

A measure of the economic dependence of countries on tourism.

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Abstract

The first and main aim of this study was to construct a tourism economic dependence index (TEDI) for a sample of 144 countries and the period 1995 to 2019. Next, we analysed convergence in TEDI levels. The TEDI calculated shows a mild trend toward higher levels of dependence on tourism of economies since the end of the global financial crisis. However, we did not observe a clear reduction in cross-country dispersion in TEDI levels. Moreover, the estimation results suggest that the absolute convergence hypothesis can be rejected and that there are four final convergence clubs and two diverging countries (Albania and Macao). Further analyses indicated that geographic factors play a major role in determining the corresponding probability of club membership. In addition, large economies and more resource-dependent economies have a lower probability of belonging to the most dynamic and high-level TEDI club of countries.

Keywords

Economic dependence on tourism; composite index; club convergence; ‘log-t’ regression model.

Extended abstract

Tourism is an important component of GDP across countries and is a major source of export revenues. This industry is a major employer worldwide and has been one of the largest and fastest-growing economic sectors in the decades leading up to 2019 (WTO, 2021). However, as the COVID-19 pandemic has brutally shown, countries that are highly dependent on tourism revenues have been more vulnerable to external shocks that have a direct impact on tourist demand. In this regard, Milesi Ferreti (2021) showed that, when compared to pre-crisis growth forecasts, more severe downturns were experienced by countries that are more dependent on tourism than were experienced by less-dependent countries. This author also suggested that the effects of such external shocks are a relevant challenge, especially

to smaller tourism-dependent economies, which, in many cases, are highly indebted and have few possibilities to diversify their economies. In these lower- and lower-middle income countries, which employ many people in tourism, there is almost nothing that can be done in the face of external shocks to substitute a fall in tourism demand in the short run (Mooney & Zegarra, 2020). In fact, according to the World Bank (2020), the broader economic impacts of the collapse of tourism demand on individual countries will differ according to the following features: (1) their specific ‘economic dependence’ on tourism activities; (2) the resilience of the country’s main tourism destinations; and (3) the dynamics of demand in their main source markets. For these reasons, it would be helpful to have available a single measure of the dependence of economies on tourism. This could be used, for example, to correctly assess tourism’s contribution to economic growth and development, and also to evaluate how individual economies will be affected due to external demand shocks according to the countries’ level/stage of tourism dependence. To our knowledge, there is a lack of a commonly accepted single measure of the economic dependence of tourism at the national level. Thus, to address this gap in the literature, the first and main aim of this paper was to construct a tourism economic dependence index (TEDI) for a sample of 144 countries and the period 1995 to 2019. As an example of the application of this single measure of dependence, we analysed convergence in TEDI levels across countries for the period 2000 to 2019 (i.e. the time span for which a balanced panel can be constructed using our database) in order to identify groups of countries converging to the same long-run equilibrium level (i.e. convergence clubs). In addition, this analysis indicates some factors which can affect membership of countries in convergence clubs. Thus, this study may contribute to increase understanding of the evolution of economic dependence on tourism across countries and to reveal some relevant patterns of such a process. In the present study, the proposed single measure of economic dependence of countries on tourism was a composite index (TEDI), which was constructed by adapting the Extractives Dependence Index (EDI) proposed by Hailu and Kipgen (2017) to the particularities of the tourism sector. The EDI was constructed to measure the economic dependence of countries on non-renewable resources such as oil, gas, and minerals. In our case, the main variables that made up the TEDI are as follows: (1) the share of exports earnings from tourism in relation to total exports earnings; (2) the share of tourism value added in GDP; (3) the share of tourism employment in relation to total employment. All these variables encompass the three dimensions through which tourism activities may have an impact on the economy: that is, through their contribution to foreign exchange, national income, and employment (Eadington & Redman, 1991). In this regard, it can be noted that Mooney and Zegarra (2020) employed the three indicators mentioned above to calculate a normalised (ranging from 0 to 100) Tourist Dependence Index (TDI) for a sample of 166 countries, and used 5-year averages of these indicators for the period 2014 to 2018. However, in our case and in line with the work of Hailu and Kipgen (2017), the proposed index goes beyond the simple construction of a single index based on the three indicators mentioned above. Before calculating the single composite index measure, and in order to consider the productive context under which tourist activities operate, the calculation of the TEDI implied the adjustment, on a yearly basis, of the three indicators measuring the contribution of tourism to foreign exchange, national income, and employment. These adjustment variables are as follows: (1) the medium- and high-tech manufacturing value added share in relation to the total manufacturing value added (%); (2) Manufacturing Value Added per capita Index (%); and (3) the total employment share of industry (%). For the whole sample of the 144 countries, the calculated TEDI series shows a mild trend toward higher levels of the dependence on tourism of economies since the end of the global financial crisis. However, there are persistent differences between countries, and we did not observe a clear reduction in cross-country dispersion in the TEDI levels for the period 2000 to 2019. Moreover, the estimation for the trend

component of the TEDI of the ‘log t’ regression model (Phillips & Sul, 2007) indicated that, for this period, the absolute convergence hypothesis can be rejected at the 5% significance level. This result suggests that countries did not converge to the same long-run equilibrium level in terms of TEDI. Next, we used the clustering mechanism test procedure proposed by Du (2017) to identify convergence clubs. As a result, we determined that there are four final club classifications and two diverging countries (Albania and Macao) in the subsample considered. Finally, estimation results suggest that, as expected, geographic factors play a major role in determining the corresponding probability of club membership of a country. The estimation results also suggest that, holding other independent variables at their respective means, East European countries have a lower probability of belonging to the high-speed convergence/high-dependence club of countries. Otherwise, all other aspects being equal, East European countries have a higher probability of belonging to the low-dependence club. Similar results were obtained for countries in Northern and Western Europe, South America, and Central and Eastern Asia, which are regions in which the world’s main tourism source markets are located. In addition, the results suggest that larger economies and more resource-dependent economies have a lower probability of belonging to the most dynamic and high-level TEDI club of countries.

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