

A comparative analysis of technical efficiency, technological change and total factor productivity in selected ASEAN+3 countries

Abstract

Total factor productivity (TFP) growth in ASEAN+3 countries exhibits varied trends. This is due to the fact that each country has different skills and different levels of technological advancement. This study aims to analyse the trends in technical efficiency (TEC), technological change (TC) and TFP growth using the Malmquist productivity index method. The analysis is based on data ranging from 1981 to 2014 in selected ASEAN+3 countries. The results show that during the periods 1981–1985, 1986–1990, 1991–1995, 1996–2000 and 2001–2005, the contribution of TEC to TFP growth was higher than that of TC. However, during the periods 2006–2010 and 2011–2014, the contribution of TC to TFP growth was higher than that of TEC. Therefore, it is imperative for the countries to improve the quality of inputs such as labour. Hence, skilled workers are indispensable to produce higher productivity.

Keywords

ASEAN+3; technical efficiency change; technological change; TFP growth