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Technological Change and Its Effects on the Economy

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ABSTRACT

Technological developments have been a key driving force behind economic transformations throughout human history. Since the Industrial Revolution, advancements such as mechanization, information technologies, and artificial intelligence have shaped productivity, labor, wages, and income distribution. This article examines the major economic effects of technological change by evaluating evidence from the literature, theoretical models, and policy suggestions. Within the scope of the study, data were obtained from the Web of Science database using the keywords “technological change” and “economy.” A total of 1,985 articles (covering the years 1981–2025) were identified by selecting all fields and filtering for studies containing both terms. According to the analysis, the most cited authors were Otmar Edenhofer, David I. Stern, and Pierre Alexandre Balland. The countries with the most cited publications were the United States, the United Kingdom, and Germany, respectively. The most cited organizations/institutions were the National Bureau of Economic Research (NBER), Cambridge University, and Boston University. In conclusion, articles involving the topics of technological change and the economy emphasize that technological change supports economic growth while also deeply affecting labor markets and income distribution. Theoretical and empirical evidence shows that this process can be shaped through appropriate policy interventions. Therefore, a holistic and interdisciplinary approach is essential to ensure that the benefits of technological progress are broadly distributed.

KEYWORDS Technology; Technological Change; Innovation; Economy