The statistical surveys of the British iron industry in 1797-98 and 1806

Chris Evans

The ironmasters of the eighteenth century were apt to portray theirs as the 'the second trade in ye Kingdom', acknowledging only the woollen industry as a more vital component of national prosperity. Such was their collective amour propre that they were notably alert to any threat to the well-being of their trade. Campaigns were undertaken to draw attention to the perils of an over-reliance on imported bar iron from the Baltic and elsewhere, to debate the wisdom of encouraging pig iron production in the American colonies, or to protest the ruinous consequences of taxing the domestic product. One happy consequence of this activity was that ironmasters undertook periodic surveys of plant and production in order to furnish themselves with data that could be deployed against their adversaries. Controversies over the course of commercial and fiscal policy stimulated surveys of this kind at various points in the eighteenth century. A list of blast furnaces and forges was compiled in 1717-18, and of forges alone in 1736-37 and 1749-50. A further survey of the industry was made in 1788, possibly as a response to the wide-ranging debates over the future of the Navigation Laws after the loss of the American colonies. By the end of the eighteenth century the gathering and exchange of information within the trade had become habitual. It was quite clear to ironmasters that their industry was in the throes of epochal change, and they were, accordingly, avid for news of further innovation and growth. A fresh survey of iron-producing sites in the early 1790s was exceptionally detailed, enumerating individual hearths within forges, specifying the precise means by which blast furnaces were blown, and giving, where possible, the dates at which items of plant had been erected.

What store can be set by these surveys? They have been employed by historians to construct a statistical picture of the iron trade in the late eighteenth and early nineteenth centuries, but can any confidence be placed in them? Were they nothing more than special pleading? Certainly, the lists of 1717 and 1736 can be shown to have been seriously imperfect, underplaying the extent of bar iron production in Britain so as to support the contention of forgemasters that their trade was wasting away before the competitive advantage of Baltic iron. Given this, what reliance can be placed on the production surveys of 1796 and 1805, the first really systematic surveys of furnace sites and pig iron output?

It should be said that the collection of information was facilitated by the structure and ethos of the iron trade. There were, after all, only a limited number of participants to be taken into account. The capital requirements of iron production were onerous, restricting participation to those who could command the necessary resources. Moreover, the technological bottlenecks that beset the industry during its period of dependence upon vegetable fuel had placed limits on the number of furnaces that could operate. A multiplication of furnaces would only drive the price of charcoal up to uneconomic levels, with the result that the number of sites at which iron was smelted with charcoal never exceeded seventy in the eighteenth century. The high capital threshold and the inelasticity of fuel supplies during the charcoal era had, in turn, bred a clannishness in the trade. In an attempt to aggrandise both fuel supplies and markets ironmasters had coalesced in a small number of interlocking partnerships, each controlling a network of furnaces, forges and processing mills. The heyday of these great, sprawling combines, such as that dominated by the Foley family in the West Midlands, had been the late seventeenth and early eighteenth centuries. Nevertheless, the ethos of intra-trade collusion, institutionalised in the price-fixing assemblies ('quarter days') that were regularly convened in the major iron-making districts, was carried over into the late eighteenth century. In short, ironmasters were grouped in established networks which could be mobilised for the defence of the trade should the occasion arise.

The occasion arose in October 1797 when William Pitt announced his intention of imposing a tax of 20 shillings per ton on pig iron. Four years of war against revolutionary France had emptied the coffers of the British state. Hitherto, Pitt had financed the war in the traditional eighteenth-century manner by raising a succession of loans that were to be paid for out of future receipts. However, a near-catastrophic banking crisis in the spring of 1797 signalled that the credit system had reached its limits. The war could only continue if fresh sources of revenue were tapped. As Pitt told the