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Small Island Tourism Competitiveness: Expanding Your Destination's Slice of Paradise

Robertico R. Croes
University of Central Florida, robertico.croes@ucf.edu

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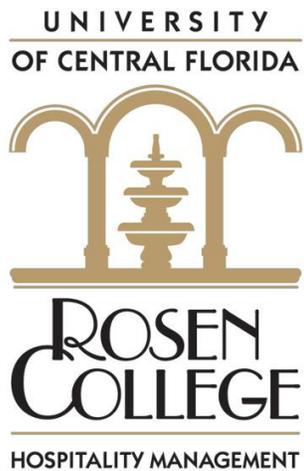
Dr. Robertico Croes
Associate Professor
Rosen College of Hospitality Management
University of Central Florida

ABSTRACT

The lecture consists of two sections. The first section discusses the theoretical underpinnings of the competitiveness theory as it applies to the tourism development debate. The second section focuses on the empirical testing of four propositions derived from the tourism competitiveness literature Proposition 1: small island destinations engage in fierce competition. Proposition 2: simplicity rather than richness is a more useful benchmarking criterion for small island destinations. Proposition 3: non-price competition is the most significant driver of destination competitiveness. And, proposition 4: tourism competitiveness increases the quality of life for the destinations' citizens.

*Key words***:** Tourism competitiveness, small island destinations, tourism competitiveness index, quality of life.

Introduction

I would like to thank the University of the Netherlands Antilles (UNA) for doing me the honor of inviting me to give the *Dies Natalis* Lecture in 2010. I would particularly like to thank Dr. Rupert Silberie, Provost of the University, for making me feel so welcome at the University.

An occasion like this not only serves the purpose of self-congratulation for another year as the existence of a university as a capacity-building institution in a small country could be harrowing; it also stresses the relevance of the university as a production and distribution unit of knowledge. Knowledge has been recognized as essential in propelling development and competitiveness of countries in the era of globalization. Lessons from the past teach us that relying only on endowed resources and cheap labor, without the backing of intellectual value added is a *'dead-end'* for development. Codifying knowledge through universities is a crucial strategic effort for a sustainable future; therefore, I hope that my contribution will add to this lofty endeavor.

The issue of relative economic performance among countries has long dominated the attention of economic and management scholars. Recently, this issue has received heightened attention because results of development strategies applied in large parts of the globe have been disappointing. The persistence of poverty and the lack of significant economic growth in developing countries, hence, triggered a worldwide interest in tourism development. Notwithstanding this heightened interest in tourism development, the potential for tourism as a developmental tool is still in discussion, because the results of competitiveness enhancement efforts in tourism seem inconsistent.

Tonight's lecture spans six years of my research and covers four of my central research pieces thus far (Croes, 2005; 2006; 2010a; 2010b). The main topic of our lecture, therefore, is about tourism competitiveness. The lecture will address (i) the definitional and operationalization issues regarding the concept of competitiveness; (ii) the application of competitiveness to tourism, especially small island destinations; (iii) the need and creation of a tourism competitive index for small island destinations; and, (iv) the conditions to enhance tourism competitiveness in small island destinations.

The economic growth potential of tourism is not without literary foundation as it has been highlighted in several recent studies (Hazari & Sgro, 1995; Balaguer & Cantavella-Jorda, 2002; Lanza et al.., 2000; Dritsakis, 2004; Durbarry, 2004; Eugenio-Martin, Morales, & Scarpa, 2004; Maloney & Rojas, 2005; Eugenio-Martin, Martin-Morales & Sinclair, 2008; Croes & Vanegas, 2008; Sequeira & Nunes, 2008). And, it is expected that tourism will continue to play an even greater role in propelling increased growth and economic opportunities for small island destinations.

