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# conomic development in Glasgow 1802–2002

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1802



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The ending of the French Revolutionary War in the summer of 1802 was not necessarily widely welcomed by Glasgow merchants as the war had proved to be profitable for many. However, conflict was soon resumed, government orders were to be got, prices were good and there were huge profits to be made with a bit of risk-taking. Scottish goods still found their way, by devious means, into Napoleon's Empire. With the British Navy in control of the seas after Trafalgar, trade with the West Indies also expanded rapidly. Sugar came in to the refineries in Greenock and Glasgow, cotton and linen textiles went out, as did a range of other manufactured goods made in a growing number of small workshops around the rapidly expanding city.

## **MERCHANT CITY AND COTTON TOWN**

Cotton had arrived in the 1760s with technological developments allowing factory production in spinning thread. The spinning mills were near the water supplies at places like New Lanark and Catrine. Weaving was carried out by the 30,000 or so handloom workers scattered throughout the city and region. The coming of steam power allowed spinning mills to develop in Glasgow itself where labour was more easily and more cheaply obtained than in

the villages. But steam power was less easily applied to the fine weaving in which Glasgow specialised and so, although the powerloom was steadily making inroads, the demand for good handloom weavers remained high into the 1820s. The textile industry also required a multitude of support industries. Shuttle-makers and pirn-makers proliferated in the streets and alleys off the High Street. There was calico printing at Thornliebank, dyeing at Barrowfield and in the Vale of Leven, and soap- and bleach manufacturing at St Rollox.

The years immediately following the end of the Napoleonic wars with France in 1815 were difficult ones, with high costs and tens of thousands of demobilised soldiers seeking work. Unemployment, distress and discontent were widespread with threats of revolution around, but the city continued to grow and new textile firms continued to emerge. Yet even as growth was continuing, there were signs that Lancashire was beginning to pull ahead of Scotland as the main cotton textile region: markets there were larger, port facilities better, and machine-building skills more available. The decision of Henry Houldsworth of Anderston to switch from textiles to the iron industry and machine-making in 1837 is often taken as significant turning point, while the bitter industrial unrest at that time is a sign of a malaise in the industry created by over-expansion. Nevertheless, textiles were to retain great importance in the west of Scotland well into the 20th century, with the number working in the industry continuing to rise to over 40,000, until the 1860s. The decline was a slow one and J. & P. Coats and J. & J. Clark of Paisley were for long able to dominate the world market in thread.

## **THE ENGINEERING CITY**

Domestic more than manufacturing needs had stimulated a demand for coal and the desire for access to the Lanarkshire fields had led to the construction of the Monklands Canal in the 1780s and the early development of railway networks. An iron

industry had been slow to develop because of low-quality iron-ore and poor-quality coking coal. However, the invention of the hot-blast process in 1828 allowed the rich blackband iron ore of Lanarkshire to be utilised and Glasgow money rapidly found its way into the expanding industrial heartland of Lanarkshire. The really significant thing about the hotblast and other subsequent technological developments was the dramatic reduction in costs which it brought. Cheaper iron stimulated new industries and had implications for everyone. Machines could be built more cheaply, iron-frame buildings could be erected, and wrought-iron decoration could replace the expensive intricacies of wood carving.

Foundries spread, producing the extensive range of pipes, fittings, axles, nuts and bolts needed for machines. By the mid-19th century, Glasgow was well-placed to become the workshop of an expanding empire, providing the heavy machinery that was to speed industrialisation in other parts of the world. Firms like Arrol & Co. at Dalmarnock produced the piers for Brighton and Blackpool and the bridges across the Thames, the Forth and the Tay. Locomotive manufacture began to develop in Springburn and Polmadie. Macfarlane's Saracen works produced the ornamental cast-iron fittings for balconies, fireplaces, conservatories. The manufacture of pumps and steam-engines also added to Glasgow's reputation as a major engineering centre.

## **SHIPBUILDING**

It was application of steam engines to ships which turned the Clyde from a minor to a major shipbuilding area. After all, a narrow, comparatively shallow river is not the most obvious place to build ships. In 1812, Henry Bell's Comet – designed to transport guests to his hotel in Helensburgh – was powered by an engine made in John Robertson's engineering works in Dempster Street and with a boiler from Robert Napier's Camlachie foundry. It was the Napier family which more than any saw the new opportunities. In 1821, David Napier set up a combined engineering and

shipbuilding yard and began building sea-going steamers to ply to Belfast and Liverpool and, from the 1840s, across the Atlantic with Cunard. It was men trained in the Napier yards who led the expansion over the next 30 years. James and George Thomson set up a yard at Mavisbank in 1847 before moving to Clydebank in four years later. Charles Randolph and John Elder founded the Fairfields yard at Govan and were succeeded by another Napier product, William Pearce. Between the 1850s and the early 1870s, the Clyde launched two-thirds of British steamship tonnage.

