

sectors such as agriculture, private, nonfarm, manufacturing, government, etc. In this study we constructed instead a so-called mix index (X) making use of a breakdown of GNP by type of product or service recently initiated by the Department of Commerce and the input-output technique. First, estimates were prepared, utilizing mainly the Department of Commerce data on GNP, by type of product for each year 1909-58. These values were in constant 1954 prices. The breakdown was that provided in "*United States Income and Output*," A Supplement to the Survey of Current Business, November 1958, table VII-6, page 224. The input-output-table developed by the Federal Government at the Bureau of Labor Statistics for the year 1947 was utilized to distribute estimates of man-hours worked in each of about 50 industries and capital stocks in each of these industries to the final goods and service accounts in the GNP. The procedure made use of the table given by Evans and Hoffenberg (note 21 above) showing the direct and indirect deliveries of each of the 50 industries to each of the number of final demand sectors. The contributions of each industry to each of these broad final demand sectors was broken down into the final categories required for our purposes by inspection of the basic input-output table. Some rough tests showed that more refined procedures would not make enough difference to be worthwhile at this point.

With the man-hours and capital stocks distributed from industries to final goods and service categories, these were then totaled for each category of the gross national product. We then had the total number of man-hours and the total stock of capital employed in producing the particular quantity of goods or services produced in each category. Dividing the man-hours by the gross national product in each category gave a labor-output coefficient and division of the capital stock by the output gave a capital-output coefficient for each category of GNP.

These two sets of labor and capital ratios were used as weights in combination with the annual estimates of GNP by categories of goods and services to derive an index with 1954 equal to 100. Since this index used the changing composition of demand for each year at a constant set of labor-output and capital-output ratios, the resulting index expressed the change in the output which the system is capable of generating each year because of changes in the mix of demand but assuming that the efficiency with which inputs were used would remain constant throughout all years.

Potential mix index ($\bar{X}_p$) was computed by fitting a trend through the actual index for the individual years. In both the index of actual mix (X_a) and the index of potential mix ($\bar{X}_p$) the labor and capital components were combined with changing weights based essentially on those used by Kendrick. See note 30 above.