Tourism may be the only policy option for some of these countries to overcome the structural constraints imposed by the small size of their economies. For example, in many small economies, there is simply insufficient market demand for a good or service to enable local firms to achieve any efficiencies or economies of scale. But, in the case of tourism, the demand for the product of tourism in essence is imported into the small economy and thus a small island of 100,000 inhabitants may see its temporary population (and market size) increase up to ten times that amount. Moreover, the temporary population of tourists typically will have an extremely high purchasing power. Therefore, a local firm in the tourism sector will have a much larger market for

its goods and services and may begin to achieve economies of scale and efficiencies (Croes, 2006).

Some final comments pertaining to the scope of our lecture are merited at this point. First, smallness for the purpose of our lecture is defined from a population perspective. "*Small size*" is defined as a population under 1.5 million inhabitants, per Commonwealth Secretariat and World Bank (2000). These countries are facing unprecedented adjustment challenges in the wake of the increasing process of globalization and are in search of appropriate policy responses to that globalization. Second, the geographical area comprising the reviewed small islands is defined as the Caribbean. Many countries in the Caribbean have few natural resources and have had only halting success with efforts to develop a light manufacturing base in textiles and import substitution (Griffith, 2002; Lewis-Bynou, Griffith & Moore, 2002). The small size of Caribbean nations has made them ill-suited for manufacturing goods because they lack necessary resources and they are subject to high transportation costs for importing and exporting raw materials and finished goods.[1]

And finally, the concept of competitiveness for the purpose of our discussion refers to the ability of an agent (e.g., destination) to outperform another agent in its pursuit to achieve something. The propositions entertained in this lecture stem more from a Popperan than a Kuhnan perspective, meaning that they purport to be falsifiable in nature and do not pretend to induce any paradigm shift regarding tourism competitiveness.

Why does tourism competitiveness matter?

International tourist arrivals have increased from 25 million in 1950 to over 900 million in 2008 (UNWTO, 2009). Tourism has become the fourth largest export, only behind fuels, chemicals and automotive products. Although tourism's contribution to economies is facing challenges induced by the global recession, tourism continues to be among the most dynamic economic sectors, generating a wide range of benefits including a growing contribution to gross domestic product, in some cases over 10%, and substantial foreign exchange earnings (UNWTO, 2008).

Research shows that revenues from tourism are stable and are two to five times more reliable as a source of revenues than the sale of goods such as agricultural and mineral commodities (Maloney & Rojas, 2005). Recent studies from, for example, Vanegas and Croes (2007) indicate similar findings. Mihalic (2000) cited two specific advantages of tourism compared with the export of goods and services: (i) natural, cultural and social attractiveness, which normally cannot be exchanged, and thus can be valorized, and thus may be fixed at a premium through tourism; and (ii) products produced locally can command a higher price sold locally to tourists than when exported and have lower costs because of no or lower transportation or insurance costs.

Looking beyond the current economic misfortunes, the World Travel and Tourism Council (WTTC) forecasts an average growth rate of 4.4% for the tourism industry between 2009 and 2018,

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[1] The Caribbean area is one of the most tourist dependent areas in the world (World Bank, 2005). Tourism is the single largest earner of foreign exchange in 16 of the 30 countries in the Caribbean. One in every seven jobs in the Caribbean is supported by tourism, and by 2012 it is expected that this ratio will increase to one in every six jobs resulting in a total of three million jobs (Croes, 2006).

representing 10.5% of the global gross domestic product and supporting 297 million jobs (WTTC, 2009). A significant amount of this growth will accrue to developing countries (UNWTO, 2008). For example, the proportion of international tourism receipts accruing to developing countries amounted to 25% of the total global international receipts in 2005. Tourism has become the principal export of a third of all developing countries and the main source of foreign exchange earnings of 49 of the least developed countries (Vanegas & Croes, 2007).

Despite the significant inroads of tourism globally, its developmental effects have been so far uneven. The link between tourism numbers (arrivals and expenditure) and economic contribution is not always obvious. Some studies modeling computable general equilibrium reveal that tourism expansion might "crowd out" other economic sectors resulting in a change in the composition of industry rather than an expansion of economic activity (Adams & Parmenter, 1992; Dwyer & Forsyth, 1998; Madden & Spur, 2000).[2] Other studies take issue with these results pointing to the long-term positive economic effects of tourism on economic growth (Shan & Wilson, 2001; Balaguer & Cantavella-Jorda, 2002; Vanegas & Croes, 2003; Durbarry, 2004; Dritsakis, 2004; Eugenio-Martin et al., 2004; Kim et al., 2006; Croes & Vanegas, 2008). Brau et al., (2003) and Neves-Sequiera and Campos (2005) assert that tourism-based economies have shown faster growth on average than other economies.

