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STUDY SHOWS HOW PRODUCTIVITY AND ECONOMIC GROWTH HAVE BEEN REDUCED BY ENVIRONMENTAL PROTECTION REQUIREMENTS, EMPLOYEE SAFETY PROGRAMS, AND CRIME

Costs arising from protection of the environment, protection of employee safety, and crime help to explain why productivity gains have slowed in recent years, according to an article appearing in the January issue of the *Survey of Current Business*, a monthly magazine published by the Commerce Department's Bureau of Economic Analysis.

In "Effects of Selected Changes in the Institutional and Human Environment Upon Output per Unit of Input" Edward F. Denison, a Senior Fellow of the Brookings Institution, examines the effect on productivity exerted by (1) new requirements to protect the physical environment against pollution; (2) increased requirements to protect the safety and health of employed persons; and (3) rise in dishonesty and crime.

Denison finds that output per unit of input in the nonresidential business sector of the economy was 1.8 percent smaller in 1975 than it would have been if business had operated under 1967 conditions. Of this amount he ascribes 1.0 percent to pollution abatement, and 0.4 percent each to employee safety and health programs and to the increase in dishonesty and crime. Denison's analysis is in terms of output per unit of input, i.e. it takes into account not only the labor used in production, but also capital and land, and relates to the sector of the economy for which productivity measurement is most clear-cut, the nonresidential business sector.

Denison's estimates show that by the mid-1970's the three factors were importantly retarding the growth of productivity. "Together, they subtracted 0.2 percentage points from the percentage change in output per unit of input in 1973, 0.4 points in 1974, and 0.5 points in 1975."

"A reduction of 0.5 percentage points in the annual growth rate, the reduction reached in 1975, is equal to a large fraction of the growth rates that have been achieved in the past. For example, it is equal to nearly one-fourth of the annual growth rate of output per unit of input from 1948 to 1969 (2.1 percent) and nearly one-fifth of the growth rate of output per person employed during that timespan (2.6 percent). The fractions are even larger if comparisons are made with more recent growth rates, which are lower for other reasons besides the impact of pollution abatement, employee safety programs, and crime."

Estimates provided in "Effects of Selected Changes in the Institutional and Human Environment Upon Output per Unit of Input" are part of a comprehensive study of U. S. economic growth in which Denison is engaged. The estimates are to aid analysis of growth and productivity, not to judge the wisdom of government programs, which have benefits as well as costs.

*Survey of Current Business* is available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402. First class mail: annual subscription \$31.00 domestic, \$38.75 foreign; single issue, \$2.75 domestic, \$3.45 foreign. Second class mail: annual subscription \$19.00 domestic, \$23.75 foreign; single copy \$1.60 domestic, \$2.00 foreign.

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