Chapter 12

The Relevance of the Tourism-Led Growth Hypothesis to Malaysia:
A View Through Rolling-Samples and Disaggregated Tourism Markets

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ABSTRACT

This paper explored whether the tourism-led growth (TLG) hypothesis is empirically relevant to Malaysia based upon both full sample and rolling sample analyses. Data from January 1995 to December 2010 have been utilised for the purpose. Instead of relying upon aggregated data of tourist arrivals, disaggregated data of arrivals from 12 major tourism markets are relied upon for more insightful and accurate findings. The empirical results suggest that there was cointegration between Malaysia's economic growth and tourist arrivals from these tourism markets. However, the results of the full sample Granger causality test indicate that only 2 out of 12 tourism markets contributed to economic growth in the short-run. The TLG hypothesis is only supported in the long run by tourist arrivals from 10 out of the 12 tourism markets. The rolling-based Granger causality test shows that it is also these 10 markets situated mostly in developed countries that could provide a stable support for the TLG hypothesis.

1. INTRODUCTION

Malaysia is one of the important fast growing countries for tourism in the Asia Pacific region. Based upon the 2015 Tourism Highlights presented by the United Nation World Tourism Organisation (UNWTO, 2015), Malaysia is the third most visited destination in Asia with 27.4 million international tourist arriv-

als in 2014, and fourth in the ranking in terms of international tourism receipts with the record of USD 21.8 billion in 2014. In light of the impressive performance in tourism attraction, research on tourism, especially the validity of the tourism-led growth (TLG) hypothesis in Malaysia has been given special attention by the scholars. According to our reading, studies on Malaysia can be summarised into five major strands based upon the methodology used.

The first strand of the literature (e.g. Lau, Oh and Hu, 2009; Mulok et al., 2012) analysed the validity of the TLG hypothesis in Malaysia within a bivariate framework, whereas the second strand (e.g. Loganathan, Ibrahim and Harun, 2008; Kadir, Nayan and Abdullah, 2010; Othman, Salleh and Sarmidi, 2012; Tang, 2013; Cheam et al., 2013; Lean, Chong and Hooy, 2014; Kumar et al., 2015; Tang and Tan, 2015a; Tang, Cheam and Ong, 2015) extended the analysis by employing a multivariate framework in order to avoid the omission of relevant variable(s) problem. However, the results of these two strands of past studies are mixed with regard to the validity of the TLG hypothesis. The third strand of the literature (e.g. Hassan and Jenggie, 2012; Mazumder, 2009; Salleh et al., 2012) presumed that tourism is the engine of growth, and they thus applied the Input-Output (I-O) approach to estimate the multiplier effects of tourism on the Malaysian economy. The fourth strand of the literature (e.g. Kadir & Karim, 2012; Tang, 2011) argued that the use of aggregated tourism data in examining the validity of the TLG hypothesis in Malaysia is prone to the aggregation bias problem. This may offer unclear guidance for policymakers when designing tourism marketing strategies and economic growth policies. To overcome these imperfections, this strand of studies have analysed tourist arrivals from different tourism markets. This could provide knowledge about which inbound tourism markets that are to be focused upon in policymaking. The fifth strand of the literature (e.g. Lean and Tang, 2010; Tang and Tan, 2013, 2015b) brought in the issue of stability of the TLG hypothesis. Their argument is that testing for the validity of the TLG hypothesis based upon full samples may be inappropriate as relationships between variables may vary over time due to changes in the global economic and political environments as well as policies. Therefore, studies in this strand would focus on the stability or the persistence of the TLG hypothesis in Malaysia using the time-varying Granger causality methods, especially the recursive- and the rolling-based causality tests.[1]

Based upon our review of the studies on the TLG hypothesis, especially for Malaysia, research at the disaggregated level remains limited and also imperfect in terms of the methodology used. We noticed that only Tang and Tan (2013) investigated the validity as well as the stability of the TLG hypothesis at the disaggregated level of inbound tourism markets in Malaysia using the recursive-based test for Granger causality in a bivariate framework. It is well noted in the econometrics literature that a bivariate framework may suffer from the omitted variable bias problem while the recursive-based tests would not able to differentiate between changes in a causal relationship and changes in statistical power due to a recursive increase in sample sizes. Motivated by these imperfections, this study applies the rolling regression-based test for Granger causality in a multivariate framework to re-assess both the validity and the stability of the TLG hypothesis in Malaysia over a sample period from January 1995 to December 2010. The rolling-based test is more appropriate and superior to a recursive-based test because the sample size for rolling-based test is fixed over the length of the available time series. In such a case, the change in the test statistics would mainly reflect the variation in the causal relationship rather than change in the sample size.

The rest of the paper is organised as follows. Section 2 presents the model, the econometric techniques and information about the data used in this study. Section 3 then discusses the empirical findings of the study. Finally, the conclusion and policy implications are presented in Section 4.

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