While tourism benefits in the short-term seem clear, its benefits in the long run are not self-evident (Sinclair, 1998; Nowak et al., 2003; Kim et al., 2006). The current debate in the literature masks a fundamental problem in tourism development. Tourism seems to grow slower than the manufacturing industry over time because technological change seems faster in knowledge intensive manufacturing than tourism thereby impacting negatively on tourism cost structure. In a recent study, Smeral (2003) found that tourism services have become relatively more expensive than other goods. He attributed this trend to the special nature of tourism production and consumption. First, there is the perishable nature of the production (i.e., an unsold hotel room is lost forever). Second, there is an element of inseparability in the production. For example, with tourism there is no special separation between production and consumption because the customer must be present and on site. The coincidence of production and consumption both temporarily and spatially restricts rationalization opportunities in the tourism industry. In his view, because productivity in the tourism sector jobs tends to lag behind productivity in manufacturing, the costs in the tourism business end up rising over time.

In Lucas (1993), sustained high growth stems from the ability to constantly enter new technologies and from quick labor reallocation in the production of new goods. In tourism, the range of services produced is limited with little room for expansion and labor reallocation. Therefore, it seems that the only way to get and maintain growth sustainability is by working the tastes and preferences of tourists in such a way that tourists' goods are increasingly valued in international markets thereby offsetting the increase in cost production (Smeral, 2003; Hazari & Sgro, 2004).

Raising or maintaining prices of tourism products under conditions of increased competition seems a daunting task. This is because (i) there is an increased number of destinations and increased

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[2] Capo, Fond & Nadal (2007), assert that in the long run tourism development could induce 'sluggish development' displaying symptoms of the so-called Dutch disease evidenced by two Spanish regions (the Balearics and the Canary Islands).

competition among them, though the originating markets have remained almost unchanged (Vanhove, 2005); (ii) destinations seem easily interchangeable (Mangion et al., 2005); (iii) tourism supply has achieved an unprecedented level of quality in providing service (Aguilo et al., 2005; Go & Govers, 2000); and (iv) despite increase in tourism demand, growth rates have fallen significantly over the last 50 years (Papatheodorous & Song, 2005).

The attempts to increase price of tourism products is inherently intertwined with efforts of making a tourist destination more competitive. That is, destinations in attracting and satisfying current and potential new customers are required to do this better than their rivals. Seen in this light, destination competitiveness is becoming increasingly important, especially if more economies are relying on tourism (Gooroochurn & Sugiyarto, 2005).

What is tourism competitiveness?

Competitiveness has been identified in the tourism literature as a crucial factor for the success of tourist destinations (Kozak & Rimmington, 1999; Crouch & Ritchie, 1999; Mihalic, 2000; Buhalis, 2000; Dwyer & Kim, 2003; Gooroochurn & Sugiyarto, 2005; Mazanec, Wöber & Zins, 2007; Chen, Sok, & Sok, 2008). Policy-makers seem to have become 'obsessed' with tourism competitiveness. In the last ten years, three prominent journals dedicated special issues to this subject, namely *Tourism* (1999), *Tourism Management* (2000), and *Tourism Economics* (2005) as well as a number of competitiveness indices have appeared. These indices include the Global Competitiveness Report of the World Economic Forum (WEF), the World Competitiveness Report prepared by the International Institute for Management Development (IMD) and the World Travel and Tourism Council Competitiveness Report.

