2nd quarter). The process of normalising the relative unit labour costs index to remove cyclical effects significantly improved its contribution to explaining changes in exports of manufactures.[3]

‡ Canada, the United States, Japan, Sweden, Switzerland, Belgium/Luxembourg, France, the Federal Republic of Germany, Italy and the Netherlands.

§ Based on an export matrix. The total UK export market is divided into 11 areas. Area *A*, for example, receives 6·8 per cent of the UK total exports of manufactures. The ten competitor countries listed above also export to area *A*, and of their total exports of manufactures to area *A* 3·7 per cent came from the United States. The weight given to the United States as a result of this transaction is

$$\frac{6\cdot8}{100} \times \frac{3\cdot7}{100} = \cdot002516$$

The total weight given to the United States in the index is obtained by adding to this the weights similarly derived for the United States in the other 10 market areas.

‖ Based on the fitting of Cobb-Douglas production functions.[6]

relatively homogeneous trade headings, and within each of these trade headings calculating the average value (i.e. the ratio of value to quantity). The average values for selected headings are weighted together (with fixed weights) to calculate aggregate unit value indices. The unit value index differs from a true price index to the extent that the average values for the selected headings differ from prices. Each country calculates its own indicator of export price changes and the methods vary in the degree of detail employed in the calculation and in the choice of weights. The UK weights reflect the pattern of exports in the base year (1975). Those for France and West Germany are current year weighted, while the United States and Japan employ chain linked Fisher indices. The unit value indices for all countries covered by the index of relative export prices are published quarterly by the Department of Trade.[5]

Wholesale price index

These indices, which are derived from national sources, are supplied by the IMF in national currency terms and converted by the Department of Trade to a US dollar basis. As indicated earlier, the precise coverage of the indices varies from country to country.

Unit labour costs index

These are basic (i.e. unnormalised) unit labour costs indices as published by the OECD in *Main Economic Indicators* for each country except France. They represent changes in the actual labour costs per unit of output converted to a US dollar basis. Labour costs cover principally wages and salaries and employers' social security contributions. The index for France has been provided by the Institut National de la Statistique et des Etudes Economiques, and converted to US dollar terms by the CSO.

Recent movements

The charts show movements in the indicators of trade competitiveness which are to be published in *Economic Trends*, together with the UK share in exports of manufactured goods by the main manufacturing countries of the world, and the effective exchange rate index for sterling. A decline in an indicator of competitiveness signifies an improvement in that aspect of the UK competitive position. A decline in the profitability index signifies a deterioration in relative profitability of exports.

The various measures of competitiveness show some prominent similarities. The sharp improvements in the third quarter of 1973 and throughout 1976 reflect declines in the effective exchange rate for sterling. Between these periods there was loss of competitiveness in early 1974 associated with an increase in the exchange rate, followed by a year and a half of stable or slowly deteriorating competitiveness, when increases in export prices were to a large extent offset by a steadily declining exchange rate. During 1975, costs (adjusted for exchange rate changes) increased by no more than those of our competitors, and by the end of the year the relative profitability of exports was slightly higher than at the beginning.

The decline in the exchange rate in 1976 brought with it an improvement in competitiveness and at the same time a significant improvement in the profitability of exports relative to home sales. The relative profitability of exporting reached its peak in the fourth quarter of 1976, but has remained high ever since. The 10 per cent appreciation of sterling between the fourth quarter of 1976 and the first quarter of 1978 brought with it general losses of competitiveness, but the extent of the losses shown by different indices varied. In terms of domestic prices, relative normal unit labour costs rose only slightly faster than those in the rest of the world, whereas export prices and wholesale prices rose much faster in the United Kingdom, so that when the effects of exchange rate changes are added in, the loss of competitiveness was quite sharp. In the second quarter of 1978 there were large recoveries in price competitiveness, and a smaller recovery in cost competitiveness. For the latter half of 1978 information is incomplete, but sterling has strengthened somewhat, tending to worsen UK competitiveness, particularly in relation to the United States, where the dollar has been weak.¶

¶ This conclusion is necessarily tentative. Little is known yet about the performance of other countries over the period.

References

1. *International Financial Statistics* (IMF) monthly
2. 'The international competitiveness of selected OECD countries', *OECD Economic Outlook: Occasional Studies*, July 1978 (OECD)
3. 'Measures of competitiveness in international trade', *Bank of England Quarterly Bulletin*, June 1978
4. *Economic Progress Report*, February 1978 and September 1978, HM Treasury
5. 'Economic indicators of the industrial countries: quarterly analysis', *Trade and Industry* (most recently in the issue of 2 December 1978)
6. J. R. ARTUS, 'Measures of potential output in manufacturing for eight industrial countries, 1955-78' *IMF Staff Papers*, March 1977

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10 DOWNING STREET

From the Private Secretary

2 November 1981

The Prime Minister was most grateful for your letter of 30 October with the attached work on unit labour costs. This is very useful material to back up arguments which have been used by the Prime Minister and other Ministers in recent weeks about competitiveness.

M. C. SCHOLAR

P. J. Cropper, Esq.