

polations over short and economically meaningful periods for hours in each of three sectors—agriculture, private nonfarm, and government. This resulted in about a 0.4 percent rate of decline in the most recent years which corresponds closely to the rate of decline in the early years, and a more rapid rate in the 1930's and 1940's.

(32) The estimate of capital stock, prepared by Dr. Terborgh, is that underlying Capital Goods Review, No. 39, September 1959, published by Machinery & Allied Products Institute, Washington, D.C.

(33) Dr. Terborgh describes the procedure and his results in Capital Goods Review, No. 39, September 1959. He comments on possible shortcoming of his procedure as follows:

This calculation is subject to at least one serious defect. The same estimated survival curves are used throughout. Even if these curves were correct for assets installed in one period, they would not necessarily be so for the installations of other periods. There is no reason to believe that mortality rates have held constant in the past. Because of this instability, actual changes in stocks must have differed appreciably from changes computed on the assumption of constancy.

It is difficult to appraise the magnitude of the errors arising from this assumption. They may be substantial. We are reasonably sure, however, that they are not sufficient to vitiate the computed results fundamentally. Though no more than crude approximations, these results offer a significant indicator of major changes in the stock of productive facilities. Needless to say, they should be read for major changes only.

A further warning is in order. Since our calculations relate to the grand total of business capital goods—agricultural, industrial, public utility, transportation, commercial, and miscellaneous—extreme care should be exercised in drawing inferences for particular classes or product lines. There have been wide differences from one line to another in past installation and survival rates, and the overall picture may, therefore, be of limited significance for any one of them taken singly.

(34) See Capital Goods Review, No. 40, Machinery & Allied Products Institute, December 1959. The average age refers to a weighted combination of the Terborgh series for plant and for equipment.

(35) The problem of allowing for the influence of changes in the composition of demand on productivity and costs was discussed in "Productivity, Prices, and Incomes" (materials prepared for the Joint Economic Committee by the committee staff), committee print, June 1957. See particularly the analysis of effects on share of employee compensation in national income (a related issue), pages 49–50, 59–60. See also, hearings on employment, growth, and price levels part. 2, testimony of Solomon Fabricant, page 281 and following pages; Bulletin No. 1249, U.S. Department of Labor, "Trends in Output Per Man-Hour in the Private Economy, 1909–58," January 1960, especially pages 12–14; and Study Paper No. 17, "Prices and Costs in Manufacturing Industries," by Charles L. Schultze and Joseph L. Tryon.

(36) In the past, two basic techniques have been used, particularly in the study of productivity, to make allowance in time series for the influence of changes in the composition of demand. One of these used by Kendrick, for example in the study cited in note 30 above, involves combining the inputs with weights reflecting the relative importance of each industry or, as in Kendrick's case, by the average compensation. The other technique derives measures, such as measures of productivity, for each of a number of components of the gross national product, then combines the outputs resulting from the component