

**TRADE AND EMPLOYMENT IN SCOTLAND**  
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This paper has been prepared for a conference on the implications of the Brandt report for Scotland and is concerned with Scotland's international trade, particularly with the developing world, and the effects of trade on the employment structure.

Approximately two thirds of Scotland's external trade is carried on with the rest of the United Kingdom; the remaining one third represents Scotland's overseas trade, ie trade carried on with the rest of the world. It is this latter element which particularly concerns us, and the following analysis will be concerned with rest of the world trade only.

Table 1 shows all those Scottish industries which export to the rest of the world more than one quarter of their gross output.

In column (2) we have indicated the value of these exports. The total figure for the 18 industries concerned of £787.93 million represented 63% of total Scottish exports to the rest of the world in 1973. Column (3) shows the proportion of each industry's output which it exported to the rest of the world and column (4) shows the number of employees in each industry at June 1977. The total figure for column (4) of 219.8 thousand employees represented 10.6% of total employees in employment in Scotland in that year.

It is clear from the table that the most important commodity groups exported in value terms are Whisky and Other Spirits, Computers and Electronics, Shipbuilding and Marine Engineering, and Paint and Other Chemicals. Whisky not only accounts for almost 20% of all exports, but itself exports the largest percentage of its own output (75.17%) of any industry. More recent figures indicate that whisky is still the single most important Scottish export although its share of total manufactured exports is steadily declining.<sup>1</sup> From the same source we have estimates of recent changes in the territorial destination of Scottish manufactured goods exports. These are shown in Table 2. The figures in Table 2 clearly show the increasing importance of the EEC market to Scotland throughout the 4 years covered by the survey. This almost certainly reflects the effects of membership of the EEC which began in 1973. What the figures cannot reveal is whether the trade creating effects of accession to the EEC were greater than the trade diversion effects. Before 1973 Scotland had a greater share of its overseas trade with the Sterling area and with North America than did the rest of the UK.<sup>2</sup>

**TABLE 1 SCOTTISH INDUSTRIES EXPORTING MORE THAN 25% OF THEIR OUTPUT TO THE REST OF THE WORLD IN 1973**

(1) Commodity Groups	(2) Value of Exports 1973 (£ million)	(3) Proportion of industry's out- put exported %	(4) No of Employees 1977 (Thousands)
Whisky & Other Spirits	234.57	75.17	22.2
Electrical Machinery	34.66	59.01	7.1
Computers & Electronics	107.73	55.45	27.4
Construction Equipment	47.87	51.25	11.7
Office Equipment	17.91	46.76	4.9
Shipbuilding/Marine Eng.	96.86	44.90	39.7
Man-made fibres	8.03	43.15	1.4*
Industrial Engines	28.62	41.04	11.5
Spinning & Weaving	25.93	40.89	7.3
Aerospace Equipment	28.01	33.87	10.1
Agricultural Machinery	6.14	33.81	3.8*
Paint & Other Chemicals	54.27	32.91	14.5*
Instrument Engineering	25.45	32.81	14.7*
Rubber Products	17.07	30.46	6.3
Machine Tools	8.13	29.74	2.7
Hosiery & Knitted Goods	18.92	28.19	14.7
Sea Transport & Ports	19.37	27.69	15.6
Wire Products	8.39	27.44	4.2
<b>TOTAL</b>	<b>787.93</b>		<b>219.8</b>

**Sources:** Department of Employment Gazette, March 1980  
Fraser of Allander Institute et al Input/Output Tables for  
for Scotland, 1973  
Scottish Academic Press, Edinburgh, 1978

\*Under-representation due to non-disclosure

**TABLE 2 DESTINATION OF SCOTTISH MANUFACTURED EXPORTS**

TOTAL INC. WHISKY	EEC	EFTA	NORTH AMERICA	STERLING AREA	OTHER
1974	30.1	10.6	16.7	20.5	22.1
1975	27.6	8.4	16.5	23.3	24.2
1976	37.2	8.8	11.8	19.1	23.1
1977	38.2	9.4	13.6	17.0	21.8
<b>TOTAL EXC. WHISKY</b>					
1974	32.6	12.0	11.4	22.9	21.1
1975	29.4	9.4	12.2	26.3	22.7
1976	40.2	9.7	7.7	20.8	21.6
1977	41.4	10.4	10.3	18.4	19.5

