The Scottish economy faced severe problems in the inter-war period. Its dependence on traditional heavy industries was the root of its depression. Scottish industry has been criticized for failing to wake up to the realities of the twentieth century. Here, Ronald Weir considers the difficult problems the Scottish economy faced in restructuring towards new industries.

Structural Change and the Scottish economy, 1918 - 1939

In 1902 the Registrar-General forecast that Scotland’s population would double over the next 60 years from 4.5 to 8.9 million. This proved wildly inaccurate - by 1961 Scotland’s population was no more than 5.2 million and Scotland accounted for a lower proportion of the UK’s population (9.9%) than it had in 1901 (11.7%). The forecast was based on the rapid population increase in the central Lowlands where industries and manufactures, trade, commerce, and agriculture and educational facilities had attained their highest development. Much optimism was generated by the growth of the heavy industries - coal mining, iron and steel making, mechanical engineering and, above all, shipbuilding and marine engineering – in the west of Scotland. Clyde shipbuilders enjoyed an unrivalled reputation and a giant liner, or a battleship, required not only iron and steel but a whole range of ‘fitting-out’ trades - painters, joiners, electricians, plumbers and upholsterers. Shipbuilding therefore exercised an important multiplier effect on the Scottish economy. In 1913 Clyde yards built a record 757,000 tons, over 33 per cent of UK output, and more than the whole of Germany produced. Little wonder then that optimism was commonplace.

‘A state of arrested development’

The collapse of shipbuilding between the wars tore the heart out of Scotland’s economy. On most indicators, the Scottish economy performed badly during the inter-war period. Real income (see Figure 1) grew slowly during the late 1920s when Scotland missed out on the world boom. In the economic crisis of 1929-32 income fell faster and further than in the rest of the UK. Real income per head of the population fell from 90% of the UK average in 1924 to as low as 86% during the slump of the 1930s. Only after 1935 when rearmament benefited heavy industry did Scotland begin to regain lost ground. Unemployment (see Table 1) was persistently high with the gap between Scotland and the rest of Britain widening during the 1930s.

Emigration (see Table 2) soared in the 1920s when it absorbed 11% of the natural increase in population and, but for emigration, unemployment would have been very much higher. The outflow was reduced during the 1930s but that reflected lack of opportunities abroad rather then growth of opportunity at home. Curiously, emigration was seen as part of the Scots’ natural habits and as a contribution to the peopling of the Empire rather than a loss of the most productive young adults which exacerbated Scotland’s high dependency ratio.

Structural change

Economic historians have been extremely critical of the demise of Scotland’s heavy industries. Scottish industry has been described as ‘under pressure’, or ‘troubled’, or in ‘an Age of Crisis’, and her economic performance as ‘grim’, leaving the nation ‘in a state of arrested development’ [1]. Most damning of all is the verdict that ‘the Scottish economy dramatically failed to come to terms with the economic world of the twentieth century’ [2].

Economic historians have devoted a great deal of effort to explaining ‘the rise and fall’ or ‘growth and contraction’ of Scotland’s staple industries [3]. What they have been less successful in explaining is why it proved so difficult for the Scottish economy to transform its industrial structure and to develop new industries such as motor vehicles, electrical engineering and man-made fibres. This process of transformation is known as structural change.

It may be defined as the change over time in the relative importance of different sectors or industries in terms of resources employed. Structural change is an important issue in economic history because it is fundamental to the process of economic growth. It assists growth if it increases the relative weight if industries with a good productivity performance. In a market economy the transfer of resources should be brought about by the normal working of the price system. In progressive industries rising productivity should reduce prices and, if demand is responsive to lower prices, the weight of these industries in total output should rise [4]. When stated this way, structural change seems straightforward but the statement begs a number of important questions. Does the price system always work normally? What happens if employers or trade unions combine and regulate the price of goods or labour? What happens if resources - capital, labour and entrepreneurship - are specific to particular industries? Are, for example, the skills required to build a ship transferable to Sunbeam Talbot cars? At what point is it apparent to entrepreneurs that demand has shifted irretrievably from one activity to another? The statement refers to productivity, and this may require not only investment in new machines but also the acquisition of new knowledge including, if the progressive industries are science-based ones, investment in research and development. New products also often require new methods of marketing.

