

Thanaporn Jensukhum 2007: Sources of Output Growth in Thai Manufacturing Sector.  
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This study aims to identify the sources of output growth in Thai manufacturing sector. Both the constant return to scale Cobb-Douglas production function and the production function of technological progress are estimated by using data during the period 1977-2004. The residual of output from both equations are separately used to trace the source of growth of such residuals.

The regression result of production function showed that domestic capital stock contributes the largest share of output growth, followed by human capital, foreign capital stock, and labor, respectively. In quantity these factors contribute 0.5143 0.2449 0.2067 and 0.0341 percent and explain 99.52 percent of the total output growth. Moreover, the total factor productivity (TFP) or the residual factor from that production function, which share 0.3116 percent, depended on the technological progress, technology policy, technology policy interaction with research and development (R&D) expenditure in the last three years, and human development policy interaction with education budget in the last two years. As the estimation result of production function with technological progress, it was revealed that domestic capital stock in the share of output growth is more than others factors. Human capital, labor, technological progress, and foreign capital stock are the following important factors that contribute growth, respectively. Statistically, these factors have contribution 0.5502 0.3836 0.0507 0.0301 and 0.0155 percent. They contribute to the total output growth at 99.60 percent. Furthermore, the TFP or the residual factor from that equation shares 0.2930 percent. Factors affecting the TFP are the technology policy, technology policy interaction with R&D expenditure in the last three years, and human development policy interaction with education budget in the last two years.

Because those factors play an important role on output growth in manufacturing sector. It is recommend that the government pay particular attention to support investment on domestic capital stock, foreign capital stock, and human capital. The R&D and education expenditures have play a small role in enhancing output growth.

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