Throughout the 19th and early 20th centuries coal played a vital role in Britain's performance as an industrial nation. Until the advent of cheap oil and natural gas after the Second World War, it was an unrivalled fuel for domestic heating, industrial machinery, sea and land transport, and the production of gas and electricity. And the availability of huge, seemingly limitless and easily accessible, coal reserves, meant that coal-mining became a critical element in Britain's 19th century supremacy, both as a manufacturer and (through the export of coal to feed the world's new shipping and railway systems) as the dominating nation in the international economy.

This essay is particularly concerned with the period between the outbreak of the First World War (when the industry attained its peak of development) and the close of the Second World War (when it was enfeebled and wracked by problems which resulted in its nationalisation in 1947). During those years coal-mining was both a vital element in the British economy and a powerful example of the economic and social tensions which beset Britain's great staple industries as her economic performance and position in the international economy underwent radical changes.

In 1913 there were over 2,500 British mines producing just over 290 million tonnes of coal - 30% of which was exported (accounting for about 10% of all exports). In 1938, on the eve of the Second World War, although the number of mines had fallen to about 1,900, the output to some 230 million tonnes, and exports to just under 50 million tonnes, the scale of the industry was still very large. But the significance of the coal industry in modern British history was more than a matter of the level of its output and exports.

First, dependent as it was on a natural resource, coal-mining was a heavily concentrated industry: in 1913 about 20% of coal production came from each of the South Wales and Northumberland/Durham coalfields, and some 15% each from Yorkshire and Scotland. More than that, given the size of the industry, towns and whole counties were dominated by coal-mining and its labour force (In 1921 coal-miners accounted for about half of all adult male workers in Glamorgan, Monmouthshire and Durham outside the largest cities.) Nor was this all. The importance of coal as a fuel for heavy industry (iron and steel, shipbuilding, heavy engineering) meant that these industries, too, became predominantly concentrated in the principal coalfields. In effect, the coalfields were Britain's industrial heartlands.

This characteristic of coal-mining was the more important because coal-mining was only mechanised at a relatively late stage: in 1913 less than 10% of coal was cut by machine, and by the late 1920s that figure was still only about 25% (it was to grow to some two-thirds by 1939). Coal-mining was, therefore, a labour-intensive industry. It employed huge numbers (well over one million men and boys for most years between 1913 and 1927) and its costs were largely composed of wages (which accounted for between two-thirds and three-quarters of the cost of production). For much of the late 19th and early 20th century labour productivity, measured in output per man-hour, was greater than it had been in the early Victorian years (Church [3]). But a reduction in the length of the working day in the 1890s and 1900s also reduced output per man-shift, while even stable labour productivity might render British coal uncompetitive. As a result, there was an intense pressure on costs in the inter-war period - and the labour-intensive character of the industry meant that attempts to reduce costs would almost inevitably be directed at wage rates or hours of work.

Economic pressures on the coal-mining industry, 1913-46

Figure 1 shows the broad pattern of change in coal-mining between 1913 and 1946. As in so many other industries, the First World War was something of a watershed (although it principally served to accelerate developments which would ultimately have proved inevitable). During the War itself home demand was high, but labour shortages reduced production and occasionally threatened the war effort. In the decades which followed, the emergence of competing coalfields in other countries, the slowing-down of world economic growth and trade, together with economies in the use of coal - all combined to reduce demand and depress the industry. Admittedly, the buoyancy of wartime demand continued into the immediate post-war period - but even then the output level of 1913 was never regained, and the spur to expansion was both temporary and artificial (first, a post-war boom, and then the disruption of American and German coal production by strikes and military occupation respectively). After 1924 the new situation asserted itself.


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decisively: coal-mining entered a prolonged period of stagnation as its excess capacity and superfluity of workers were exposed. A high level of unemployment (between 1928 and 1936 there were never less than 24% of miners wholly or partly out of work) and widespread distress, especially in South Wales, the North East and Scotland, became endemic to the industry. And the benefits of the modest revival of demand in the late 1930s were only feasible because so many miners had left the industry and so many mines had closed. Prosperity never fully returned and, ironically, with the Second World War, in spite of severe shortages of coal and desperate needs, output and employment continued to decline. Coal never regained its pre-eminence among Britain's exports, and in peacetime domestic demand never recovered sufficiently to sustain the industry.