**Source:** Scotland's Manufactured Exports 1974-1977, SCRI, 1978

When whisky is excluded from the export figures the importance of the North American market falls substantially. Table 3 shows the destination of whisky exports in 1978. Not surprisingly Scotland dominates the world whisky market. In 1976 it held a 35% share compared to the US share of 26%, Canada 15%, Japan 14% and others 10%.

**TABLE 3 DESTINATION OF WHISKY EXPORTS 1978**

COUNTRY/AREA OF DESTINATION	BY VOLUME (million proof gallons)		BY VALUE (£ million)	
	mpg	%	£m	%
	USA	36.23	34.3	194.37
EEC (approx.)	15.10	14.3	104.06	15.7
Australia/ New Zealand	3.57	3.4	18.48	2.8
Japan	10.34	9.8	49.41	7.5
Others	40.38	38.2	294.90	44.6
	105.62	100.0	661.22	100.0

**Source:** Thomson J K, **Should Scotland Export Bulk Whisky?**  
Scottish Council (Development & Industry) Dec 1979.

## Restrictions on Scottish Exports

What restrictions are placed on Scottish exporters in overseas markets, and how do these limit job opportunities in Scotland? There are no precise answers available to these questions, but a few fragmentary pieces of evidence may be adduced.

In its quarterly surveys of its members opinion, the CBI asks a number of questions, of which a few relate to exports and export prospects. One question is "What factors limit your ability to obtain export orders over the next four months?" Table 4 shows the responses which were obtained to this question both in Scotland and in the United Kingdom over four recent surveys. The respondents are classified according to six broad commodity groups. From this table it is clear that as far as the UK sample of respondents is concerned, an overwhelming importance is attached to competitors' prices as a factor limiting export expansion, compared with formal import restrictions or political and economic conditions abroad. If this sample is a representative one, it suggests that industrial exports may be responsive to a fall in the exchange rate of the pound. It should be noted that the percentages in Table 4 need not total 100, as more than one answer per respondent was allowed. Perhaps for this reason, because of the small size of the sample, the pattern of Scottish responses is much more variable. There is one Scottish result which stands out, however: Scottish respondents in the food, drink and tobacco sector returned a consistently strong indication that quota and other import restrictions limited their export potential. Since the responses are trade-weighted, we can safely assume that the complainants are whisky distillers. Indeed, the Scotch Whisky Association has identified no fewer than 350 cases of trade restriction against its product. Restrictions by overseas governments on imports of whisky into their countries is a complex issue which has recently been reviewed by Thomson<sup>3</sup>. Almost all of these restrictions are against the more processed form of whisky ie that which has been bottled and packaged in Scotland. The industry's answer to this has been to export both bulk blended and bulk malt whisky. A number of observers (particularly trade unions and academics) have made the point that, since the main job-related aspects of the whisky trade are in the processing and bottling of the finished product, this bulk trade is costing Scotland a large number of jobs.

Thomson's analysis shows that, depending on whether or not bulk exports are fully replaced by bottled exports and on whether or not the US removes its tariff on whisky imports (Wine Gallon Assessment Act), then the total direct employment effects of banning bulk exports would range from 2,065 jobs created (with maximum replacement and the US tariff reduction) to 135 jobs lost (with minimum replacement and no US tariff reduction). By using Thomson's estimated employment multiplier of 2.5 these results yield a total of jobs created and lost of 5,163 and 338 respectively (the latter figure is obviously an overstatement since it assumes all income is lost and doesn't take into account the demand-sustaining effects of unemployment benefit.