Finally, like much else in economics the statement is timeless. It gives no indication of how long the process of structural change should take. In the context of the inter-war period, a relatively short time span of twenty years, this turns out to be an important consideration. For example, one of the new activities in Scotland was hydro - electric power. This industry, which probably did more than any other to rehabilitate northern Scotland and to improve the quality of life, involved massive construction projects some of which were

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Possible explanations

Explanations for the restricted development of the new industries may refer either to supply-side or demand-side factors or a combination of both. On the supply side it has been said that the heavy industries were unable to provide the raw materials and semi-finished goods required by new industries, and that new industries were constrained by lack of suitable factories, good industrial sites, relevant skills and effective government support. A long tradition of building products tailored to specific customer requirements is said to have prevented the adoption of mass production, essential for consumer goods.

Demand-side factors include the small size of Scotland's home market, Scotland's distance from the major markets in the south of England, and the distribution of income and wealth. Distributional considerations appear in three different arguments. The first, and most obvious, is that Scotland's commitment to the depressed staple industries resulted in a slow growth of income which limited demand for the products of the new industries and

Table 1 Percentage unemployment in Scotland and Great Britain

<table>
<thead>
<tr>
<th>Year</th>
<th>Scotland</th>
<th>Great Britain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1923</td>
<td>14.3</td>
<td>11.6</td>
</tr>
<tr>
<td>1927</td>
<td>10.6</td>
<td>9.6</td>
</tr>
<tr>
<td>1929</td>
<td>12.1</td>
<td>10.3</td>
</tr>
<tr>
<td>1932</td>
<td>27.7</td>
<td>21.9</td>
</tr>
<tr>
<td>1934</td>
<td>23.1</td>
<td>16.6</td>
</tr>
<tr>
<td>1936</td>
<td>18.7</td>
<td>13.0</td>
</tr>
<tr>
<td>1938</td>
<td>16.3</td>
<td>12.6</td>
</tr>
<tr>
<td>1939</td>
<td>13.5</td>
<td>10.3</td>
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People had been leaving the land since the mid-nineteenth century, partly in response to higher rates of pay in the industrial sectors. Such broad differences in the sectoral distribution of the labour force help to explain variations in regional income levels. Scotland, for example, had a higher than average proportion of its labour force in poorly paid agriculture and a lower than average proportion in the highly paid (and expanding) service sectors [6].

Discussion of structural change during the inter-war period has been more closely focused on development within manufacturing industry because this sector bore the brunt of job losses in the depression and accounted for the majority of new jobs in the recovery. A partial view of this process is shown in Table 4.

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Rationalisation and diversification

Research into business history makes good sense in relation to structural change, for in a predominantly private enterprise economy, where the role of government was limited, though increasing over time, structural change was largely dependent on the decisions of private businessmen. Two aspects of their response to the depression are particularly important. The first is rationalisation or the elimination of redundant productive capacity either by firms acting on their own or after merger and amalgamation. The second is diversification or the development of dissimilar products based on similar technological and production processes.

The ultimate goal of rationalisation was to concentrate production on the most efficient plant and to bring capacity into line with demand. Sufficient studies exist to show that in the staple trades, where structural weaknesses were greatest and should have led to efforts to reorganise industry, rationalisation was strictly limited.

Even where the state was fully involved, as in coal-mining, or partly involved, as in the iron and steel industry, or where self-help was tried, as in shipbuilding, rationalisation was resisted and ineffective. This is sometimes attributed to lack of will and belief in individualism but, as Campbell has shown, the actions of firms need to be judged against the general evaluation of economic prospects by contemporaries. Using The Glasgow Herald Trade Review as a barometer of contemporary opinion, Campbell shows how the brief post-war boom of 1918-20 encouraged expectations and actions that had a lasting impact. When the boom collapsed, and the need for change was even more imperative, it was also more difficult due to lack of profitability.

Throughout the 1920s, businessmen in the old staples looked, retarded their growth. The second is that Scotland's under-representation in the better-paid service sector meant weaker consumer demand and lower incomes all round. This argument gains some support from the greater prosperity of the eastern Lowlands where a range of consumer industries were sustained by Edinburgh's large numbers of lawyers, civil servants, doctors and teachers. The third, and more subtle argument, is that the extremely unequal distribution of wealth in early twentieth century Scotland biased production towards custom-built rather than mass-produced products. Combining these supply and demand side arguments produces a series of mutually interlocked factors which inhibited new industries and condemned Scotland to economic failure [7].