The 20th century history of coal-mining has, therefore, been largely shaped by market fluctuations, the size and distinctive structure of the industry, its geographic concentration and labour intensity, and (for much of the time) the slowness with which new technology was applied. Precisely because coalfields were so dependent on a limited range of economic activity, when the market for coal (or for goods produced with coal) declined they became focus points of mass unemployment, widespread social distress, and bitter industrial-relations disputes. Coal-mining has therefore provided an extreme example of a number of important economic, political and social issues in modern British history: the problem of adapting the great export staples to a new international environment, the disappointment of near-inevitable growth with the slowness with which new technology was applied. The enormous size of the industry clearly worked both ways, because they are efficient, and not efficient because they are big. But there were two more immediately practical issues: first, newly-sunk mines might have been more productive, but existing mines could not be easily combined; second, even if labour productivity might have been increased by more mergers and faster mechanisation, the costs and risks of pursuing such a policy would have been considerable. Rationalisation in this sense would have needed substantial investments at a time when the industry was short of risk capital and operations were generally unprofitable. Moreover, competition from near-bankrupt colliery firms always threatened any 'progressive' policies which entailed the sinking of more capital. Hence, given the resources and risks with which they had to deal, and given the individual nature of decision-making, colliery owners who faced a stagnant market were not necessarily irrational or even inefficient entrepreneurs if they declined to invest more money in a declining and keenly competitive industry for gains that would be problematic. Comparative obstacles prevented any very rapid run-down of the industry's capacity. Extensive pit closures would certainly have lowered unit costs and increased the profits of the firms left in business by enabling output to be concentrated in more productive mines and in mines which could have produced nearer their full capacity. Yet it is hardly surprising that it proved impossible to persuade the owners of marginal mines to go out of business completely. Nor was it worthwhile for successful coal-owners to spend

Figure 1 Output, employment, and overseas shipments in British coal-mining, 1913-1946.

The central economic problem of the British coal-mining industry between the wars was the stagnation of its sales, and particularly the inability of its exports to regain their pre-1913 dominance of the world market. This fact naturally focussed attention on costs and prices. In the 1920s the coal-owners argued that wages were too high and hours too low (pay had been increased and the working day reduced during the immediate post-war shortage of coal in 1919); but, although the (Samuel) Royal Commission of 1925-6 accepted that wages might have to be reduced to meet the immediate problems of competition, and they were indeed cut after a strike in 1926, it was widely agreed that the problems of the industry were more fundamental than the level of wages. Rather, they related to the size of the industry and the efficiency of its techniques and its Organisation. As a result, the coal-owners have been blamed - by historians as well as contemporaries - for being too individualistic and conservative in their outlook, for neglecting investment (especially in mechanised cutting and conveying), and for refusing to merge and streamline the industry into a smaller number of more productive colliery firms. (Each colliery firm or company owned and managed at least one - and frequently many more than one - mine or pit.)

Coal-mining therefore became the principal example of the presumed need to 'rationalise' British industry, so as to meet competition and adapt to new levels of demand. Yet, in coal-mining as in other industries, the meaning of 'rationalisation' was never entirely clear. For example, it could mean reorganisation into larger and (it was assumed) more efficient firms and its through mergers and acquisitions, as a way of securing economies of scale. Alter-natively, it might mean a reduction in industrial capacity (i.e. pit closures) in order to concentrate coal output in mines and firms which, without much change in techniques, but because they would then produce at near-full capacity, would have lower unit costs. Somewhat less precisely, it was often applied to an unspecified programme of increased investment and modernisation.

With the exception of the coal-owners' representatives, most commentators appeared to agree that the industry was neglecting opportunities for economies of scale. And the most thorough contemporary investigation (by the Samuel Com mission in 1925-6) concluded that 'there are great advantages in large-scale production which are not now being realised'. Nevertheless, it is debatable whether there were very large and unexploited economies of scale to be gained in the industry by merging existing firms or mines. The owners certainly felt that there were limits to the efficiency of large-scale operations (especially limits of managerial competence) and their leader advised the Samuel Commission that 'successful companies have become big because they are efficient, and not efficient because they are big'. But there were two more immediately practical issues: first, newly-sunk mines might have been more productive, but existing mines could not be easily combined; second, even if labour productivity might have been increased by more mergers and faster mechanisation, the costs and risks of pursuing such a policy would have been considerable. Rationalisation in this sense would have needed substantial investments at a time when the industry was short of risk capital and operations were generally unprofitable. Moreover, competition from near-bankrupt colliery firms always threatened any 'progressive' policies which entailed the sinking of more capital. Hence, given the resources and risks with which they had to deal, and given the individual nature of decision-making, colliery owners who faced a stagnant market were not necessarily irrational or even inefficient entrepreneurs if they declined to invest more money in a declining and keenly competitive industry for gains that would be problematic.