New engine development, much of it on Clydeside, culminated in the application of the screw propeller, the introduction of the compound marine steam engine and the use of Howden's Scotch boiler. These developments did two things: it made a switch to iron-built ships essential, since the speed and vibration of the screw would shake apart wooden-hulled vessels, and it brought dramatic reductions in use of energy. The Clyde had easy access to the necessary iron and by the early 1850s, iron hulls were cheaper to build than wooden ones. Cheap shipping encouraged more trade which in turn increased demand for more goods and for yet more ships. By the 1870, 24,000 people were employed on shipbuilding on the Clyde, more than half the total number in the whole of Britain. Such a figure took no account of the hundreds of contractors employed in producing the elaborate cabin and stateroom fittings in the ever larger liners plying the oceans.

## **SIGNS AND OMENS**

At one level, there is no doubt that the story is one of great success. The west of Scotland had shown itself to have enterprise and skills. New opportunities had been seized and new directions taken. There was a good supply of labour augmented by Highland and Irish migration. However, there were also worrying signs. The financial system, concentrated in Edinburgh and London, showed itself less than sympathetic to the needs of industry. Many firms were vulnerable to downturns in the economy and the failure rate

was high. Many remained relatively small, dependent upon family money or on bank loans as credit for manufacturing was relatively expensive. A further potential weakness derived from the fact that markets were often narrow and quite specialised. Glasgow firms prided themselves in being able to produce one-off items exactly to the customer's specifications but sadly, such commendable pride in craft did not always make the most economic sense.

Yet there were also some competitive advantages in the area: raw materials were accessible, business networks were well-established, labour was relatively cheap, trade-union organisation was poor, and people seemed willing to tolerate poor housing and working conditions. Such conditions perhaps encouraged a complacency, and certainly a conservatism amongst Glasgow's business community but the economic climate was about to change and the response of many firms was slow and ultra-cautious.

The extraordinary boom years of the early 1870s had given a boost to trade unionism and the gap between Glasgow wages and those of the other parts of industrial Britain narrowed. Moreover, by the 1870s raw materials were running out, with the rich black-band seams close to exhaustion and ore having to be imported. Scottish pig-iron production also peaked in 1870 as Cleveland and South Wales proved more efficient, more modern and less costly. Markets were also closing as mainland Europe and America set about protecting their own nascent industries with high tariffs. Yet in spite of such developments, there was a tardiness in moving into steel production. Only the Steel Company of Scotland at Hallside, near Cambuslang was in existence by the end of the 1870s and even this was on the initiative of the Tennant family and of engineers like William Arrol and Henry Dubs, rather than on that of the iron masters. Growth did come in the 1880s and for a brief period, Scottish steel dominated. However, none of the steel plants was integrated with pig-iron producers, leading to higher costs and lower efficiency than in England and it soon became cheaper to build ships with Cleveland and even German steel plate than that of Lanarkshire.

Throughout this period, shipbuilding retained its dominance. A third of new British shipping tonnage came from the Clyde slipways: a quarter of a million tons each year in the 1870s to over three quarters of a million tons in the peak year of 1913, with some 55,000 workers employed in the industry. Iron eventually gave way to steel in ship construction after 1879 when William Denny in Dumbarton launched the *Rotomahana*. J & G. Thomson also started on a run of famous Cunarders at Clydebank.

Yet here too there were signs of changing times. The new technology of steam turbine and diesel engines which were to revolutionise marine engineering was not coming from Clydeside firms and a failure to develop an expertise in diesel was eventually to prove crippling. In a fiercely competitive environment, what were, in many cases, relatively small firms were battling for orders. Prices were cut to the bone just as shipowners were laying down tighter specifications and many ships were built at a loss. In other cases, there was an excessive reliance on admiralty orders. At the same time, the very dominance of shipbuilding meant that other, often huge, parts of the regional economy were dependent on its fate and demand for ships was always volatile.

