

TABLE 1.—PERCENT DISTRIBUTION OF MILL FIBER CONSUMPTION, BASED ON COTTON EQUIVALENTS, 1947, 1957, AND 1966

Type of fiber	Cotton-equivalent basis ¹		
	1947	1957	1966
Total ²	100.0	100.0	100.0
Manmade fiber.....	23.1	39.2	56.6
Rayon and acetate.....	21.8	24.2	19.6
Noncellulosic.....	1.2	12.7	32.2
Glass.....	0.1	2.3	4.8
Cotton.....	71.0	57.9	41.6
Wool.....	5.8	2.0	1.8

¹ Converted by the Department of Agriculture to enable fiber comparison on the basis of the quantity of material realized. Adjustment was made for differences in the waste involved in manufacturing fabric from various fibers, and for differences in the average weight of generally comparable end products made from the different fibers.

² Does not include silk.

Source: Unpublished data, U.S. Department of Agriculture.

Productivity in the hosiery industry has been increasing rapidly, according to the BLS official index ⁷ constructed with appropriate weights. Output per man-hour for all employees rose at an average annual rate of 2.9 percent from 1947 to 1957, but at a rate of 6.6 percent from 1957 to 1965. From 1960 to 1965, the rate was 7.3 percent. The sharp increase in productivity is associated with a rapid rise in output and a major change from full-fashioned to seamless hosiery.

Cotton and manmade fiber broad-woven production, for example, was 25 percent greater in 1965 than in 1948, but there were 22 percent fewer looms in place and 2 percent fewer loom hours worked in 1965. Engineering studies of future technology suggest a continuation in the reduction of equipment per unit of output.

Increasing and more intensive use of modernized equipment are reflected in the doubling of the industry's electric consumption over the postwar period, despite a significant decline in real fixed capital. Per production worker, consumption of electric energy increased two and one-half times from 1947 to 1965, rising at the average annual rate of 4.4 percent. Compared with all manufacturing, however, the rate of electrification of textile mills per worker remains relatively low.

Lower capital requirements in relation to capacity or output is another partial indicator of technological change, reflecting improvements in textile machinery and more intensive utilization. Real fixed capital in the textile industry declined almost 40 percent from 1948 to 1963, while textile mill capacity increased 13 percent, according to the National Industrial Conference Board. Data on selected types of machinery tend to confirm this trend to a lower capital-output ratio.

Performance potential.—The potential for "efficiency" increase can be assessed from the Commerce Department's approximations of interplant differences in performance. Measures of value added per production worker (an approximate indicator of "efficiency" for the "more efficient", "less efficient", and average mill of 1958 indicate a wide variance.⁸ Scattered data for 1963 appear to indicate roughly similar differences.

The difference in average value added per production worker man-hour between the "more efficient" and the average mill ranged from 40 percent in the narrow fabric sector to 140 percent in the knit outerwear sector. In the "more efficient" cotton and synthetic weaving mills, the ratio was 50 and 70 percent, respectively, greater than in the average mill. (See table 2.) As would be expected, differences between the "more efficient" and "less efficient" mills, were considerably greater—from double in the narrow fabric sector to four and a half times the ratio in the knit outerwear sector.

⁷ *Indexes of Output Per Man-Hour, Selected Industries, 1939 and 1947-66*, (BLS Bulletin No. 1572, 1967).

⁸ This efficiency concept, developed by the U.S. Department of Commerce, is based on the ratio of payrolls to value added. The plant with the lowest ratio of payrolls to value added would be the most efficient mill. See *U.S. Industrial Outlook, 1967* (U.S. Department of Commerce, Business and Defense Services Administration), pp. 206-210.