

the commodities have been divided into two groups, (1) Raw or Partly Manufactured Products and (2) Fully or Chiefly Manufactured Products, predominant usage having been followed as closely as possible.

Base Period.—The old official index number was based on the period 1890-1899. In view of the upheaval in prices occasioned by the war, comparisons are now called for in the main with the period immediately preceding it. In any event, comparisons with a period now so remote as 1890-1899 are not practical, and it is a fact that the more remote the base the wider is the margin of error in the index. The year 1913 has been adopted by the Bureau as the base period, in conformity with the practice in most other countries. Prices in the year 1913 are represented by the figure 100, and prices in prior and subsequent years are expressed as percentages of those prevailing in 1913.

Collection of Prices.—The collection of prices is perhaps the most important matter in connection with index numbers, and in their collection the policy of the Bureau is to secure as many as possible from reliable individual firms. Certain trade papers are used for quotations on commodities such as grain and other farm products which are traded in on organized markets.

The Bureau does not adhere rigidly to any one system as to the kind of price used. Many of the prices are those current on the fifteenth of each month, but where a commodity is subject to frequent fluctuations, the price prevailing on a single day of the month may not be representative. This method has, therefore, been supplemented by the use of monthly averages, averages of weekly quotations (one quotation per week being taken) or the selection of a predominant price. By this means it is thought that a more representative series of prices is obtained.

Weighting.—The Bureau follows the principle now widely accepted that an index number which is weighted with even approximate accuracy is more reliable than one which is unweighted, and in connection with this process, two questions have to be decided—(1) whether to use as weights the quantities of commodities marketed, produced or consumed, and (2) what formula to select for the purpose of combining the quantities and prices into index numbers.

The quantities used in weighting are those actually marketed. In other words the weighting of each commodity is in relation to its commercial importance, duplication being avoided where possible. Weighting according to quantities consumed or produced would doubtless give different results, but the method of weighting according to quantities marketed or exchanged is more logical, seeing that much of what is produced does not reach the market in its original state, if at all, and would not affect prices in the same way as if it had, while a strict consumption standard would not take account of quantities exported.

One more step in weighting is necessary to ensure the most accurate results. The 238 price series have been classified into various groups. In the chief component material classification there are eight. Within these groups the weighting of each commodity ensures that it exercises its proper influence, but the weighting of each commodity accurately within a group will not ensure the group as a whole exercising its proper influence upon the total result. That will depend upon whether or not the group total bears its proper ratio to the grand total. If, in the total trade of the country, vegetable products were estimated to have a relative importance represented by 28.1 p.c., then the vegetable products group in the index number should bear that ratio to the grand total for the 238 commodities. In order to have each group exert its proper influence on the final result, it was found necessary to multiply the group totals by certain numbers which may be termed group weights as distinguished