

Revisiting the Relationship between Education and the Dynamics of Production: Does Vocational Education Change the Equation?

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When models for economic growth include human capital, they typically use years of schooling as a measure, or decompose it into high and low skill categories. Vocational formation is acknowledged as theoretically important for absorptive capacities and technological diffusion, but little is known about relative contributions of this type of educational formation to economic output; growth, or convergence and catch-up. This paper uses new internationally comparable variables available for 129 countries from 1950-2010 to analyze how the portion of vocational education in secondary school interacts with other levels of human capital in an economy and how those interactions benefit technological progress and overall economic growth. The approach taken in this paper is to replicate four cross-country analyses conducted by authors whose work represents bedrocks of different strands of literature on the relationship between education and economic output. We first replicate as exactly as possible the methods of the authors, attempting to use the original data they used in their analyses. We then update the data and incorporate our vocational variable. Using similar econometric techniques, we reinvestigate the relationship between education and a variety of measures for economic output, more explicitly specifying the role of different types of educational formation. We find evidence that vocational formation has a relationship with economic output that is distinct and possibly complementary to the overall non-vocational years of schooling. The results are quite sensitive to changes in specifications, number of countries, and different time periods. This opens the floor to deepen currently common empirical approaches to assessing the expected relationship between education and the dynamics of production. By distinguishing between vocational and non-vocational educational formation, we allow for a non-uniform relationship with the productive world.