

CONTRIBUTION OF TOURISM TO EMPLOYMENT AND ECONOMIC GROWTH: AN APPLICATION OF DATA ENVELOPMENT ANALYSIS

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ABSTRACT

In today's economy, performance analyses in the tourism industry attract more and more attention. As Asian economies are making significant contributions to this sector across the globe, ten randomly selected countries of Asia are considered as a representative to study tourism performance. This paper examines the performance of selected countries using Data Envelopment Analysis (DEA). The DEA analysis is applied to obtain the efficiency scores of the countries under study during the period of 2008–2017. Five input and two output variables are used to assess relative performances of the countries in tourism at the macro level. Based on relative efficiency scores, problematic indicators are identified for detail investigation. In addition to above, importance of all indicators is studied and found that indicators are significant irrespective of economy except total contribution to GDP. Detail study of GDP contribution in association with other indicators is also conducted to make relevant suggestions.

Keywords: Tourism, Asian countries, Data Envelopment Analysis, Efficiency, Benchmark.

Introduction:

Tourism sector is one of the largest and fastest growing industries in the world.. For the last few decades, this sector is generating the prosperity, all over the world by creating huge number of jobs. As per the available statistics it accounts for 9.9 percent of total jobs and huge contribution of about 10.4 percent of global GDP (WTTC, 2018). In this performance contribution of Asian countries is significant. Every country in the world is conscious as well serious about number and quality of jobs to ensure inclusive growth. This sector is being seen as great opportunity in terms of employment as tenth jobs is related to this sector. This sector is performing just an extraordinarily as within last one decade it has reached from every fifth job to every tenth jobs. Expert of the area believes that if regulatory conditions as well as proper support by the government is received then it seems that target of hundred million new jobs can be achieved (WTTC, 2018). There would be movement of millions of people to see different destinations and there is need of effective as well as strategic planning.

The tourist industry is recognized as an important for any economy which results in growth of income, employment and infrastructure. Growth of private sector has also seen in many countries (Gee, 1999). In this way tourism development leads to industry growth and overall economic Growth (Lee & Chang, 2008). It has become one of the important development strategies for most of the developing countries. Due to this growing importance, it has become a matter to investigate the relationship between tourism spending and economic growth. Understanding of the relationship may help in design the tourism policies and identification the way for effective implementation. Study of this association can be utilized to provide useful implications of policy decisions and new strategies for the tourism promotion.

The employment potential of tourism sector in many developing countries is observed higher than any other Sector. Employment is one of the important indicators of any economy which reflect nature of growth. This sector not only creates direct jobs but also have tremendous potential to induce jobs in other related sectors. Although there is lot of literature available for tourism for development and it is also considered as an important contributing sector but rarely talk about employment exclusively. There are some researched which discussed about support for labor intensive industries and inclusive growth (Kozel, 2014). Employment for residents should be a one of the main concern. It needs to be taken at priority and some strategic plan of employment creation to streamline employment and growth opportunities (Samans, Blanke, Corrigan, & Drzeniek, 2015). There is a need to differentiate employment strategies to get productive results in terms of poverty reduction (Bakker & Messerli, 2016). There are many studies about the issues, perceptions and opportunities related to employment in small businesses such as budget hotels, backpackers catering restaurant, nature of employment, salaries (Ashley, 2006; Cohen, 1982; Hampton, 2013, Nguyen, Rahtz, & Shultz, 2014, Long, 2012). It can be observe that tourism itself is being regulated by tourism industry rarely any of the them is driven by government policy.

Data and Methodology:

We have selected ten potentially emerging countries in tourism Bangladesh, Cambodia, China, India, Indonesia, Malaysia, Pakistan, Sri lanka, Thailand, Vietnam as a sample for this study. We have employed a DEA model to evaluate the performance of tourism in selected countries based upon the available data from 2008 to 2017. All the countries are defined as a decision making units (DMU). The data originated from the website of World Travel & Tourism Council. To calculate tourism efficiency of these countries we have used Government individual expenditures and Investment (capital investment), Total contribution to employment, Total contribution to GDP, Domestic tourism spending, Leisure tourism spending, Visitor exports (foreign spending) as input and output indicators.

Analysis and Findings:

We have calculated relative efficiency of the selected countries. Table 1 shows the results under DEA-CCR, by running the DEA model.