Tourism

Tourism competitiveness is comprised of two concepts: tourism and competitiveness. Tourism displays several features that distinguish it from other exportable goods. Tourism is a product that covers the whole destination. Consumers are in search of an experience and therefore need to move to consume the product, i.e., it is the consumer who moves to the product for its consumption rather than the other way around. Inter-industry competition (airlines, hotels, facilities, conventions, events, etc.) is dependent upon and derived from the choices made by tourists between alternative destinations. Competition therefore focuses on the tourism destination, i.e., the destination is the *unit of analysis.*

The movements of consumers (agents) may become a potential source of externalities, such as petty crime, congestion, pollution, etc. Tourists become an additional agent of demand for local products (tradable and non-tradable goods) in conjunction to the locals. Relative price, therefore, is determined by this *'extended'* demand and domestic supply. This creates an element of monopoly power in trade because the average and marginal terms of trade need not be identical in accordance with the demand of tourists.

Another distinguishing characteristic of tourism consumption and production is the pervasive presence of market failure. This market failure stems from (i) the practice of price discrimination

and (ii) the nature itself of the production and consumption patterns (Gray, 1982; Eadington & Redman, 1991; Bull, 1995; Sinclair & Stabler, 1997; Mak, 2003). The practice of price discrimination alludes to the situation where locals and tourists are charged different prices for the same goods and services (Reece & Sobel, 2000; Hazari & Sgro, 2004. An example is the practice of the so-called Antillean rate for hotel rooms where locals are charged in the local currency while tourists are charged in USD Dollars or Euros.

The nature of the production and consumption patterns in tourism is determined by the complimentary character of the service providers at a destination. The discrete business units generate a number of customers through activities (e.g., promotion) and affect the activities of other tourist agents. These effects (externalities) could be either positive or negative and affect the business units among themselves, between these units and community (e.g. environmental protection, infrastructure), and between visitors and business units/community. Internalizing these externalities is associated with the ability of a destination to maximize the benefits derived from tourism in its attempt to realize equilibrium.

The distinguished features of tourism, therefore, include: a steady increase of production costs over time as compared to other economic sectors; the opportunity to apply scarcity as a method to increase prices; and the presence of market failure that is pervasive in the consumption and production patterns of tourism, collectively impose daunting challenges to the competitiveness of a destination. These conditions present in tourism production and consumption seem to have prompted academe to devote increasing attention to studies of destination competitiveness. Tourism has become a competitive activity among regions that are compelled to enhance their performance in order to attract more tourists and to increase their revenues (Crouch & Ritchie, 1999, 2005; Dwyer, Forsyth, & Rao, 2000). More noticeable is the attempt of policy makers to increase the market share of travel and tourism by constantly undertaking a plethora of new initiatives (Hawkins & Mann, 2007). This is particularly true in the case of developing countries, where tourism is viewed as an engine of economic growth to generate jobs, much-needed foreign exchange to cover for imports, business opportunities, and tax revenues.

Competitiveness

The literature on competitiveness reveals diverse perspectives vis-à-vis definition, understanding, and measurements (Krugman, 1996; Fagerberg, 1996; Lall, 2001). Defining the concept of competitiveness has been cumbersome so far. The problem in defining the concept seems to stem from competing perspectives on the usefulness of the term competitiveness (Wint, 2003). Management analysts, such as Michael Porter, are comfortable in applying the concept to national economies, while economists, such as Paul Krugman, questioned the meaningfulness of the concept to national economies. In the latter's view 'competitiveness is a meaningless word when applied to national economies. And the obsession with competitiveness is both wrong and dangerous.'

A review of the literature from Adam Smith to Michael Porter reveals that the term 'competitiveness' has evolved from the *conditions of resource availability and technology* (comparative advantage) to *the deployment of resources adjusting to customer preferences* (competitive advantage). Assessing the endowment of natural resources and productivity

differences between countries is the basis for comparison from the comparative advantage perspective, and explain trade patterns. In other words, costs differentials are considered as the basis for international trade. For example, the availability of accessible natural resources (e.g., beaches, sunny weather, natural areas) becomes a comparative advantage in the tourism product function and explains why destinations with these elements have specialized in tourism.