Rationalisation, capacity, and entrepreneurship

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money buying up inefficient firms in order to close them down. In other words, it was in nobody’s individual interest to take the initiative in reducing capacity when the presumed benefits would have to be shared among all the many producers in the industry.

Finally, whichever course of action was advocated, the condition of the market for coal meant that ‘rationalisation’ would probably not have solved the industry’s immediate social problem - the high rate of unemployment among miners. Indeed, it would probably have aggravated it, just when nation-wide unemployment was a mounting problem. Admittedly, larger-scale and more efficient mines, or fewer mines working nearer capacity, would have needed less employees per ton of output. In that way, costs would have been reduced and tile industry stabilised. But if the aim had been more or even stable employment, this would have entailed reducing prices to stimulate; more demand -in which case the cost-price margin might not improve and colliery profits (and therefore colliery firms) would have been no better off. In effect, the industry was simply too large. It could never regain its best export levels. The problem of coal-mining - as of cotton and steel and shipbuilding - was that it was part of a structural imbalance: the industrial distribution and uses of capital and labour appropriate to the booming exports of Victorian and Edwardian Britain were simply not appropriate to the retardation and competition which characterised the international economy of the 1920s, and 1930s.

Given the economic and social obstacles to the rationalisation of production, it was hardly surprising that coal-owners should have looked to the possibility of controlling supply, sharing markets, and steadying prices as an alternative form of ‘protective’ rationalisation. After some resistance, various marketing regional schemes were introduced on a voluntary basis in the late 1920s – only to be sabotaged by a minority of colliery firms which undercut the policy intended to share markets and stabilize prices. Consequently, those who were suspicious of the coal-owners argued that the Act contain a provision to encourage, and if necessary enforce, amalgamations so as to enhance the productivity and competitiveness of the industry as a whole. This policy was to be pursued by a Coal Mines Reorganisation Commission. But in the event its authority proved too weak, and the opposition of the coal-owners too strong. Nothing came of this attempt to rationalise the industry, rather than a ‘progressive’ rationalisation. Consequently, those who were suspicious of the coal-owners instead argued that the Act contain a provision to encourage, and if necessary enforce, amalgamations so as to enhance the productivity and competitiveness of the industry as a whole. This policy was to be pursued by a Coal Mines Reorganisation Commission. But in the event its authority proved too weak, and the opposition of the coal-owners too strong.

The State and coal-mining

Government intervention in the coal industry has a long history - extending back to safety legislation during the 19th century and the establishment of minimum wages and maximum hours before the First World War. And during the War labour shortages and miners’ militancy had obliged the government to assume financial control of the mines and to take responsibility for the industry’s industrial relations, pricing and profit distribution. This control continued during the immediate post-war inflation, and in 1919 the government only barely resisted political pressure to resolve the industry’s tense labour disputes by some form of permanent public ownership or direction. But a severe depression in 1921 led to the hasty decontrol of the industry (to avoid the official responsibility for business losses). Prices and profits fell and, after a prolonged strike, the coal-owners obliged the miners to accept substantially lower wages. In 1925, after a brief recovery, the government was faced with another clash between miners and employers over wages. The result was a wage subsidy (which prevented a strike) and the appointment of another Royal Commission (the Samuel Commission), which reported in the Spring of 1926. But the report was ineffective and after yet another, and even more bitter, strike the miners were once again obliged to return to work at lower wages - and also with a longer working day. To the sense of betrayal aroused by the failure to nationalise the industry in 1919 was added the humiliation of defeat in 1921 and 1926, and an enforced increase in the length of the working day.

Thus far, although obviously concerned at the social instability caused by labour disputes in the coalfields, tile government had favoured the owners against the miners. Moreover, ideological opposition to intervention or subsidies, let alone to nationalisation, effectively restricted the state’s course of action. Nevertheless, it was significant that the increase in hours and reduction in wages which followed the defeat of the miners in the strike of 1926 did not, after all, achieve greater competitiveness. Profits and output fell, unemployment rose. And by the late 1920s, government ministers were much more ready to contemplate officially-sponsored ‘rationalisation’. In the event, the compulsory marketing scheme embodied in the Act of 1930 was stimulated by pressure from the miners to reduce the length of the working day without reducing wages. The resulting increase in costs could only be covered by policies designed to support prices and therefore profit margins.

