Determinants of deforestation in Peninsular Malaysia: an ARDL approach

ABSTRACT

The forested land in Malaysia is slowly giving way to agriculture especially oil palm and other forms of land use, creating a conflict between agriculture production and forest management. Land use for agriculture has changed over the years. While the land use for oil palm has been increasing steadily since the late 1980s, the relatively more drastic increment has been observed in the late 1990s. On the other hand, land use for other crops such as rubber and cocoa has been declining. This paper highlights the empirical evidence on tropical deforestation in Peninsular Malaysia. The economic factors and short-run and long-run effects of its determinants were examined in an Autoregressive Distributed Lag (ADRL) approach. The results suggest that in the long run, there are no determinants that have significant impact on deforestation. Instead, the price of oil palm is significant at 10 percent level and has positive impact on forest area. In the short run, the results show that the weighted price of logs and the price of oil palm are negative and statistically significant at 10 and 1 percent level respectively. These results indicate that the determinants of deforestation in the short run do exist. They lead to the decline of forest area which increases the rate of deforestation in the Peninsular Malaysia.

Keyword: Deforestation; Short-run; Long-run; Autoregressive distributed lag