

The Growth of Information Workers in the U.S. Economy, 1950-1990:
The Role of Technological Change, Computerization, and Structural Change

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Abstract. This paper uses data from the U.S. Decennial Censuses of 1950 through 1990 to measure the growth of information workers in the U.S. economy and analyze the sources of their growth. There are three major findings. First, information workers increased from 37 percent of the workforce in 1950 to 55 percent in 1990. Second, using a decomposition analysis, I find that the growth in information workers was driven not by a shift in tastes toward information-intensive goods and services (as measured by the composition of final demand) but rather by a combination of the substitution of information workers for goods and service workers within the structure of production of industries and by the unbalanced growth effect -- that is, the slower productivity growth of the more information-intensive industries. Third, on the basis of econometric analysis, it is found that while technological change, as measured by the growth in total factor productivity, has a negative effect on the employment of information workers, the pace of new investment as reflected in the growth in the capital-labor ratio, R&D intensity, and the rate of computerization has a positive relation to the change in information employment.

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