Porter, on the other hand, asserts that the application of resources to customer preferences (deployment of resources) is more important than inherited resources in explaining wealth and trade. National influences exercise an important role in how firms adjust to and exploit the differences in the resource availability. Porter identifies four sets of variables that influence firms' ability to establish and sustain competitive advantage within international markets. These variables that are intertwined and form the 'national diamond' are: factors conditions, demand conditions, related and supporting industries
and firm strategy, structure and rivalry. Upgrading and innovation are seen as central to the creation and sustaining of competitive advantage of nations.[3]

These seemingly competing perspectives have had a lasting impact on the debate within the tourism literature about competitiveness. At the heart of competitiveness is the notion of competition. Hong (2008) asserts that competition consists of four elements: (1) competitors (competing with whom); (2) competing for something (profits, market share, customer satisfaction, etc.); (3) competitive capability; and, (4) results. Each competitor strives to efficiently use its special capabilities to achieve its goals in an optimal way. In doing so, each competitor shapes its competitiveness.

Defining competitiveness

Competitiveness has become the benchmark against which success is measured (Porter, 1990; ECLAC, 1990; Dollar & Wolff, 1993; Krugman, 1996). However, whereas the discussion about the definition of competitiveness was focused mainly on price related factors, it is currently moving to non-price related factors, such as technology, innovation, etc. (Fagenberg, 1996; Lall, 2001; Wignaraja, 2004)**.** Some studies have defined competitiveness either explicitly or implicitly as having more of something such as market share, profits, success, etc. than that of another destination. For example, some destination specific studies have addressed the competitive position of the following countries and regions: the United States (Ahmed & Krohn, 1990); the Caribbean (De Keyser & Vanhove, 1994); South Africa (Kim, Crompton & Botha, 2000); Las Vegas (Chon & Mayer, 1995); Australia (Dwyer, Liviac & Mellor, 2003); Spain and Turkey (Kozak & Rimmington, 1999); European cities (Mazanec, 2007); Mediterranean resorts (Papatheodorou, 2002); Southeast Asia (Pearce, 1997); South Korea (Kim et al., 2001); Cambodia (Chen, 2008); Asia Pacific (Enright & Newton, 2004); and Cuba (Miller, Henthorne, & George, 2008).

The above mentioned studies seem to imply that destinations that enjoy more arrivals and more spending from tourists, or have benefited from a higher market share in the global market than that of others, are considered to be competitive (Hassan, 2000; Sahli, 2004; Craigwell, 2007). There is

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[3] Location (homebase) and internal and external economies seem important in Porter's cluster theory, reflecting two central paradigms in regional science, i.e. the Weberian theory (location) and the Marshallian theory of externalities.

a widely held view that competitiveness should be linked to high visitor numbers and increasing destination income. Poon (1993), for example, took issue with the assertion that more is better. She suggested four 'key principles' supporting destination competitiveness: (i) put the environment first; (ii) make tourism a lead sector; (iii) strengthen the distribution channels in the market place; and, (iv) build a dynamic private sector. Others discussed topics relevant to destination competitiveness, such as destination positioning (Chacko, 1998); destination management systems (Baker, Hayzelden & Sussmann, 1996); the environment (Mihalic, 2000; Hassan, 2000); strategic management (Evan, 2002); quality management (Go & Govers, 2000); destination marketing (Buhalis, 2000); planning methods (Pearce, 1997) and price competitiveness (Dwyer, Forsyth, & Rao, 2000a, 2000b, 2000c, 2002).

For example, Dwyer et al. (2002) propose that competitiveness should be coupled with price:

> "...competitiveness is a general concept that encompasses price differentials coupled with exchange rate movements, productivity levels of various components of the tourist industry and qualitative factors affecting the attractiveness or otherwise of a destination."

Buhalis (2000) and Hassan (2000) stress the relationship between competitiveness and economic prosperity and the delivery of an experience that is more satisfying compared to other destinations. Buhalis (2000) defines competitiveness as, "...the effort and achievement of long-term profitability, above the average of the particular industry within which they operate as well as above alternative investment opportunities in other industries."

