

- Mair, J. (2011). Exploring air travellers' voluntary carbon-offsetting behaviours. *Journal of Sustainable Tourism*, 19, 215–230.
- Miller, G., Rathouse, K., Scarles, C., Holmes, K., & Tribe, J. (2010). Public understanding of sustainable tourism. *Annals of Tourism Research*, 37, 627–645.
- Rubin, J. R., & Rubin, I. S. (2005). *Qualitative interviewing: the art of hearing data* (2nd ed.). Sage: Thousand Oaks.
- Scott, D., Peeters, P., & Gössling, S. (2010). Can tourism deliver its “aspirational” greenhouse gas emission reduction targets. *Journal of Sustainable Tourism*, 18, 393–408.
- Stoll-Kleemann, S., O’Riordan, T., & Jaeger, C. (2001). The psychology of denial concerning climate mitigation measures: Evidence from Swiss focus groups. *Global Environmental Change*, 11, 107–117.
- Tol, R. (2007). The impact of a carbon tax on international tourism. *Transportation Research Part D*, 12, 129–142.
- Weaver, D. (2011). Can sustainable tourism survive climate change?. *Journal of Sustainable Tourism*, 19, 5–15

Submitted 9 November 2010. Final version 12 January 2011. Accepted 1 February 2011. Refereed anonymously. *Coordinating Editor: Nigel Morgan*

doi:10.1016/j.annals.2011.03.019

Annals of Tourism Research, Vol. 38, No. 3, pp. 1181–1184, 2011
0160-7383/\$ - see front matter © 2011 Published by Elsevier Ltd.
Printed in Great Britain

SOME EVIDENCE FOR TOURISM ALLEVIATING POVERTY

**Min Jiang, Terry DeLacy
Nickson Peter Mkiramweni**
Victoria University, Australia
David Harrison
University of the South Pacific, Fiji

Tourism is an important economic sector for many developing countries (Mitchell & Ashley, 2010). This is especially true for Small Island Developing States (SIDS) with limited alternative development options. Although ‘pro-poor tourism’ (PPT) has been widely supported by practitioners across the United Nations World Tourism Organization (UNWTO), international and bi-lateral aid agencies, governments, and non-governmental organizations, the research community has been debating on the effects of tourism on development (Sharpley & Telfer, 2002) and poverty alleviation (Mitchell & Ashley, 2010) for years. While the PPT approach has received many criticisms (Harrison, 2008) due to the deficiency in systematic analysis of the relationship between tourism and poverty reduction and empirical evidence on how tourism contributes to alleviating poverty, some researchers have been making efforts in collecting empirical evidence on this issue (Mitchell & Ashley, 2010). This note presents some evidence that tourism enhances human development and reduces poverty in SIDS by analyzing the correlations between tourism intensity and several human development indicators.

In order to test the correlation between tourism and human development, we have chosen all SIDS in Asia-Pacific, Caribbean and Africa as defined by the United

Nations (UN) for which data was available. As an indicator of tourism intensity, the ratio of tourists to residents has been applied. We might equally have chosen tourism percentage of Gross Domestic Product (GDP). This latter indicator requires complex statistical compilations based on tourism satellite accounts and as we are comparing data in small countries, some very poor, it was considered use of tourism GDP to be less consistently reliable across all our candidate SIDS. Three human development indicators have been chosen—GDP per capita in purchasing power parity (PPP), the UN’s Development Program (UNDP)’s human development index (HDI) and under five mortality rate per 1000 live births. GDP per capita PPP is used as the most common indicator of prosperity. However it takes no account for disparity of income, does not account for subsistence income and the informal economy which in poor rural areas can be very significant (Anderson, 2010) and does not measure such areas as health and education. HDI and under five mortality rate are better indicators of poverty. HDI is a composite index measuring average achievement in the three basic dimensions of human development—a long and healthy life measured by life expectancy at birth, knowledge measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio, and a decent standard of living measured by GDP per capita PPP (UNDP, 2007).