Relatively few of these arguments have been tested against the experience of Scotland's new industries. An interesting exception is recent research on the early Scottish motor industry which has shown an alarmingly high casualty rate: of 50 new entrants only seven firms survived by 1914, and the reasons for failure varied from under-capitalisation to technical incompetence. By 1930 the Scottish vehicle industry had been reduced to only one producer of any real significance, Albion, and it wisely decided to concentrate on commercial vehicles rather than motor cars. The early promise of the Scottish vehicle industry was not realised and, in contrast to England, a thriving vehicle industry was not part of structural change [8]. Timing was also important; after 1930, once other firms had adopted mass production, the costs of entry were formidable high [9].

What was also been shown is how the intensity of the depression in the staple trades made firms unwilling or unable to undertake new activities. One of Clydeside's biggest engineering firms, Beardmore's, planned a massive investment programme to build aircraft and automobiles after the First World War but when recession struck in 1921 it was unable to finance the programme. In Beardmore's case the depression itself cut off new developments [10].

### Rationalisation and diversification

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which met defence needs during the Second World War. This achievement', in Campbell's view, 'is as relevant as some of the more critical evaluations of the failure to move adequately towards a differ-ent industrial structure'. For the long run health of the Scottish economy, the problem was that it allowed the heavy industries to go on supplying traditional markets in traditional ways. It postponed the problem of reorganisation for a later generation.

Even had contemporary economic prospects indicated that rationalisation was required, rationalisation would still have been difficult. It was criticised on the grounds that it did not lead to economic efficiency but merely allowed businessmen to rig the market by controlling prices and production. The nature of ownership and control made the structure of Scotland's heavy industries very complex, particularly after shipowners gained control of shipbuilders and steel makers. Such vertical integration made reorganisation more difficult. So too did the conflicting interests of banks and creditors. There was concern about the private and social costs of rationalisation. Rationalisation involved writing-off capital, a difficult thing to do in privately-owned firms, and mergers could be delayed whilst participants argued over the valuations of their firms. The social costs lay in the higher unemployment that usually followed rationalisation but, as unemployment was already high, the more critical point is that, in the absence of government intervention, responsibility for social costs fell on industrialists.

One industry where rationalisation was successful was the distilling industry [12]. It is the exception that proves Campbell's case. Its market had been declining since 1900, so there was more prolonged pressure to adjust capacity to demand. It was dominated by one company, the Distillers Company, which was led by an individual who had no family interests to defend and who developed the concept of 'organised competition' which allowed markets to be regulated and permitted smaller firms to exit from the industry by selling out to the Distillers Company.

The need for a new industrial structure in Scotland was increasingly recognised by industrialists and government during the 1930s, even though few new industrial developments occurred and such economic recovery as Scotland enjoyed owed more to the heavy industries than to new industries. Examples of successful diversification are not only hard to find, but where they occurred they involved not only new methods of production, but new methods of marketing, investment in research and development, very large amounts of capital, new types of risk and competition with major foreign firms. Above all, diversification required time. It could seldom be accomplished speedily. This aspect of diversification is not generally allowed for in economic theories which stress the risk-spreading motive for diversification. That a long timescale is not inapprop-riate when judging contemporary businessmen can be seen when it is recalled that those regions which developed new industries, such as the Midlands and the south-east of England, were exploiting when it is recalled that those regions which developed new industries, such as the Midlands and the south-east of England, were exploiting.

severity of Scotland's economic problems lay in the depressed state of the heavy industries. Scottish society was scarred by mass unemployment and the lack of that most fundamental of essential requirements for human dignity, job opportunities. Whilst the social costs of Scotland's failure to transform its economic structure were high, recent research has produced a less condemnatory and more sympathetic appraisal of the problems which confronted industrialists. It has also shown that the process of structural change in a private enterprise economy is both slower and more complex than theories of market economics suggest.

Reference and further reading


Conclusion

Recent research has not overturned the verdict that the Scottish economy performed poorly during the inter-war period and that the...