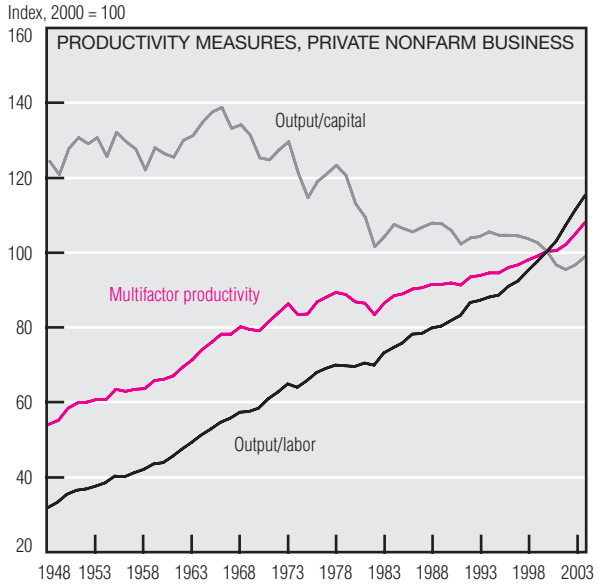
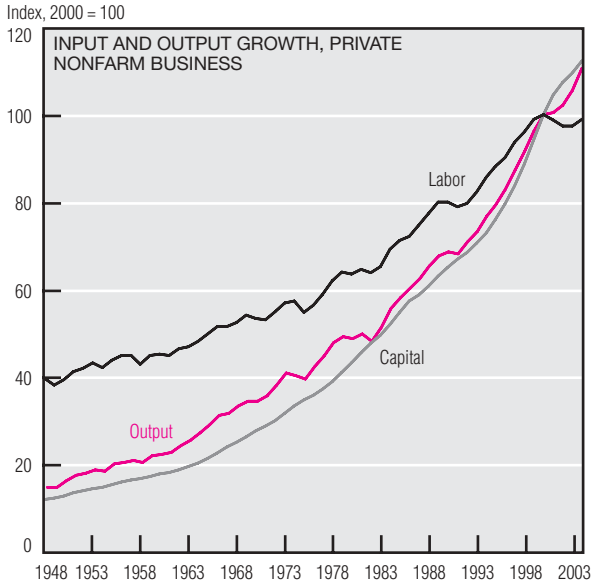
Productivity Measures





Multifactor Productivity, Private Nonfarm Business[a]

	Average annual growth rate, percent						
	1987–2004	1987–90	1990–95	1995–2000	2000–04	2002–03	2003–04
Output per hour	2.3	1.5	1.6	2.5	3.5	3.9	3.4
Contribution of capital intensity[b]	0.9	0.6	0.6	1.1	1.2	0.8	0.3
Contribution of information processing equipment and software	0.6	0.4	0.5	0.9	0.6	0.4	0.4
Contribution of all other capital services	0.2	0.1	0.1	0.2	0.5	0.4	0.0
Contribution of labor composition[c]	0.4	0.4	0.4	0.3	0.5	0.3	0.1
Multifactor productivity[d]	1.0	0.5	0.6	1.2	1.9	2.7	2.9
Contribution of R&D to multifactor productivity	0.2	0.2	0.2	0.2	0.3	0.3	0.3

a. Excludes government enterprises. The sum of multifactor productivity and the contributions may not equal output per hour due to independent rounding.
b. Growth rate in capital services per hour times capital's share of current dollar costs.
c. Growth rate of labor composition (the growth rate of labor input less the growth rate of hours of all persons) times labor's share of current dollar costs.
d. Output per unit of combined labor and capital inputs.
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

Multifactor productivity (MFP) reflects output changes that are not accounted for by changes in capital and labor. It represents the effects on output growth of many factors, including new technologies, economies of scale, managerial skill, and changes in the organization of production. As such, MFP, also known as the Solow residual, is often considered a measure of technological progress.

Labor productivity, that is, output per unit of labor, is affected by capital deepening (increases in the ratio of capital to labor), labor composition, and MFP. In fact, over the past decade, MFP has often accounted for a major part of labor productivity growth. Both labor productivity and MFP have risen substantially over the past 50 years or so. Capital deepening (or capital intensity), which boosts labor productivity by providing more and better capital for workers, accounted for over a third of labor productivity growth in 2000–04. Labor composition improvements, such as work experience and increased educational attainment, accounted for nearly 15% of labor productivity growth over the same period, while MFP accounted for more than 50%. The slowdown in labor productivity growth in 2003–04 reflects deceleration in capital deepening (in capital services other than information processing equipment and software) and a slower rate of growth in labor quality, which more than offset the acceleration in MFP that occurred over the period.