

Janjira Sodsith 2011: The Effects of Technological Progress on Effective Capital Stock of Thailand. Master of Economics, Major Field: Economics, Department of Economics.
Thesis Advisor: Associate Professor Sumalee Santipolwut, Ph.D. 154 pages.

The research objectives of The Effects of Technological Progress on Effective Capital Stock of Thailand for the whole economy and in each production sectors are 1) to study the relationship between domestic technology and foreign technology and the effect on economic growth, and 2) to study the effects of technological progress on effective capital stock and effective human capital stock of Thailand. The research employed annual secondary data over 1977-2010.

The result of this research revealed that every economic sectors have an increase in the expense of domestic technology, mostly by the government, less than by import the foreign technology. The average years of schooling of labor tend to increase in every economic sector. Agricultural sector has the lowest average years of schooling of labor (4.98 years) while service sector has the highest average years of schooling of labor (11.02 years). The results from Granger Causality test revealed that foreign technology is the cause of domestic technology development in every sector, excluding service sector. Furthermore, the analysis of technological change showed that service sector has the highest average technological change (48.22%) but agricultural sector has the lowest average technological change (12.29%). Moreover, the effects of technological progress on effective capital stock and effective human capital stock showed that other sectors has the highest accumulation of average effective capital stock (1,439,427,897.41 million baht) and service sector has the highest accumulation of average effective human capital stock (437.74 years). Nonetheless, agricultural sector has the lowest accumulation of average effective capital and human capital stock (82,063,606.2 million baht and 55.62 years, respectively).

Based on this research finding a policy recommendation is that the government should pay more attention to research and development of domestic technology and human capital development in each sector in order to maintain the increase on both effective physical capital and effective human capital, especially in agricultural sector including human capital in service sector and other sector, owing to these sectors have tended to decrease in effective human capital.

Student's signature

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