**TABLE 4 RESPONSES OF CBI MEMBERS TO THE QUESTION "WHAT FACTORS ARE LIKELY TO LIMIT YOUR ABILITY TO OBTAIN EXPORT ORDERS OVER THE NEXT FOUR MONTHS?"**

Commodity Group & and Date of Survey	Prices Compared with Overseas Competitors		Quota & Imports Licence Restrictions		Political or Economic Conditions	
	UK	SCOT	UK	SCOT	UK	SCOT
<b>Food, Drink &amp; Tobacco</b>						
(Percentages)						
October 1979	52	4	34	89	43	41
January 1980	50	8	42	85	47	33
April 1980	57	18	31	84	40	14
July 1980	70	27	29	96	36	37
<b>Chemicals, Coal &amp; Petroleum Products</b>						
October 1979	54	80	24	-		
January 1980	59	100	21	-		
April 1980	53	55	12	-		
July 1980	79	87	17	22		
<b>Metals &amp; Metal Manufacture</b>						
October 1979	90	97	27	61		
January 1980	86	97	29	18		
April 1980	84	100	1	-		
July 1980	82	97	4	15		
<b>Mech. Instrument, Elec &amp; Vehicle Engineering</b>						
October 1979	81	69	14	37	44	49
January 1980	78	77	9	31	4	22
April 1980	83	81	8	-	35	29
July 1980	85	93	4	13	44	50
<b>Textiles</b>						
October 1979	84	67	9	2		
January 1980	82	44	13	14		
April 1980	87	62	11	5		
July 1980	88	95	5	2		
<b>Other Manufacturing</b>						
October 1979	89	67			29	41
January 1980	87	76			32	16
April 1980	90	62			27	16
July 1980	86	85			26	16

Source: CBI Industrial Trends Surveys October 1979 to July 1980

It is clear, therefore, that although many more jobs are associated with packaging and bottling whisky than with distilling it, the overall effects on jobs of discontinuing bulk whisky exports remain unclear; unless the situation following any ban can be estimated beforehand.

Of the other major exporting industries listed in Table 1, several, including computers and electronics, electrical machinery, construction equipment, office equipment, industrial engines, instrument engineering and machine tools fall into the broad class of goods "mechanical, instrument, electrical and vehicle engineering" which is identified in Table 4. The UK responses indicate that this class of good does not encounter much import restrictions abroad. Since these are sophisticated goods which are unlikely to compete with the domestic industries of developing countries, this is not surprising. However, some of the more advanced of the developing countries, such as Brazil do impose quotas and tariffs on a wide range of imported machinery, which does limit the possibilities for Scottish exporters.

Shipbuilding and marine engineering is the largest employer of all the export industries. This may be because the construction of rigs and floating platforms for the offshore oil industry is classified as shipbuilding. Shipbuilding in the traditional sense is an activity in which countries subsidise their exports, none more so than the United Kingdom. The most verifying example of this was the recent Polish shipbuilding order. So distorted is the international market, that it is impossible to estimate what constitutes fair competition.

Of the remaining industries in Table 1 there seems no **prima facie** evidence of trade discrimination except perhaps in the aerospace industry, where buyers are invariably governments. Government purchasing contracts are invariably biased in favour of the home country and it is difficult for a producer to survive in a country without a major defence programme or a major airline.

#### IMPORTS AND EMPLOYMENT IN SCOTLAND

Table 5 lists the Scottish industries which face strong import competition. Specifically it lists those where imports make up more than 15% of the total supply of the commodities concerned. In this table the industries are ranked according to column 3, ie the proportion of total supply coming from the rest of the world. The cut off point for industries to be included in the table has been lowered from the 25% level of Table 1 to the 15% level. This underlines the fact that imports are more widely diversified than exports and that nearly all Scottish industries face some sort of competition from abroad. The fifteen groups which are listed in Table 5 account for just over 50% of total imports to Scotland from the rest of the world. The two questions which we wish to address ourselves to in the remainder of this section of the paper are:

1. To what extent do the Scottish industries listed in Table 5 enjoy protection from the imports with which they compete?
2. To what extent would the extension of such protection by quota, tariff, subsidy or other means increase employment in Scotland?

