

fixed equipment. The rate of technical advance in the industry has, as remarked earlier, been particularly rapid and the firms operate continuously at the frontiers of new development. Overheads (taken to include the teams of designers and other skilled staff) are high relative to turnover, and are, in effect, completely specific to manufacture of turbines. The firms concerned do all the research and development relating to the equipment they produce and bear the costs of rectifying it when it fails to work.

Of central significance, for our purposes, is the magnitude of individual contracts in this industry, the value of which, at £20 mill. or more, exceeds the average annual turnover in turbo-alternators of any one of the firms.¹ The size of order is to be explained, in this case, not in terms of the buyer's preference for inviting firms to tender for a bunch of different items, but by the remarkably rapid increase in the scale on which it proves possible and economical to build single turbo-alternator sets. This development, moreover, is not yet complete and we may envisage even larger sets, and therefore larger, and to that extent fewer, orders in the future.

A nice balance between demand and capacity is no more possible to maintain in this market than in the market for transformers. The electricity authorities cannot avoid some fluctuation in their requirements, nor can the producers hope to expand their total capacity at a continuously appropriate rate. In addition, excess capacity is likely to develop, in the absence of a strong upward movement in demand, simply because rapid technical advance has made it possible to generate the same amount of electricity, from larger sets, with reduced inputs of capital and labour in turbine construction.

These special circumstances, taken in combination, are very unfavourable to effective regulation by price competition. Failure to obtain a contract will certainly burden a firm with heavy financial losses and may indeed threaten its survival as a producer of turbines. Given that an interval of four years may elapse between the ordering and final commissioning of a turbo-alternator set, it is apparent that management will be obliged to attend, not to the current load on the works, but to the chances of getting work in the future. Each firm will be well aware of the disastrous effect on profits of competition, in terms of price, for a share in the total business; at the same time, it cannot fail to realise that failure to obtain an order may put it out of the race.

The buyer also will be faced with its own dilemma. Presumably, according to the advocates of regulation by price competition, the Central Electricity Generating Board will award a contract to the firm that makes the lowest bid, allowing for differences in performance between rival equipments. But is it really conceivable that it could thus ignore the effects of its actions on the structure of the industry? It is perfectly possible for the distribution of its orders to cause a firm to be starved of technical experience or to be obliged to give up production for good. To place contracts blindly, in these exceptional circumstances, merely according to the lowest bid, would be to credit market forces with quite magical authority.

¹ Twelve years ago, orders rarely exceeded £2 millions in value. It is worth observing that circumstances have therefore changed in this respect since the Monopolies Commission studied the industry—changed moreover in a way less favourable to the suitability of price competition.