But so much of this was largely hidden from view. A look at the buildings of Glasgow erected in the 30 years before 1914 shows the prosperity, the confidence, the pride in itself which the city exuded, despite myriad social problems. There were new entrepreneurs around taking advantage of the opportunities created by rising living standards and cheap imports. Thomas Lipton, for example, expanded his business from a single shop in Stobcross St in 1871 to become the acknowledged ‘King of the Dairy Provision Trades’ by the end of the 1880s, with branches in every significant city. Templeton’s, Massey’s, Cochrane’s and Galbraiths followed in his wake. Elsewhere, Bilsland Brothers supplied the bread and Macfarlane & Lang and Gray & Dunn the fancy biscuits for the now fashionable tea-rooms of Sauchiehall St, Buchanan St and beyond. Department stores from Anderson’s Royal Polytechnic in Argyle St to MacDonald’s and Fraser’s in

Buchanan St to Copland's 'Caledonian House' in Sauchiehall St set the fashions for the middle class. The co-operative societies were also reaching their peak and the SCWS supplied food, clothes and furnishings from its huge works at Shieldhall to the skilled working class. Prosperity and confidence oozed from every corner of its new headquarters in Morrison St, which opened in 1897. Other businessmen were also catering for the growing passion for sport, particularly football with investment in grounds and professional players at Ibrox and Parkhead, while others met the demand for either temperance outings or boozy trips 'doon the water'. Scores of companies set out to make motor cars after 1896. Some eighteen major theatres were built in the city and the Glasgow Rep was at the forefront of dramatic experimentation. Wealthy business men patronised the bold new French Impressionists and Glasgow-based artists challenged the conservatism of the academies. Glasgow proudly showed off its industry, its culture and its progress to the world in the great exhibitions of 1888 and 1901.

## **WAR AND CRISIS**

The First World War brought a huge demand for the products of heavy industry with firms once producing machines for peaceful purposes being transformed into armaments companies. There was also a brief post-war boom, and the *Glasgow Herald* in 1919 was confident that the motor car industry would soon develop on a large scale in Scotland. But the world had changed. Other countries were now producing their own ships, locomotives and heavy machinery while new coal mines in Germany, Poland and America were producing cheaper and better coal than the old, exhausted pits of Lanarkshire. Glasgow had long relied on export markets for its machines and consequently, the post-war decline in world trade was disastrous for the city. For example, The North British Locomotive Company in the years between its formation in 1903 and 1914 produced on average 450 locomotives a year,

mainly for export. By 1924 this figure was down to 74 and none at all was produced in the darkest year of 1932.

Shipbuilding too suffered a dramatic downturn in its fortunes. By 1923, the effects of wartime production and the post-war boom meant that there was a surplus of ships, a situation that lasted throughout most of the inter-war period. Defence orders also dried up as the government embarked on naval disarmament.

Inevitably, with so much of the west of Scotland's industry linked to shipbuilding, the ripples spread widely. Producers of boilers, pumps, cranes, wire, cables, ships furniture, paint all felt the effects and paid off their work forces, with the result that demand for consumer goods also tumbled. Hopes that a reduction in wages and then prices would be enough to revitalise the markets for Scottish ships and machinery proved to be misguided.

With an over-valued pound, Scottish manufacturing could not compete effectively with its American and German competitors, even before other countries, in the face of world depression, began to push up subsidy and tariff protection for their own industries.

Two factors came together in the inter-war period. A very large part of the west of Scotland economy was dependent on shipbuilding. It became worse, indeed, in the interwar period as shipbuilders strove to maintain their supplies by buying into steel companies. At the same time, the west of Scotland failed to attract new growth industries. Car production had disappeared by 1928 and ominously, Stewart and Lloyds, the successful, specialist steel-tube makers moved their business from Mossend in Lanarkshire to Corby in Lincolnshire, taking many of their workforce with them. Population was falling as migration exceeded the rate of natural increase and, with unemployment levels topping 20 per cent, real incomes were growing much more slowly in Scotland than in the rest of the UK. The fast expanding new electrical industries producing the increasingly 'necessary' refrigerators, radios and washing machines went close to the biggest and most prosperous markets of the English Midlands and South-East.



