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ABSTRACT

A review of long-term international economic trends and the literature linking education and training (ET) to economic performance reveals no evidence of deindustrialization or falling labor productivity in the United States. Over the last 40 years, the nation has experienced lower growth rates in gross domestic product and productivity but remained the world leader in both. What is seen is a trend toward general conversion on those dimensions among nations in Organization for Economic Cooperation and Development. ET and its effects on labor quality are generally found to be among the most important contributors to economic growth, but, so far, scientific attempts to establish just how this mechanism works have not succeeded. Likewise, there is only sketchy evidence about the importance of human resources to a firm's success. The shortcoming may lie in the two approaches economic research has traditionally taken to the question--one focusing on the macro level of economic growth, the other on how ET affects individual wages and worker productivity. A more systems-oriented approach would be more appropriate and equal to the task. Taking this tack would mean developing a new theoretical framework that includes approaches as diverse as business and economic history, evolutionary economics, and case studies of matched firms in different countries. (YLB)

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Trial by False Fire

Education's Role in U.S. "Economic Decline"

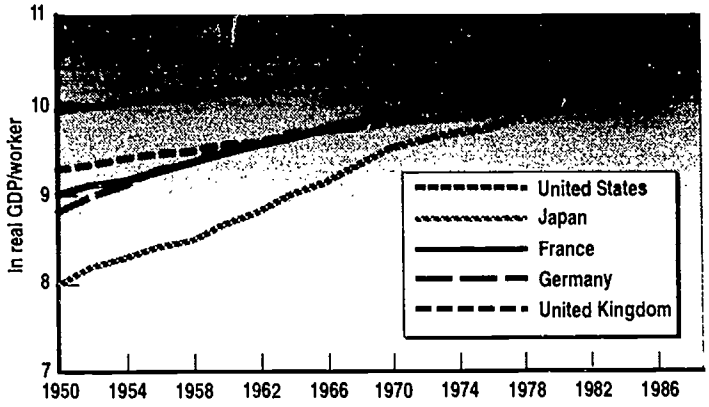
Policy debates often beg large questions and operate on questionable assumptions. An extreme case is the debate on how education and training must be "fixed" to avoid further U.S. economic decline. Although the proposed "fixes" differ, most parties assume that the United States is losing its industrial core, U.S. workers are less productive than competitors' workers, U.S. education and training bear much of the blame, and improving them will have a high payoff in the U.S. national quality of life and competitive position.

To help decisionmakers assess such claims, economist Roland Sturm looked at long-term international economic trends and reviewed the literature linking education and training (ET) to economic performance. What he found strongly challenges many of the debate's assumptions:

- U.S. economic performance is much more competitive than doomsayers believe.
- ET clearly affects economic performance, but no one knows exactly how.
- The economic data do *not* suggest the need for dramatic, immediate changes in ET—much less what those changes should be.
- Research will need a new approach to establish the links between ET and economic performance and the kinds of ET changes that will improve that performance.

Adjusting the picture on U.S. economic performance

Long-run international analysis reveals no evidence of U.S. deindustrialization or *falling* labor productivity. Over the last 40 years, the United States has experienced lower *growth* rates in gross domestic product (GDP) and productivity—but remains the world leader in both. The U.S. share of manufacturing output in the Organization for Economic Cooperation and Development (OECD) has increased, while the share of Germany and other OECD nations (except Japan) has dropped. In terms of real GDP per capita, the relative position of the United States is still 25 percent above the mean. Labor productivity *has* grown more slowly,



SOURCE: Penn World Table (Mark 5), data set described in Summers and Heston (1991).

United States still leads as labor productivity trends converge for OECD nations

but other countries are not quickly surpassing the United States in either productivity or per capita GDP.

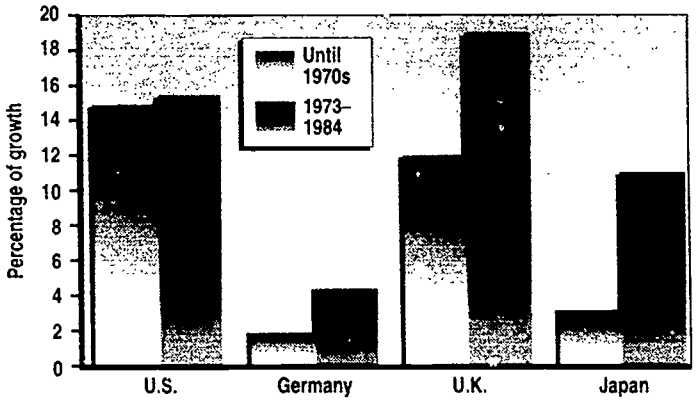
What we are seeing is a trend toward general convergence on those dimensions among OECD nations. Economists explain this convergence in terms of improved *social capability*—a country's ability to exploit

the "advantages of backwardness" by copying a leading country's production methods without incurring the same development costs.

Trying to link education to economic performance

Even though the data show convergence and do not show that other countries are quickly surpassing the United States, it is important to consider factors that may give countries the edge in certain industries. No one would deny that ET is *connected* with economic performance. Regardless of the particular method used to measure the contribution, ET and its effects on labor quality are generally found to be among the most important contributors to economic growth. But, so far, scientific attempts to establish just how this mechanism works have not succeeded. Likewise, there is only sketchy evidence about the importance of human resources to a firm's success—despite the claims in business magazines and columns.

Sturm suggests that the shortcoming lies in the two approaches economic research has traditionally taken to the question. One focuses on the macro level of economic growth, the other on how ET affects individual wages and (to a lesser extent) worker productivity. But, he argues, both approaches have limitations that make them ill-suited to analyze the current policy issues of international competitiveness and technological change. Sturm proposes that a more systems-oriented approach would be more appropriate and equal to the task. Taking this tack would mean developing a new theoretical framework that includes approaches as diverse as business and economic history, evolutionary economics, and case studies of matched firms in different countries.



Countries vary in percentage of growth "explained" by education

With such a framework, research could address key issues of economic growth that have not been explored in the existing work on ET's contribution to productivity: Are ET levels related to firm size? Are ET levels higher in industries where a few firms dominate the market? Are industries with higher ET levels experiencing faster productivity growth?

Sturm concludes that guidance for policy on ET clearly needs further development and that—though far from perfect—such less-orthodox frameworks offer the most promising approach. However, until research can identify how the connections among ET, labor productivity, and national competitiveness work, ET reforms aimed at improving both will continue to be well-meant shots in the dark.

RAND policy briefs summarize research that has been more fully documented elsewhere. This policy brief describes work sponsored by RAND's Institute on Education and Training with funds from a grant by the Lilly Endowment Inc. This work is documented in How Do Education and Training Affect a Country's Economic Performance? A Literature Survey, *by Roland Sturm, MR-197-LE, 1993, which is available from RAND Distribution Services: Telephone: (310) 451-7002; FAX: (310) 451-6915; Internet: order@rand.org. RAND is a nonprofit institution that seeks to improve public policy through research and analysis. RAND's publications do not necessarily reflect the opinions or policies of its research sponsors.*

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