The data used in the analysis are from UNWTO Tourism Fact book (UNWTO online e-library, 2010) and UNDP Human Development Report (UNDP, 2007). Of the 49 SIDS in Asia-Pacific, Caribbean and Africa, 29 had data for all four indicators chosen in year 2005. There were: seven in Asia-Pacific (Fiji, Maldives, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu), 16 in Caribbean (Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago), and six in Africa (Cape Verde, Comoros, Guinea-Bissau, Mauritius, Sao Tome and Principe, and Seychelles).

We posed the following four questions: One, what hard evidence is there that increased tourism can reduce poverty in SIDS? Two, do SIDS with a greater tourism intensity have a higher average standard of living than ones with a lower tourism intensity? Three, do they have a higher human development index? And four, do they have lower infant mortality? The correlations between the indicators of

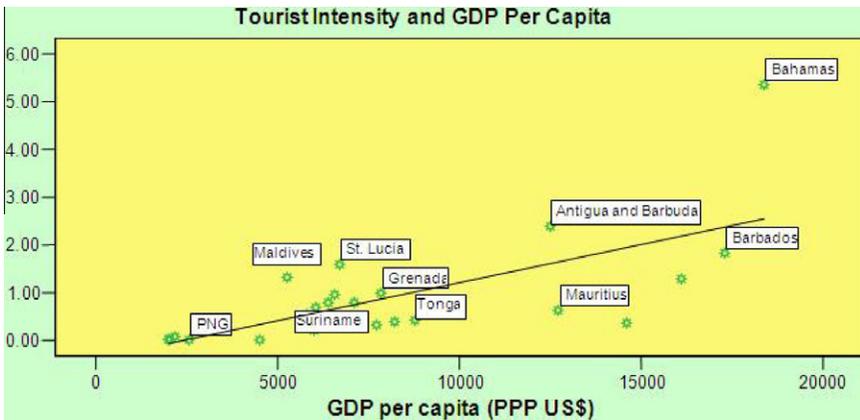


Figure 1. Tourism Intensity and GDP Per Capita in SIDS (Source: UNWTO online e-library, 2010; UNDP, 2007)

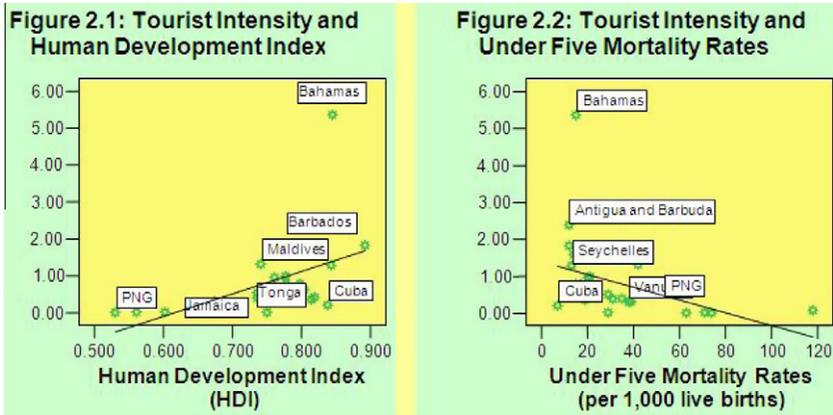


Figure 2. Tourism Intensity and Human Development Indicators in SIDS (Source: UNWTO online e-library, 2010; UNDP, 2007)

tourism intensity and human development were tested using SPSS and are presented in the Figures 1 and 2.

Figure 1 indicates the link between tourism intensity and GDP per capita (PPP US\$) for Pacific, Caribbean, and Africa SIDS. Results show that there is a positive relationship between the two indicators and the relationship is highly significant in terms of 2-tailed Pearson correlation significance ($r = 0.682, p < 0.01$). This observation informs that GDP per capita PPP increases with increasing tourism intensity. Figure 2 portrays the link between tourism intensity and human development indicators. Results indicate a significant positive relationship ($r = 0.483, p < 0.01$) between tourism intensity and HDI (Figure 2.1). That is, as tourists number increases HDI increases. Figure 2.2 shows a significant negative relationship ($r = -0.396, p < 0.05$) between tourism intensity and under five mortality rates, which tells that mortality rates decrease with increasing tourism intensity.