Table1: Technical Efficiency (DEA CCR) of selected countries from 2008 to 2017										
Country/Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Bangladesh	1.00	1.00	0.25	0.00	0.58	1.00	1.00	0.47	0.83	1.00
Cambodia	1.00	1.00	0.00	1.00	1.00	0.92	0.70	0.85	1.00	1.00
China	0.68	1.00	0.00	1.00	1.00	0.49	1.00	0.52	1.00	1.00
India	0.26	1.00	0.00	0.11	0.81	0.79	0.49	1.00	1.00	1.00
Indonesia	1.00	0.68	0.00	0.06	0.47	0.44	1.00	0.87	1.00	1.00
Malaysia	1.00	1.00	1.00	1.00	0.68	1.00	1.00	1.00	1.00	0.80

Pakistan	1.00	1.00	0.00	0.00	0.29	0.53	1.00	0.55	0.43	0.76
Sri Lanka	0.39	0.78	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.74
Thailand	1.00	0.81	0.00	0.43	1.00	1.00	1.00	1.00	1.00	1.00
Vietnam	1.00	1.00	1.00	1.00	1.00	0.41	0.46	1.00	1.00	1.00

Source: Authors' calculations

As we can see from the table 1, the overall efficiencies of the Bangladesh, India and China are lower as compare to Cambodia, Indonesia, Malaysia, Thailand and Vietnam. Bangladesh, India and China are also operating at lower scale and at present they have decreasing rate of scale which means there is scope to improve the performance. If we see individually, Bangladesh in 2008 the efficiency was 1, remained the same the next year, reduced further, then became zero, increased to 0.58, further increased to 1 for the next two years, reduced further the next two years and it became 1 in 2017. In case of India, the efficiency in 2008 was 0.26, it increased to 1 in the next year, became zero in 2010, increased to 0.1 the subsequent year, increased to 0.81 it reduced to 0.79 in 2013, reduced to 0.49 in 2014, again it increased to 1 in 2015 and remained the same in 2016 and 2017 also. It can be observed that India has progressed a lot with respect to tourism, but is still way behind the developed or even the developing countries. Foreign tourists often fail to get suitable accommodation in hotels and go back as unsatisfied. In addition to this Indian tourists have started travelling abroad rather than travelling within the country due to high aviation cost in the domestic sector. The origin and growth of tourism is urban oriented. Lack of infrastructure safety and corruption add on to obstacle in the path of growth. If we look at information available about China, then we can see that in 2008, the efficiency was 0.68, it increased to 1 in the next year, became zero in 2010, increased to 1 the subsequent year and remained constant the next year also, it reduced to 0.49 in 2013, increased to 1 in 2014, reduced to 0.52 in the later year, again it increased to 1 in 2016 and remained the same in 2017 also. Going through different report is observed that China still has a long way to go in terms of tourism infrastructure (112th), international "openness" (96th) and environmental sustainability (137th). Many agree that air pollution and food contamination would certainly cause some foreigners to reconsider a trip to China. On the other hand, Cambodia, in 2008, the efficiency was 1, remained the same for next year, became 0 in 2010, increased to 1 for the next year and remained constant for the next year, decreased to 0.92 in the next year, further decreased for the next 2 years, and increased to 1 for the next year and remained constant in 2017. Indonesia, in 2008, the efficiency was 1, it reduced to 0.68 in the next year, became zero in 2010, increased to 0.063 the subsequent year, reduced to 0.47, it reduced to 0.44 in 2013, increased to 1 in 2014, again it reduced to 0.87 in 2015, increased to 1 in 2016 and remained the same 2017 also. Malaysia in 2008, the efficiency was 1, and it remained the same for next 3 years, it decreased to 0.68 in the next year, became 1 in 2013, and remained constant for the next 3 years, reduced to 0.8 in 2017. Thailand in 2008, the efficiency was 1, it reduced to 0.81 in the next year, became zero in 2010, increased to 0.43 in the subsequent year, became 1 in the following year and remained constant till 2017. Vietnam in 2008, the efficiency was 1 and it remained constant till 2012, it reduced to 0.41 in 2013, increased to 0.46 the later year, increased to 1 in 2015 and remained the same till 2017. We can observe that these countries could be really wonderful if they could maintain the same pace.

Conclusion:

Study evaluates tourism efficiency at the macro level using basic characteristics. For this purpose, tourism efficiency of selected Asian countries is analyzed with the data set of the year 2008 to 2017. According to the findings most of the countries seems to be efficient, which is an indication of awareness of tourism and key indicator of growth. In terms of tourism efficiency, Cambodia, Indonesia, Thailand, and Vietnam are found relatively efficient and countries such as Bangladesh, China, India Malaysia, Pakistan, and Sri Lanka seems to have devilmnt potential. Tourism is one of the major contributors in growth of any economy and Asian economies are a significant part of globalized economy. Thus, in this work we have made an attempt to measure the tourism efficiency of the selected countries of Asia. Outcome draws over all conclusions about the major problems in the economies under consideration and identified efficient economies are able to use all its resources in an optimum way to produce the maximum output. These economies in terms of policies and procedures can be set as bench mark to improve the performance.

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