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ABSTRACT

The purpose of this study was to compare islands and regular countries to determine if islands depend more on tourism in their economies than regular countries. In fact, it is possible that islands depend too much on tourism. A literature review covers the various areas of research regarding island tourism, including economic impact, sustainability, forecasting, and destination management. Data from the World Bank Group was used to form a panel of 140 countries for the period 1995 through 2006. Islands and regular countries were compared on economic factors such as GDP per capita, travel receipts, and travel receipts as a percentage of exports. The results indicate that islands have a lower level of travel receipts than regular countries, but travel receipts represent a higher percentage of exports for islands.

INTRODUCTION

Tourism is a multi-billion dollar industry and it is normally one of the top three industries in most countries throughout the world, regardless of the country's level of development. In fact, developing countries tend to rely more on tourism because they don't have other products that they can export due to a lack of production and technological expertise. For example, tourism has become the top priority for the government of South Africa to eliminate the country's socio-economic inequality (Muhanna 2007), and Cuba is in the process of developing a sustainable tourism industry (Winson 2006). In particular, island nations have limitations in regards to the raw materials, skilled labor, and technology necessary to compete in the global export markets.

Islands often focus their efforts on sustainable tourism (e.g., ecotourism) because of their natural environments and lack of built (i.e., man-made) tourism attractions like theme parks and museums. Also, there is normally a cultural allure to the islands that motivates visitors to choose those destinations. One of the issues associated with natural tourism sites is that tourists expect a more personal experience in a natural setting with minimal development. Islands have the benefit of being able to operate built environments (e.g., resorts and casinos) on their coasts, and maintain their ecosystems inland. However, they need to focus their product development efforts in areas that are consistent with their strengths, as well as the economic policies of the government. Additionally, it is important to manage the negative social and environmental impacts of tourism. The purpose of this paper is to examine the economic importance of tourism for island nations relative to other countries to determine if it could be possible that they are too dependent on tourism.

BACKGROUND

There has been a good deal of research in the area of sustainable island development. The studies range from Caribbean countries (Craigwell & Maurin, 2007; Griffith, 2002) to European countries (Chen, 2006; Sharpley, 2003), and global analyses including island nations throughout the world (Shareef & McAleer, 2006). Most of these articles examine the impacts of tourism on small islands and developing nations, while some focus on forecasting tourism demand and managing destinations (Carlsen, 1999). This research leads to discussions on policy issues facing islands such as ecotourism in Cuba (Winson, 2006) or the effects of climate change (Belle and Bramwell, 2005; Ghina, 2003). The final result is a comprehensive overview of the effect of tourism on the overall economic development of islands and how they can prosper by controlling the development process (Kokkramikal et al., 2003; Sahli & Nowak, 2007).

Craigwell & Maurin 2007) established a reference cycle (based on real output) for Barbados over the quarterly period 1974-2003, and linked the aggregate output cycle to the cycles of the individual sectors that comprise real output. The authors concluded that the tourism cycle closely resembled that of the aggregate business cycle. Griffith (2002) looked at four Caribbean Community and Common Market (CARICOM) countries to examine their economic performance, including tourism, from about 1970 to 1997. The article explains the expansion of tourism in Barbados from a luxury destination to a mass-appeal destination with many companies benefiting, including hotels, taxis, handicraft shops, and local food producers. Additionally, all of the same products available to tourists were made available to the locals, resulting in a favorable environment for tourism expansion and a high percentage of repeat visitors. Initially, other countries did not take advantage of the favorable international environment for tourism expansion. For example, the government of Trinidad and Tobago did not encourage export tourism, Guyana did not take advantage of eco-tourism opportunities, and Jamaica suffered to some degree from its choice of export markets. Over time, most of the countries did improve once they realized the importance of tourism to the economy.

Chen (2006) combined quantitative and qualitative techniques to develop a multi-dimensional model that includes modules for geographic information system applications, economic impact assessment, forecasting modeling, accessibility modeling,

seasonality modeling and alternative modeling. The 'Gederi' project resulting in the island tourism multi-dimensional model (ITMDM) was funded by the European Union involving 11 island regions of Europe: Balearics (Spain), Bornholm (Denmark), Crete (Greece), Corsica (France), Gotland (Sweden), Gozo (Malta), Ionian (Greece), Sardinia (Italy), Sicily (Italy), Western Isles (Great Britain) and Aland (Finland). The eight main themes include: (1) what the meaning of accessibility is in the island environment, (2) sustainable tourism in the islands, (3) what strategies can be adopted to encourage people to remain living on or move to islands suffering from depopulation, (4) how the mismatch between the supply of training and the demands of the employment market in the island environment can be resolved, (5) how the image of the island can be used as a means of developing and marketing local products, (6) how to improve the islands' rapid response capability in the face of major natural or environmental risks, (7) what sort of higher education policies could make an effective contribution to the economic development of the islands and (8) which integrated strategy for the development and management of island regions?