**TABLE 5 IMPORTS FROM THE REST OF THE WORLD ACCOUNTING FOR MORE THAN 15% OF TOTAL SUPPLY IN SCOTLAND IN 1973**

(1)	(2)	(3)	(4)
Commodity Group	Value of Imports (£ million)	ROW Imports of Commodity (% of total supply)	No of Employees in corresponding industry (1977) (Thousands)
Oil & Gas Exploration	120.74	89.80	5.9
Metallic ores etc	32.77	38.88	2.1*
Sea Transport & Ports	30.87	30.36	15.6
Office Equipment	19.26	30.21	4.9
Paper & Board	57.65	27.76	9.9
Timber Products	66.40	26.95	13.3
Construction Equipment	34.83	23.76	11.7
Instrument Engineering	27.18	21.24	14.7*
Sugar & Confectionery	18.00	20.55	3.1*
Coal Mining	21.85	20.37	27.2
Indus. Plant & Equip.	62.93	18.93	23.5
Electrical Machinery	21.45	18.48	7.1
Man-made fibres	7.59	17.85	1.4
Agriculture	120.11	16.98	41.9
Spinning & Weaving	21.74	16.90	7.3
<b>TOTAL</b>	<b>663.37</b>		<b>189.6</b>

**Sources:** Department of Employment Gazette, March 1980  
 Scottish Input/Output Tables for 1973, Fraser of Allander Institute et al, 1978

\*Under-representation due to non-disclosure

The evidence which is available to answer the first question is of limited value. The available data are shown in Table 6. They relate to the United Kingdom, and are for the years 1963 and 1968; they do not include all the headings in Table 5 since the classification system does not exactly match our own, and the author of the estimates has himself questioned their accuracy. In the case of three of the industries displayed in Table 6, the rates of protection are less than 5% whereas in the other groups three have their rates for effective protection increased over the period while two fell. Perhaps it should be explained that the rate of effective protection provides a rough measure of the degree to which domestic producers can be inefficient and still compete with imports. Since the period between 1963 and 1968 saw the completion of the Dillon Round of tariff reductions, and the beginning of the Kennedy Round we should have expected that all rates of protection would have fallen between 1963 and 1968, in particular the nominal rates. This was the plan though not the case with construction equipment, industrial plant and equipment and electrical machinery.

Looking at the industries listed in Table 5 from the point of view of extending further protection to them, they fall into three distinct categories:

There is first of all that category of commodities which, for technical reasons, do not compete with the like named domestic product. Thus, most of the goods and services imported under the rubric of Oil and Gas Exploration are specialist services and equipment which would not be produced in Scotland. Likewise a large element of the commodity group Metallic Ores is likely to be made up of iron ore. Again, Paper and Board (newsprint), Timber Products (hardwood), Sugar and Confectionery (cane

**TABLE 6 NOMINAL AND EFFECTIVE RATES OF PROTECTION FOR SELECTED UK INDUSTRIES, 1963 AND 1968**

UK Commodity Group	Corresponding Scottish Commodity Group	Nominal 1963	Tariff 1968	Effective 1963	Tariff 1968
(Percentages)					
Office Machin.	Office Equip.	11.6	6.5	18.8	8.7
Paper & Board	Paper & Board	2.6	1.1	2.4	-0.1
Timber & Wood Manuf.	Timber Products	2.1	1.5	1.4	0.5
Contractors, Plant & Mech. Handling Equip.	Construct. equip.	6.3	12.5	6.8	21.7
Scientific Instruments	Instrument Engineering	15.1	11.2	22.6	14.7
Industrial Engines	Indus. Plant & Equipment	2.3	5.1	-2.4	3.2
Electrical Machinery	Electrical Machinery	9.5	20.9	13.6	40.3
Cotton etc, Spin & Weave	Spinning and Weaving	6.1	5.4	5.3	5.9

**Source:** Artis & Nobay (eds) **Essays in Economic Analysis**, CUP 1976, pp196-197

sugar) are largely or wholly imports of raw materials not produced in Scotland. In these cases, import substitution would simply not be feasible.

