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PRESS RELEASE

Human capital, firm capabilities and productivity growth

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Economists and policy makers have always had a keen interest in understanding how firms turn inputs into outputs. Productivity, which is a measure of the efficiency with which this conversion occurs, has received special attention as it can be directly related to welfare differences between countries. At the aggregate level for example, over 50% of differences in GDP per capita across countries can be accounted for by productivity differences.

At the macroeconomic level, productivity growth can be caused by individual firms becoming more productive, for example through innovation, or by upgrading the labor force skills through education or training. However, this is not the only source of aggregate productivity growth. The reallocation of resources across firms also plays a role. When input factors are reallocated from low marginal value activities to high marginal value activities, the total value of output increases, while the global level of inputs is not changed, leading to a rise in aggregate productivity.

We estimate total factor productivity growth in the Belgian private sector for the period 1997 to 2009 and determine the relative importance of both increases in firm level productivity and the reallocation of resources to aggregate productivity growth. We find that aggregate productivity growth is relatively low in the services sectors, mainly due to lower within-firm increases in productivity. This is especially true for the low-knowledge intensive services sectors. Within-firm productivity growth is mainly realized by firms active in the manufacturing – high-tech as well as low-tech – and telecommunications sectors.

Dividing the samples according to the firm capabilities shows that productivity growth is mainly realized by firms having high levels of human capital – obtained either through the general education system or through firm provided training – and by firms that engage in international trade. Non-trading firms, in spite of their importance for overall employment, contribute very little to aggregate productivity growth.