The district marketing schemes of 1930 (which had to be strengthened in later years to mitigate competition) were, of course, equivalent to a protection of existing interests in the industry, rather than a genuine attempt to make miners the owners of the mines. Consequently, those who were suspicious of the coal-owners also insisted that the Act contain a provision to encourage, and if necessary enforce, amalgamations so as to enhance the productivity and competitiveness of the industry as a whole. This policy was to be pursued by a Coal Mines Reorganisation Commission. But in the event its authority proved too weak, and the opposition of the coal-owners too strong. Nothing came of this attempt to make miners the owners of the mines.

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significant that the state did not intervene to enforce a restructuring. A similar reluctance of government to reform the Organisation of the steel industry has been interpreted as a failure of will and purpose (Tolliday [6]). But in both industries such intervention would have been difficult on practical as well as ideological grounds, while in the case of coal-mining it would also have presented particularly severe political problems: any useful rationalisation would have inevitably involved an aggravation of the already chronic problem of mass unemployment and a deepening of the distress in depressed areas. In practice, then, the unstable labour relations of the industry and the social characteristics of mining communities played an independent role in determining government policy towards the industry. When the demand for coal was high (during and after both World Wars) the government accommodated miners’ demands; when markets deteriorated, in the early and mid-1920s, the state more or less abandoned the industry and its workers to the play of market forces (the one positive move of these years - the return to the Gold Standard at the high pre-war rate of exchange in 1925 - only worsened coal’s competitive position). (See illustration.) But by the later 1920s, when it had become clear that employment and social conditions would not recover through market forces alone, government intervention became increasingly protective or at least ameliorative - through the subsidising of migration out of the coalfields (1928); through the marketing schemes of the Coal Mines Act of 1930; through legislation to stimulate depressed areas, which tended to be located in the coalfields (1934 and 1937); through a favourable response to a national wage claim (1935-6). Yet none of these policies did much to transform the industry or satisfy the miners, whose resentment at past disappointments continued to fester. Moreover, as a result of their experience and their working conditions, the miners had earned a huge amount of public sympathy. Hence, it was hardly surprising that during the Second World War, when coal was once again desperately needed, they should have used their regained bargaining power to secure higher wages and more autonomy within the industry.

Even more significant, when the War ended, the miners’ militancy and political strength combined with the Labour Government’s commitment to public ownership and the widespread opinion that restructuring was long overdue, to produce a far-reaching innovation. By legislation passed in 1945-6 the coal industry was nationalised from 1 January 1947.

The nationalisation of the coal industry is generally interpreted as the outcome not only of the Labour Party’s commitment to public ownership, but of the desperate need of the industry for investment funds and restructuring. And certainly government backing and centralisation offered scope for changes denied to the industry in the inter-war years. Yet public ownership was also a device to tackle the social and political problem of industrial relations in coal. As long ago as 1919 Sir John Sankey, the independent Chairman of a Royal Commission, had argued that some form of public owner- ship or control was necessary to dispel ‘the present atmosphere of distrust and recrimination’. A generation later the same logic lay behind the abandonment of private ownership - a logic given added force by the miserable experience of the 1920s and 1930s, the turbulence of wartime, and the unalleviated bitterness and long memories of the mining communities. The National Coal Board (subsequently re-named British Coal) was formed to resolve the tensions of poor labour relations and organisational deficiencies in the coal industry. The history of the subsequent 40 years, and particularly the history of strikes and pit closures in the 1970s and 1980s, have shown how difficult it is to escape the social and economic realities of structural change in a declining industry. In this respect, coal-mining is merely the most dramatic example of the social pain and political disruption involved in the adaptation of Britain’s 19th century staple industries (cotton, railways, iron and steel, shipbuilding, heavy engineering) to the new economic world of the 20th century.

References

ReFRESH is sponsored by the Economic History Society and edited by Drs. Anne Digby, Charles Feinstein, and David Jenkins. ReFRESH 10 will appear in the Spring of 1990 and contain articles by Charles Feinstein on Slowing Down and Falling Behind: Britain, 1870-1914, and Pat Hudson on Proto-Industrialisation. The first seven issues of ReFRESH have been published as New Directions in Economic and Social History by Macmillan.

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ISSN 0268-683X

Supple, Refresh 9 (Autumn 1989)