Agriculture, a huge bundle of diverse commodities, straddles the first and second categories. This group also contains a number of commodities (eg hard wheat) which are non-competing as well as many other raw materials. However, it also contains commodities which do compete with domestic products, for example livestock and dairy products. But for these products the market is already heavily protected. Therefore some of the agricultural imports fall into our second category, that of commodities for which there exists a regulated market.



which there exists a regulated market.

An argument is of course frequently made for further extending protection to agriculture in order to increase domestic production at the expense of imports. So far as our present purposes are concerned, this argument however has two severe limitations. First of all, any measures which were adopted to further diminish the imported supply of agricultural products from eg New Zealand, would not necessarily lead to increased sales of Scottish agricultural products since the gap might simply be filled by products supplied by other EEC countries. Secondly, even if it were somehow possible to expand domestic agricultural production, (within or outside the CAP) by adopting even stronger protectionist measures than those which exist at the moment, then the employment effects would be negligible. Such is the rate of substitution of machinery for labour in agriculture, there is little prospect for expanding employment in this industry.

The other commodity groups listed in Table 5 which fall into our second category include Sea Transport, Coal Mining and Man-made Fibres. Employment in the last named is negligible. Sea Transport is a particularly sensitive sector with some developing countries pressing in UNCTAD for adoption of the principle of "cargo-sharing". There is no scope for further protection of British shipping, indeed, retrenchment seems inevitable in the long run. Nor are further restrictions on the import of coal likely to expand jobs in the coal industry in Scotland. Additional supplies of coal on the British market, and indeed on the Scottish market, are much more likely to come from the more accessible, and therefore more productive seams of coal in England.

The third category of commodity groups consists of those which also appear in the listing of export industries in Table 1, viz Office Equipment, Construction Equipment, Instrument Engineering, Electrical Machinery and Spinning and Weaving. This indicates the extent to which international trade has led to specialisation within commodity groups. It is clear that any attempt at protection in these sectors would be soft feeding.

Two other commodity groups, neither of them listed in Table 5, are suffering from rapid import penetration. One of these is motor vehicles. At present, British car producers are enjoying the protection of a "voluntary" export agreement which limits the Japanese to around 11% of the British car market this year. Should the Japanese increase their share in the future, jobs at the Talbot factory at Linwood, and at the Leyland factories at Scotstoun and Bathgate might be at risk. It may be argued, however, that such is the worldwide competition amongst assemblers of popular cars that it is not an industry which holds out much hope in the future for increases in real wages in the advanced countries.

One final industry in which Scottish jobs are at risk from competing imports is carpet making. At present, carpets imported from the United States may be sold for as little as one quarter of the price of the domestic product. This gap is too large to be bridged by quality differences alone. Accordingly, carpet manufacturers in Scotland are on short-time working and redundancies are common. In this industry it is doubtful whether the imposition of import controls would result in the saving of many jobs. By staying with the traditional high quality product, the domestic carpet industry has priced itself out of the market. Even if imports of carpets

were completely banned, it is likely that people would try to buy a cheaper substitute such as carpet-tiles or cushion floors.

## THE BALANCE OF EMPLOYMENT AND THE GAINS FROM TRADE

Listing the numbers of employees in those industries in Scotland which contribute substantially to exports and to import replacements can give only the crudest impression of the sensitivity of employment to changes in external trading conditions. We cannot be sure how many of those employed are vulnerable to adverse changes in circumstances, nor how many jobs would be created by a favourable change in circumstances such as the withdrawal of import restrictions overseas. Indeed, nowadays, as a result of such government measures as the temporary employment subsidy, such consequences are as likely to take the form of changes in short-time working as of actual changes in jobs. Nor do the employment figures which are listed in Tables 1 and 5 take any account of the indirect employment which is dependent upon the volume of exports and import replacements. We have already quoted figures to show that many more jobs are created in the ancillary industries which serve the whisky industry than in that industry itself.

