

deducting the cost of materials from the gross value of production (excluding excise and other sales taxes) or revenue. The 1960 Standard Industrial Classification of establishments is the basis of classification in the survey of production.

Current dollar census value added in the goods-producing industries increased by 2.1% in 1970, compared to the 9.1% annual increase recorded in 1969. Most of the slowdown was caused by a 0.4% decline in manufacturing.

### 21.2.3 Aggregate productivity trends

The level of, and changes in, productivity have a vital influence on economic growth, over-all cost-structure, international competitiveness and, in the final analysis, on the quality of life. In the measurement of productivity, output is related to one or more kinds of inputs utilized in the production process.

Although these measures of productivity relate output to a single input only, namely labour time, it must be emphasized that changes in output per unit of labour input cannot be attributed directly and solely to labour. Such measures reflect not only changes in the skills and effort of the labour force but also the contribution of other productive resources with which labour works as well as the effectiveness with which all are combined and organized for the purpose of production. In other words, changes in technology, capital investment, capacity utilization, work flow, managerial skills and labour-management relations each have a bearing on movements in what is termed "labour productivity".

**Sources of data.** The output components of the various indexes of output per unit of labour input referred to here are the indexes of "real domestic product (RDP) by industry". These indexes, which were developed within the conceptual framework of the Canadian System of National Accounts and which measure in constant dollar terms the unduplicated contribution of each component industry to total output, are considered basically suitable for productivity measurement when matched with the corresponding input measures.

The major sources for the employment and man-hour indexes were the monthly labour force and employment surveys, and these were supplemented by data from such sources as the annual censuses of manufactures and mining and the decennial census of population. Since the data from these diverse sources varied considerably in their coverage, concepts and methods of compilation, care had to be exercised in their selection, adaptation and combination into aggregate measures of labour input which would be conceptually and statistically consistent, both internally and in relation to the output data. Labour force survey data were used for the paid worker estimates of agriculture and of fishing and trapping, while those for manufacturing and mining were based on adjusted annual census data. Estimates for most of the remaining industry divisions were derived from employment survey data. Estimates of other than paid workers (own-account workers, employers and unpaid family workers) were derived mainly from the labour force survey. Estimates of average hours worked, which were needed for the indexes of output per man-hour, were also based on labour force survey data, except in the case of manufacturing, where man-hours data reported in the census of manufactures were also utilized. Indexes of output per person employed in commercial industries for 1946-72 are given in Table 21.14.

**Growth rates.** Between 1961 and 1972, output per person employed in the commercial industries increased at an average annual rate of 3.4%. Output per man-hour rose at a faster rate, 4.2%, due to a decrease in the length of the average work week (Table 21.15). During the past twelve years the rate of productivity increase has fallen off. The annual growth of 3.8% in output per person employed during the 1961-66 period dropped to 3.2% between 1966 and 1972. Corresponding rates for output per man-hour were 4.5% and 4.2%.

Productivity growth in the commercial service-producing industries continued to lag behind the comparable rate of increase in the goods-producing industries. From 1961 to 1972, the average annual rate of increase in output per person employed was 1.9% in the service sector and 4.7% in the goods sector. During the same period, output per man-hour increased 2.9% and 5.4%, respectively. In manufacturing, from 1961 to 1972 output per person rose 4.1% annually, while the growth in output per man-hour was 4.3%.

## 21.3 Price indexes

Price indexes express prices for a given period as a percentage of prices in a designated base period and consequently measure the movement of prices from one period to another. A