All the evidence called out for a reorganisation and rationalisation of Scottish industry, but remarkably little happened. Shipbuilding on the Clyde slimmed down only marginally while firms, always hopeful of imminent recovery, were wary about losing their skilled workforce. Re-organisation in steel was rather more vigorous. By 1936 Colvilles controlled nearly 90% of Scottish steel capacity and became a highly-efficient producer, with good productivity, but there was not a substantial re-siting and integration of plant. Iron manufacture was separate from blast furnaces which in turn were separate from the steel plants. The result was that Scottish steel costs remained higher than those in other areas. Rearmament at the end of the 1930s once again generated a demand for the ships and munitions of the west of Scotland and the long-awaited growth seemed to have returned. With it, the pressure for new products and new technologies faded.

## **THE NEW ECONOMY?**

Despite the world economic boom of the post-Second World War period, Glasgow and the West of Scotland were not too successful at tapping into it. The Scottish Council for Industry still believed that 'the mainstay of the Scottish prosperity would always be the heavy industries'. But, the small yards on the Clyde with their limited space for manoeuvre could not compete with the huge new ones appearing in Germany and Japan. The Clyde could not produce the tankers necessary to meet the world's demand for oil or the huge container ships. There were labour shortages – the Clyde had rivetters, not welders – and there were labour disputes as a score of unions battled over the demarcation of new processes. Yards closed with increasing momentum although valiant attempts to salvage something brought about the Fairfield's experiment of collaboration between private enterprise, trade-union and government, and then the merger of Fairfields, Browns, Connells, Yarrows and Stephens and others into Upper Clyde Shipbuilders. Within three years, however, UCS was bankrupt and

although something was temporarily salvaged by the famous, high-profile work-in at UCS, the respite was short-lived: 77,000 were employed in the industry in 1951; 40 years later, it had fallen to 14,000 and the downward spiral continued.

Inevitably, the steel and coal industries felt the brunt of any downturn but with government help, there were attempts to diversify. Always keen to attract vehicle construction, the Scottish Office successfully persuaded the Macmillan government to force Rootes to open a plant for the new Hillman Imp at Linwood in 1963. But, it was far from the supply of components and Scottish firms were slow to seize the opportunities to produce them. Strikes and poor management did nothing to help. Political pressure also brought a steel strip mill to Ravenscraig to supply the light steel for the new consumer industries which it was hoped would appear, but it proved a short-lived chimera. By 1967 Colvilles was to all intent bankrupt and the state stepped in. The new British Steel Corporation took up a plan that had been around since the 1930s for a fully-integrated iron and steel works linked to an ore terminal at Hunterston. But demand for steel was already falling by the time the terminal was completed and there was no ‘glorious resurrection’ of the Scottish steel industry as was hoped. The closure of Ravenscraig in 1991 marked the end of an era.

Some new industries were appearing with the coming of largely American-owned branch factories after the war. IBM came to Greenock, Hoover to Cambuslang, Honeywell first to Blantyre and then to Newhouse, Burroughs to Cumbernauld and Goodyear Tyres to Drumchapel. The main thrust of public policy was to encourage outside firms to invest in Scotland rather than to stimulate home-grown enterprise. The danger of such a branch economy is that it is vulnerable to changes in the company and the market and this proved to be the case in the late 1970s and early 1980s. Goodyear closed in 1980; Honeywell was down to half the size; Hoover barely clung on; and Singer went from Clydebank after more than a century. The decision of the now

Chrysler-owned Linwood to build their new model in France in 1975 was the beginning of the end and when Peugeot took over, it was closed in 1981. Significant manufacturing was rapidly disappearing from the west of Scotland. The Scottish Development Agency (later Scottish Enterprise) tried with some success to attract clusters of high-technology firms and the west of Scotland, but not Glasgow itself, gained something from the growth of 'Silicon Glen'. Glasgow set about creating a new image as 'City of Culture' and 'City of Architecture'.

In the new century, Scotland, on the periphery of Europe has had to struggle hard to face the challenges of globalisation, market liberalisation, deregulation and the advances being made in information- and communications technology. Highly creative young people have developed niche markets in software products, but have struggled to break into export markets. It is still proving difficult to translate innovative ideas into commercial success and to integrate an excellent IT base in the city's many institutions. The hope has to be that a well-educated workforce will attract inward investment and generate innovation, but much is going to depend also on maintaining an attractive environment and a decent infrastructure and getting the necessary integration of services, supplies, workforce and transport. Glasgow has still much to do to become the 'Knowledge City', the 'Creative City', the 'Communicating City', the 'Liveable City' to which its development themes aspire.