However to rely purely on an aggregated figure would be misleading in this case. That there are limited barriers to entry into machine tools is indicated by the continued addition of new firms even during recessionary times. There are often small scale enterprises, often set up from remnants of a failing company, and succeeding on the basis either of novel technology or of customisation eg Winchester Machine Tools entered in the late 1980's as a phoenix company selling single spindle CNC lathes. This would ignore the considerable mobility barriers that limit such companies progress in other sectors of the machine tool industry. Jacobsson details the growth of entry barriers into the mass market CNC lathe sector due to standardisation and substantial sunk cost elements in R&D and Marketing (Jacobsson, 1986). He estimates that the main scale economies are exhausted at production volumes of 500-700 machines per annum. The larger UK firms have attempted to exploit these scale economies and tended in recent years to specialise in particular types of tool where they have a competitive advantage. Hence Jones and Shipman have 90 per cent of the market for grinding wheels. Matrix-Churchill specialises in CNC and standard lathes where it has an estimated 10-15 per cent market share. Similarly Bridgeport (35 per cent) and Cincinnati Milacron (15 per cent) in machining centres (Keynote, 1992).

Given that each producer tends to specialise in particular types of tools, concentration is greater in specific product categories, but with few exceptions the market cannot be described as highly concentrated. Figure 2.6 shows the data from the latest available survey of product concentration with the number of enterprises in each product group clearly indicating that competitive pressures are present across all markets, either from existing competitors or from producers switching across the product spectrum.

Looking instead at individual firm data, we see that UK firms do not compare in size with those of USA, Japan and Germany. Of the 136 largest machine tool companies in the world according to the American Machinist, only 4 are British. Only a handful of the larger companies are publicly quoted, the rest being either subsidiaries of large engineering groups or are owned of foreign multinationals. The remaining medium to small enterprises are independent and often family owned. The medium and larger companies have as already discussed tended to adopt a policy of supplying a specific market, but are forced by the small size of the home market to rely heavily on export trade. The smallest firms, rely more heavily on domestic sales, exploiting their proximity to the market to provide a high degree of customisation and service. More often working on ad hoc projects for particular companies or specific industries, they provide a bespoke service to the engineering sector.

To summarise, the UK machine tool industry, in common with its European competitors, is an industry of relatively low concentration with little sign of any significant increase since 1970.

2.4 Product Diversification

The industry has never been characterised by a high degree of diversification. Of the large enterprises, only two undertake any substantial degree of activity outside the industry. Even in these cases the diversification is closely related, being in the areas of