Others have linked competitiveness to improved quality of life for citizens and sustainable destination development (Crouch & Ritchie, 1999; 2003; Dwyer et al., 2004).

Ritchie and Crouch (2003) define competitiveness as:

> "...[the] ability to increase tourism expenditure, to increasingly attract visitors while providing them with satisfying, memorable experiences and to do so in a profitable way, while enhancing the well-being of destination residents and preserving the natural capital of the destination for future generations."

We find mention of similar elements within the definition of Hong (2008):

> "...the competitive position (with high profits and constant growth) of the tourism industry of a nation relative to the global market of tourist industries in other nations, whether developed or developing countries, which therefore increases the real income and standard of living of its citizens."

Table 1. Selected Review of Definitions on Competitiveness

Literature sources	Propositions
1. Porter	"The only meaningful concept of competitiveness at the national level is *productivity*. The principal goal of a nation is to produce a high and rising standard of living for its citizens. The ability to do so depends on the productivity with a nation's labor and capital are employed ."
2. Krugman	"Competitiveness is our ability to produce goods and services that meet the test of international competition while our citizens enjoy a standard of living that is both rising and sustainable."
3. Buhalis	"…the effort and achievement of long-term profitability, above the average of the particular industry within which they operate as well as above alternative investment opportunities in other industries."
4. Ritchie & Crouch	"…[the] ability to increase tourism expenditure, to increasingly attract visitors while providing them with satisfying, memorable experiences and to do so in a profitable way, while enhancing the well-being of destination residents and preserving the natural capital of the destination for future generations."
5. Dwyer et al.	"…The ultimate goal of competitiveness is to maintain and increase the real income of its citizens, usually reflected in the standard of living of the country…its ultimate goal is to increase the standard of living of a nation under free and fair market conditions."
6. Hong	"…the competitive position (with high profits and constant growth) of the tourism industry of a nation relative to the global market of tourist industries in other nations, whether developed or developing countries, which therefore increases the real income and standard of living of its citizens."
7. Enright & Newton	"…the degree to which a nation can produce goods and services that meet the test of international markets while simultaneously maintaining or expanding the real income of its citizens."

While there seems to be a consensus in the literature about the aim of competitiveness, namely increasing the standard of living of its citizens, attempts at measuring competitiveness vary in the literature. Next, we will discuss the most important measurement models.

The Crouch and Ritchie Model (1999 and 2003)

The most comprehensive definition about competitiveness has been crafted by Ritchie and Crouch (2003) whereupon, by applying Porter's (1990) core diamond theory of competitive advantage, Ritchie and Crouch provided a discerning framework distinguishing comparative from competitive advantages. Comparative advantage elements are: human and physical resources, availability of know how, capital, tourism infrastructure, and historical and cultural assets. Competitive advantage includes audits and inventories, maintenance, growth and development, efficiency and effectiveness. The micro (e.g., business) and macro (e.g., nature, technology, etc.) environments are impacted by four distinct domains - qualifying and amplifying determinants: destination policy, planning and development; core resources and attractors; and supporting factors and resources – which lend themselves to the design of a conceptual model for destination competitiveness.

The model outlines a series of factors that play a determining role in the competitiveness of a tourist destination. It grouped these factors as primary and secondary depending on their relevance. In total, the model identifies 36 destination competitiveness attributes and more than 250 factors. Ritchie and Crouch's comprehensive definition seems to encompass some hidden assumptions in terms of cause and effect relationships. For example, they seem to imply that satisfaction generates increasing arrivals and that well-being of the residents is an outcome of profitability. Application of this model can be found in Enright and Newton (2004; 2005) and Hong (2008).

The Dwyer and Kim's Destination Competitiveness Indicators (2003)

This model discusses a number of factors that are considered to impact tourism competitiveness, such as available resources (natural resources, cultural assets and heritage items), created resources (tourism infrastructure, available activities), supporting factors (infrastructure in general, quality of service, access to destination), and destination management factors. The destination is the unit of analysis and the role of price factor is emphasized as important on destination shares of total travel abroad. This model is substantially based on the Ritchie and Crouch model alluded to previously.