The results indicate questions two, three and four are answered in the affirmative. SIDS in the developing regions of Asia-Pacific, Caribbean and Africa with higher tourism intensity have a higher average standard of living, a higher HDI and lower infant mortality. Consequently there is evidence that SIDS with higher tourism intensity have less poverty on average. But what about question one; what hard evidence is there that increased tourism can reduce poverty in SIDS? Because questions two, three and four are answered in the affirmative and in particular questions three and four on improving human development indicators, there is evidence that increasing tourism can reduce poverty in SIDS by improving average human development indicators of the society as a whole. But these statistically significant correlations are just that; correlations, not proof of causal effects. It might be argued that SIDS with less poverty are better positioned to attract more tourists rather than increasing tourism reducing poverty. Though this counter argument would not be consistent with the view that the variance in tourism intensity in destinations is largely explained by the attractiveness of natural, cultural and built product, cost and access (e.g. closeness) to markets (Middleton, 2001; Ritchie & Crouch, 2003; Swarbrooke & Horner, 1999); which taken together would not seem to be significantly determined by the poverty level in the destination.

The statistical analysis concluded that there is a statistically significant positive correlation between tourism intensity and GDP per capita PPP in these SIDS across Asia-Pacific, Caribbean and Africa. Similarly, there is a statistically significant posi-

tive correlation between tourism intensity and HDI and a statistically significant negative correlation between tourism intensity and under five mortality. This lends evidence to the proposition that increasing tourism can assist in reducing poverty in SIDS although further research is needed to establish if the statistical significant correlations are causal. There continues to be widespread debate in the literature and in policy making circles as to the role tourism plays and could play in alleviation poverty, providing employment opportunities for low-skilled workers, women, and facilitating small and informal businesses. Despite this debate and the importance of the related policy outcomes on human livelihoods in developing countries there is insufficient hard evidence to inform this debate. Researchers need to remedy this.

Min Jiang: Centre for Tourism and Services Research, Victoria University, Footscray Park Campus, Ballarat Road, Footscray, P.O. Box 14428, Melbourne VIC 8001, Australia. Email <min.jiang@vu.edu.au>.

REFERENCES

- Anderson, T. (2010). AusAID's pacific land programs – Where does it all come from. In *Australian association for the advancement of pacific studies conference on Oceania transformations*, April 2010, Melbourne, Australia.
- Harrison, D. (2008). Pro-poor tourism: A critique. *Third World Quarterly*, 29(5), 851–868.
- Middleton, V. T. C. (2001). *Marketing in travel and tourism* (3rd ed.). Oxford: Butterworth-Heinemann.
- Mitchell, J., & Ashley, C. (2010). *Tourism and poverty reduction: Pathways to prosperity*. London, and Sterling, VA: Earthscan.
- Sharples, R., & Telfer, D. J. (Eds.). (2002). *Tourism and development: Concepts and issues*. Clevedon: Channel View Publications.
- Ritchie, J. R. B., & Crouch, G. I. (2003). *The competitive destination: A sustainable tourism perspective*. Wallingford: CABI Publishing.
- Swarbrooke, J., & Horner, S. (1999). *Consumer behaviour in tourism*. Oxford: Butterworth-Heinemann.
- UNDP. (2007). *Human development report 2007/2008: Fighting climate change: Human solidarity in a divided world*. New York: UNDP.
- UNWTO (World Tourism Organization) (2010). *UNWTO tourism fact book (UNWTO online e-library)*. Retrieved 17 August, 2010, from UNWTO website: <<http://www.e-unwto.org/content/v486k6/?v=search>> (subject to login access).

Received 8 February 2011. Revised 2 March 2011. Accepted for publication 14 March 2011.

doi:10.1016/j.annals.2011.03.008