Tourism is often the principal source of employment and foreign exchange earnings for island states, and the dominant economic sector. Sharpley (2003) conducted a case study on the island of Cyprus to address the issue of over-dependency by island states on tourism, thereby restricting overall economic development. The case study demonstrates that promoting mass tourism has proven to be an effective vehicle of development, including the socio-economic development of the island since the mid-1970s. The author concluded that promoting sustainable or 'quality' tourism might not be as effective as the mass marketing approach. Additionally, Kokkranikal et al. (2003) addressed the issue of the added importance of sustainability-oriented tourism development for islands, given the fact that they face geographic, environmental, structural, and political limitations. In the case of Lakshadweep it was found that this approach proved effective in minimizing the negative impacts of tourism.

Ghina (2003) explored the status of sustainable development in small island developing states (SIDS) using the Maldives as a case study. SIDS face challenges such as ecological fragility and economic vulnerability, but the author felt that the main challenge was environmental vulnerability – e.g., climate change. The increased frequency of events such as extreme weather and sea-level rising will threaten the sustainability of the economy (e.g., tourism), and it is, therefore, incumbent upon developed countries to provide assistance (financial and technical) to SIDS. Similarly, Belle and Bramwell (2005) examined the importance of policies addressing climate change impacts on the coast and ecosystems of Barbados, and how policy makers and tourism managers differed. The researchers found that tourism managers didn't view policy interventions as favorable as the government policy makers, even though both felt it was very likely to be damage to the coast and the ecosystems.

Some researchers have proposed new methods for managing island destinations. Carlsen (1999) suggested a systems approach for small island tourism destinations using soft systems methodology (SSM). The advantages of SSM are that it can accommodate social and environmental processes, as well as economic factors. This is an extension of previous approaches that focused mainly on economic impact. Shareef and McAlteer (2005) examined the level of volatility and its impact on international demand for small island tourism economies (SITEs). The researchers pointed out the importance of

accounting for the conditional variance in tourism demand models in an attempt to improve tourism policy and marketing decisions. Sahli and Nowak (2007) proposed a trade theoretic approach for modeling the role of inbound tourism on overall economic development. In particular, the researchers set out to prove that there are negative economic impacts from tourism, other than the leakages, in addition to the well-documented negative social and environmental impacts. They use the general macroeconomic equilibrium technique (CGE) to demonstrate the necessity to focus on the level of labor and land use related to tourism.

RESEARCH METHODS

The data for this study consist of seven economic variables obtained for a panel of 140 countries (31 islands and 109 regular countries) from the World Bank Group's WDI Online database for the period 1995 through 2006. The variables include: GDP per capita, population, tourism arrivals, tourism arrivals growth rate, travel receipts, travel receipts as a percentage of total exports, and travel trade balance. The panel was reduced to 93 countries (29 islands and 64 land=based countries) based on minimum threshold levels for annual GDP per capita ($1,000) and tourism arrivals (100,000 per year) to ensure that the countries were at least in the developing stage both economically, and in the tourism area life cycle.

The first type of analysis involves comparing the averages for the economic variables between islands and regular countries using a t-test to determine statistical significance. The second part of the analysis involves a discriminant analysis to determine which economic variables can be used successfully to classify countries as either island or regular. The results are presented in the next section, followed by a discussion regarding the practical application of the results.

FINDINGS

The results of the comparison between islands and regular countries on economic conditions and tourism statistics were significant for three out of the seven variables: population, tourism arrivals, tourism and receipts as a percent of exports (see Table 1). Islands have significantly smaller populations, less annual tourism arrivals, and travel receipts represent a larger percentage of overall exports. While not significant, islands have a larger GDP per capita, a slightly smaller arrivals growth rate, a smaller amount of travel receipts, and travel expenditures by their residents in other countries exceed travel receipts for visitors to the islands (i.e., there is a negative travel trade balance).

Table 1. Tourism Comparison of Islands and Regular Countries.