The model brings together the main elements proposed in the wider literature on firm and national competitiveness and the main elements found in the tourism competitiveness literature. The model displays eight main themes: core resources (endowed and created resources); supporting factors and resource (general infrastructure, quality of services, accessibility); destination management factors (activities and functions); demand conditions (awareness, perception, and preferences); situational conditions (economic, social, cultural, demographic, environmental, political, etc.), and market performance indicators. These themes, according to Dwyer et al., are causally linked. However, the causality assertion seems to be inconsistent with another statement found later in the same article: "There is no single or unique set of competitiveness indicators that apply to all destinations at all times." This inconsistency leaves the reader wondering not only if the model

should be interpreted in a causal sense, but also if the model is a valid framework to measure competitiveness.

The indicators brought to light by Dwyer and Kim's research appears to have adequately sampled from the intended domain of competitive literature within the context of tourism. However, the plethora of indicators (83 in total) and the items that may be used to measure those indicators are not well defined presenting potential measurement errors and biased results.[4] The application of the model resulted in 12 factor of relevance, namely destination management, nature-based resources, heritage resources, quality service, efficient public services, tourism shopping, government commitment, location and access, e-business, night life, visa requirements, and amusement/theme parks.

Policy-makers of a destination may struggle to produce a model that would hold reliable over the course of time. Moreover, the list of indicators they provide is broad in context and does not provide a suggested consistent combination of variables for a destination's policy-makers to choose from in order to measure their destination's level of competitiveness.

The World Travel and Tourism Council of Gooroochurn and Sugiyarto (2005)

The Tourism Competitiveness Monitor (TCM) created by Gooroochurn and Suguyarto is based on information gathered from the WTTC. It consists of 54 indicators, comprising of main, normalized and composite indicators, which together comprise the competitiveness index. It ranks about 200 countries according to this index. In 2007, the World Economic Forum (WEF) produced The Travel & Tourism Competitiveness Report, which is mainly based on the work of Gooroochurn and Sugiyarto.

The tourism competitiveness index forwarded by Gooroochurn and Sugiyarto is determined using a confirmatory factor analysis (CFA) that is then followed by a cluster analysis in order to "group" destinations into homogeneous segments according to their level of tourism performance. The model contains eight factors, such as price, openness, technology, infrastructure, human resources, social development, and environment applied to over 200 countries. Each theme consists of a set of variables, for example, price consists of hotel prices and purchasing power parity. Weights for each theme are derived using confirmatory factor analysis in order to compute an index and to rank destinations according to their performance. The CFA is based on specified a priori relationships between a main indicator and an item (variable) that like the Crouch and Ritchie model assumes causal relationships.

The three models are captured in the chart below:

What can we learn from these models?

Competitiveness is often benchmark against which success is measured (Porter, 1990; ECLAC 1990; Dollar & Wolff, 1993; Krugman, 1996). However, whereas the discussion about the definition

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[4] In another study of Dwyer and Kim (2003) they used 131 indicators to measure destination competitiveness.

of competitiveness was focused initially mainly on price related factors, it is currently moving to non-price related factors, such as technology, innovation, etc. (Fagenberg, 1996; Lall, 2001; Wignaraja et al., 2004). Some studies have defined competitiveness either explicitly or implicitly as having more of something such as market share, profits, success, etc. than that of another destination. Destinations that enjoy more arrivals and more spending from tourists, or have benefited from a higher market share in the global market than others, are considered to be competitive.

The concepts of comparative and competitive advantage have provided a theoretically sound basis for the models of destination competitiveness. These models seem to encompass the components that are captured in Figure 1 below. The focus has been initially and mainly on supply components emphasizing costs differentials through efficient allocation of resources. Lately, the focus has shifted onto consumer preferences.

