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PRODUCTION FACTOR COEFFICIENTS TRANSITION THROUGH THE LENS OF STATE SPACE MODEL

Abstract:

Economic growth can be considered as an important element of countries' development process. For developing countries, like Thailand, to ensure the continuous growth of the economy, the Thai government usually implements various policies to stimulate economic growth. This study, therefore, investigates explanatory variables for economic growth in Thailand from 2005 to 2017 with the total of 52 quarters. The investigation is estimated throughout the production function with non-linear Cobb-Douglas equation. The relevant factors included in the estimation cover three traditional means of production and implicit effects with the internal and external instabilities. According to empirical results, the AR(|2|) equation with the inclusion of seven significant variables presents the most suitable model. However, this is not the case of the recursive coefficient model from the state space model that allows the transition of coefficients. With the powerful state space model, it provides the productivity or effect of each significant factor more in detail. The state coefficients are estimated based on the AR(|2|) with the exception of the one previous GDP and the 2009 world financial crisis dummy. The findings shed the light that those factors seem to be stable through time since the occurrence of the world financial crisis together with the political situation in Thailand. These two events could lower the confidence in the Thai economy. Moreover, state coefficients highlight the sluggish rate of machinery replacement and the low level of technology of capital goods imported from abroad. The Thai government should apply the proactive policies via taxation and specific credit policy to improve technological advance, for instance. Another interesting evidence is the issue of trade openness which shows the negative transition effect along the sample period. This could be explained by the loss of price competitiveness to imported goods, especially under the widespread implementation of free trade agreement.

Keywords:

autoregressive model, economic growth, state space model, Thailand

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