A Cross-Country, Cross-industry Comparison of Productivity Growth

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This paper presents evidence on the nature of productivity growth for five major industries in six countries. Output growth is found to be more correlated across countries than productivity growth. In addition, productivity growth is more correlated across industries within one country than across countries within one industry. Using an error-components model, I find that a substantial fraction of changes in annual productivity can be attributed to nation-specific factors that are common across industries. The evidence suggests that short-run productivity growth is similar across industries in a nation but less similar across countries in any specific industry.

1. Introduction

In macroeconomics, Solow's (1957) method of growth accounting is commonly employed to estimate productivity. Its measurement has been used to address questions concerning both economic growth and aggregate fluctuations. When one is concerned with the long run, Solow residuals have been used to gain an understanding of the recent slowdown in productivity (Fischer 1988) as well as to assist in learning about the overall sources of economic growth in different economies (Chenery, Robinson, and Syrquin 1986; Maddison 1987). In the short run, estimates of factor productivity in the United States have been used to evaluate business cycle models (Prescott 1986).