Economic Factors	Islands	Regular Countries	t-statistic	Probability
GDP per capita US$	10,929	7,574	1.531	.129
Population	13,025,480	74,779,080	-2.207	.031
Tourism Arrivals	2,570,031	8,207,499	-2.990	.004
Tourism Arrivals Growth Rate	5.70	6.96	-1.029	.306
Travel receipts	3.2 bill	7.3 bill	-1.356	.179
Receipts as a % of Exports	30.40	11.02	4.467	.000
Travel Trade Balance	-1.3 bill	1.2 bill	-1.540	.127

The second type of analysis was focused on determining if islands and regular countries differed enough on the economic factors such that the variables could be used to successfully classify the countries (i.e., predict if a country is an island, or just regular). A stepwise discriminant analysis was performed assuming equal prior probabilities for group membership. Three of the seven economic variables were used in the model based on the Wilks' Lambda and tolerance measures: GDP per capita, tourism arrivals, and travel receipts as a percentage of total exports. Table 2 contains the results of the analysis. The discriminant function was able to correctly classify 85.7% of regular countries and 72.6% of islands, resulting in a combined figure of 81.7% for all countries. Therefore, the use of the economic variables resulted in a relatively good model for predicting country classification.

Table 2. Results of Discriminant Analysis.

Summary of Two Group Discriminant Analysis

Discriminant Function	Variance Explained (%)	Eigenvalue	Canonical Correlation	Wilks Lambda	Chi-square	Sig. Level
1	100.0	.615	..617	.619	520.368	.000

Univariate F-Ratios of Eight Motivation Factors

Motives	F-Ratio	Wilks Lambda
Travel receipts as % of exports	408.346	.727
Travel receipts	20.145	.982
GDP per capita (2000 US$)	25.599	.977

Discriminant Function Structure Coefficients

Group Centroids	Function 1	Economic Factors	Function 1
Islands	1.193	Travel receipts as % of exports	.782
Regular Countries	-.514	Travel receipts	-.174
		GDP per capita 2000 US$	.196

APPLICATION OF RESULTS

It is clear from the findings that island nations have to promote tourism more aggressively than their regular competitors. Overall, the number of tourist arrivals is less for islands and they have a lower tourism arrivals growth rate. This is alarming, given

the fact that travel receipts represent a significantly larger percentage of total exports for Islands than for regular countries. This problem is further compounded by the large travel balance deficit experienced by islands –island residents spend more money in other countries than the islands receive from international tourists visiting their countries. By contrast, regular countries have a positive travel balance. This import phenomenon is consistent with import demand functions studied in economics. Once money flows into a country over time, and the country experiences a cycle of development, the country's GDP per capita increases and its residents are more able to afford to purchase imported goods (i.e., travel internationally).

The three variables that were used in the discriminant model to classify countries were GDP per capita, travel receipts, and travel receipts as a percentage of exports. On average, island nations have higher a GDP per capita, a lower level of travel receipts, and travel receipts represent a larger percentage of exports than for regular countries. The key variable in the discriminant analysis was the receipts as a percent of exports, which isn't surprising based on the literature. In fact, several researchers examined the relationship between tourism and other export industries for islands with mixed opinions on whether their dependence on tourism is healthy (Ghina, 2003; Griffith, 2002; Winson, 2006). The level of travel receipts and arrivals was lower for islands, but they have smaller populations and higher GDP per capita, suggesting that a relatively large percentage of residents are employed in the travel industry - receipts represent over 30% of total exports.

DISCUSSION

It is evident from this study that islands rely heavily on tourism for bringing outside money and capital into their economies. However, islands generate less money in terms of travel receipts than regular countries as a direct result of the lower level of tourism arrivals. The variable that truly separates islands from other countries is the travel receipts as a percentage of total exports. Islands have a few options when it comes to increasing the growth rate for tourism arrivals and travel receipts.

- *Attract new visitors*: this can be accomplished by spending more money on promotional campaigns, improving the destination's website, identifying new target markets, and enhancing their tourism offerings (or inventory).

- *Get current visitors to visit more often*: this can be accomplished by increasing visitor satisfaction through customer relationship management (CRM) programs, enhancing their tourism offerings, and increasing the overall value of the trip through quality improvements, price discounts, packaging and forming strategic partnerships or alliances.

- *Get current visitors to spend more*: this can be accomplished through packaging tourist attractions to make them more valuable and increasing the awareness of the attractions and other activities available through promotion and advertising. Also, improving transportation and making it more convenient to visit the attractions could improve visitation.

However, islands also need to reconsider their policies regarding the importance of tourism. They may, in fact, be too dependent on tourism, given its volatile nature and the issues surrounding the social and environmental impacts. For example, the Cayman Islands made a conscious effort to focus more resources on its financial industry because it involved a better return on investment.

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