However, using input/output analysis an attempt can be made to estimate the overall (direct plus indirect) employment content of exports and of import replacements respectively. According to an earlier study (Simpson & Jowett, (1980))<sup>2</sup> an average £1 million worth of Scottish exports in 1973 employed fewer people than £1 million worth of import replacements. This suggests that if exports were to rise by £1 million and imports to rise by the same amount, so that the balance of external payment was unchanged, then there would be a net loss of jobs. But this is not the whole story. We also know from the 1973 input/output table that Scotland exports more to the rest of the world than it imports from it. Table 7 shows the balance of Scotland's overseas trade goods and non factor services in 1973. From this table it is clear that Scotland enjoys a balance of £105 million on its trade with the rest of the world. Although these data related to 1973, subsequent estimates by other groups indicate that Scotland's balance on overseas trade, both in manufactures and in oil, will have expanded rapidly since that date.

However, when the two calculations are put together, using 1973 data, it turns out that the actual number of jobs created by exports to the rest of the world from Scotland almost exactly matches the number of jobs which are in principle "lost" by imports.

We can deduce from Table 2 that less than half of Scotland's overseas trade is with the developing countries. Now the balance of trade between the industrialised and developing countries is in favour of the former, and is growing. To the extent that Scotland is representative of an industrialised country, then we may deduce that Scotland's balance of trade with the developing countries is substantially in her favour. Thus, although we cannot be conclusive, it would appear that the amount of employment in Scotland which is at risk from developing country imports is very small. As is the case with other industrialised countries, such

**TABLE 7 SCOTLAND'S BALANCE OF TRADE IN GOODS AND NON-FACTOR SERVICES WITH THE REST OF THE WORLD, 1973**

	£ million		
	EXPORTS	IMPORTS	BALANCE
Goods	1,215.72	1,143.55	+ 72.17
Services*	32.50	44.10	- 11.60
Tourism	70.51	26.00	+ 44.51
<b>TOTAL</b>	<b>1,318.73</b>	<b>1,213.65</b>	<b>+105.08</b>

\*Import figures refer to holiday travel only

Sources: Fraser of Allander Institute et al, 1978 Input/Output Tables for Scotland 1973

threats to employment are outweighed by changes originating within the industrialised international economy, such as changes in technology, changes in tastes and changes in resource availabilities. Nevertheless, protectionist pressures are growing, and one major political party has just committed itself to a programme of import controls, albeit selective and "temporary" if it is returned to power.

Throughout the last two sections of this paper the discussion of the effects of international trade upon Scotland has been conducted in terms of jobs. It is perhaps important to emphasise in this concluding section that the gains to a country from international trade are not to be measured on any such crude calculus. Otherwise, we should go back to hewing coal with picks and exporting it. The substance of the gains to any country from international trade come from obtaining commodities at lower prices and of higher quality than it would otherwise be able to obtain by producing them itself. Real living standards rose by about 14% in the United Kingdom during the years 1978 and 1979 when domestic industrial production was stagnating. An important element in the rise in living standards during that period must therefore have come from international trade, specifically from an improvement in the terms of trade. A further important feature of the gains which come about from the expansion of trade is that they are realised by the community at large, whereas protection is invariably beneficial only to the few.

This does not mean to say that our protection is not justified in any circumstances. Aid to particular industries and/or particular regions can be justified provided that they are part of a programme of measures which are designed to help the sector to adjust to change rather than to shield the sector from the consequences of change. It cannot be said that applications of industrial and regional policies to Scotland in the last decade, to go back no further, have been helpful by this standard.

So far as resisting erosion of traditional markets by imports is concerned, it would be better to bargain with the countries concerned about the relaxation of their own import restrictions on our exports, rather than to impose countervailing restrictions of our own. It is clear that the two countries from which Scotland has most to gain by way of the liberalisation of trade are the United States and Japan. If these countries were to

to relax our restrictions on theirs, it would be reasonable to predict that there would be significant gains for Scotland in the shape of living standards and employment opportunities.

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