

company decisions regarding research, advertising expenditure, labour union negotiations, pricing policy, etc. For some of these purposes concentration measures must be derived from returns for companies rather than establishments or plants; the present statistics are calculated from returns for establishments or plants, making it possible to divide a company up among the various industries in which it is active.

Concentration statistics are particularly valuable when available for a period of years. Comparisons show fluctuations in the levels of concentration in an industry and may indicate if the changes are in response to the growth of the industry or whether the degree of change in concentration as distinct from the actual level of concentration can be explained by a particular cause or is affected by the behaviour of firms. Thus, concentration measures can be used to study changes in concentration within an industry over time, as well as to compare concentration at a point in time between different industries and, where possible, between the same industries in different countries. Concentration measures are now available for a number of industrialized countries though differing industrial classifications may affect international comparisons.

The interpretation of concentration measures are subject to certain limitations. Their purpose is to measure the extent to which a small number of large firms dominate the market, but when data for whole plants are added to give industry shipments a very mixed assortment of products may be involved. Often some products will be included which are really typical of other industries. For some purposes it would be better to calculate concentration ratios for shipments of particular products or product groups, regardless of the classification of the industries of the particular plants producing them. In either case, there is room for difference of opinion on what grouping of industries or products is appropriate. For example, pork and beef are sold in competition with each other, thus concentration for the two combined or for the slaughtering and meat processors industry as a whole may be preferable to concentration for either by itself. On the other hand, concentration of shipments of large electric motors may be preferable for some purposes to concentration of shipments of an entire industry such as manufacturers of electrical industrial equipment. For other purposes, the industry may be the better basis of measurement since, in competing, producers may be able to shift capacity between products. Concentration ratios for product classes are expected in due course.

Imports and exports modify the meaningfulness of industry shipments as a measure of a market. The top four enterprises in the pulp and paper industry account for 33.7% of shipments but this does not give direct information on concentration in a definite geographic market since most shipments are exported. However, capacity may be potentially available to the domestic market. In the case of motor vehicle manufacturers, the 94.8% share of the top four firms in shipments masks the effect of both imports and exports of motor vehicles but it does show that the manufacture of motor vehicles is a highly concentrated activity.

For many industries or products, markets are regional or even local. The national concentration ratio for an industry like bakeries, showing 30.7% of shipments accounted for by the leading four firms, does not take this into account as concentration may vary in different markets.

The meaning of concentration is also modified in Canada by the existence of strong international enterprises. This means that the ability of an enterprise to compete in the Canadian market may be influenced to an important degree by the size of the foreign parent as well as the relative size of the Canadian subsidiary. Concentration measures, of course, do not take this into account. However, for many industries covered by concentration statistics, the percentage of shipments accounted for by leading producers will no doubt be a useful indicator of competitive conditions, particularly when a series of such indicators becomes available for several years.

Causes of concentration. The economic causes of concentration are diverse. It is likely that some industries are highly concentrated in a country like Canada simply because the market is small in relation to the minimum economic size of plant. In some industries, marketing may be difficult for small companies because of a need for a well developed network of dealers, while room exists for only a few such extensive networks. High costs of advertising and marketing may restrict the number of sellers and leave the industry's largest firms in a favoured position; this is particularly true of the consumer goods industries where individual consumers may be highly subject to the influence of advertising and of real or imagined differences between particular brands. In some national economies, the development of distinctive products