

changing (see p. 405 of this volume, also Chapter XX, Canada Year Book, 1932 dealing with prices), is that of the volume of manufacturing production as distinguished from its value. Since real income is ultimately measured in goods and services, the growth of the volume of manufactures therefore becomes a matter of great importance. The important thing to know is whether consumers are getting more goods and services, not whether they are expending more dollars and cents.

The ever-increasing use of factory products is one of the most significant features of modern life. Its beginnings are briefly sketched on pp. 400 to 406. The process has continued until at the present time fresh fruits and vegetables are about the only articles which reach the consumer without, in some way, being first processed at a factory. Fresh milk is pasteurized and bottled in a dairy plant, fresh fish and meats are dressed principally in packing plants, and the home preserving of fruits and vegetables is being superseded by more efficient processes in the canning factory. Thus even the foods we eat, as well as the clothing we wear, our household conveniences and our instruments of production and transportation, are increasingly products of factories. The growing volume of factory production, therefore, measures approximately the total flow of the economic goods upon which the rising standards of modern life so vitally depend.

The statistics of manufactures afford a variety of measures of the growth of factory production. The number of wage-earners, capital invested, value of production and value added by manufacture all show to some extent the direction and volume of growth. The value of production and that added by manufacture, being reported in dollars, are influenced by price changes as well as the quantity of goods produced and, as already explained, become misleading under the violent price changes of the past fifteen years. The capital invested is also affected by changing money values, while the relation between capital invested and value of goods produced varies greatly as between one industry and another. Neither is the number of wage-earners employed likely to be a representative measure of changes in the volume of production. The progressively increasing use of machinery and the rise in the power installed per wage-earner (see Table 4) tend to increase the employee's output. Thus while the reported wage-earners in 1930 had increased 27.6 p.c. over the number in 1924, the volume of production is estimated to have increased by 38 p.c. in the same period.

In the construction of an independent measure or index of the volume of manufacturing production many difficulties are encountered. There are constant changes in the commodities manufactured and in their relative proportions. New articles are introduced and rapidly come into common use, such as the radio during the past decade, giving rise to quite large new industries and frequently resulting in a decline of previously existing industries. It is difficult to construct an index which will accurately show changes in manufacturing effort resulting from these changes in production. A second difficulty arises from the fact that many establishments find it difficult to accurately report quantitatively their minor products or by-