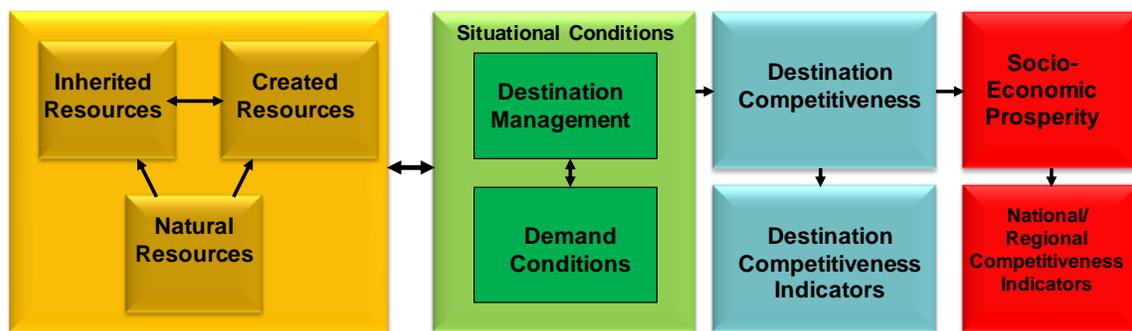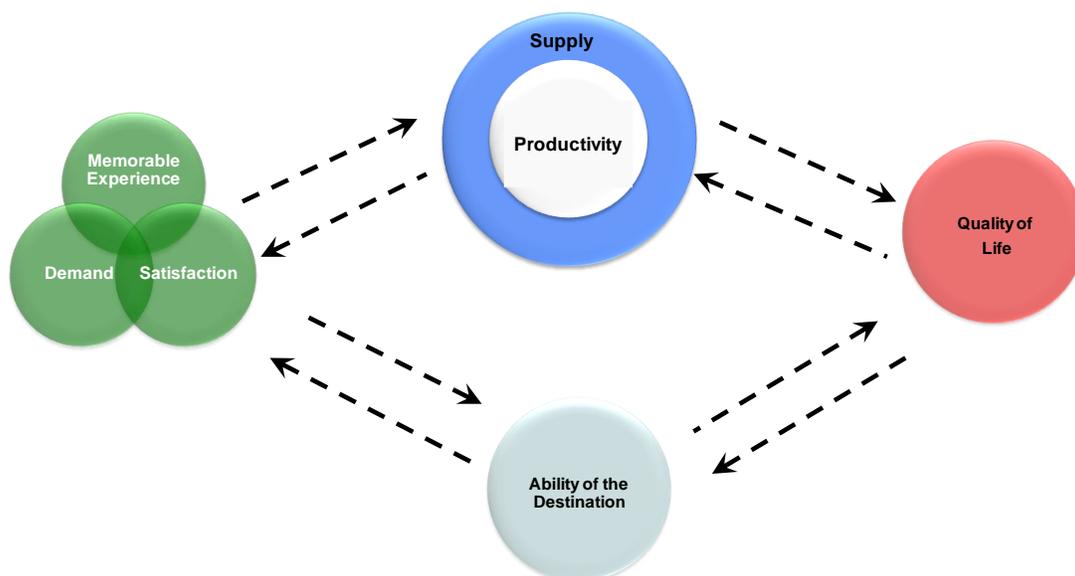Figure 1. Tourism Competitiveness Model

Figure 2. What kind of Research Program is Competitiveness?

The most striking feature of the above literature is the variety of the indicators proposed. Some pertain to inputs, others to outcomes, and others to instruments. Some activities clearly imply competition with other destinations (such as arrival flows, bed-nights, value-added and customer satisfaction) while others only have an indirect effect on competition as inputs (such as land, parts of the infrastructure, transport and hotel services, etc.) They cover a large number of factors, e.g., Ritchie and Crouch entertain over 250 items; Dwyer et al. 83 items; The TTCI comprises 58 variables; and Hong discusses 68 items, rendering application of these models a harrowing proposition.[5]

In addition to indicators lacking in their relationship to competitiveness, some lack clear causal links. Most of the models lack precision and they seem more a taxonomy for classifying the various influences on competitiveness. Take, for instance, price. Purportedly, in some studies, (Dwyer, Forsyth, & Rao, 2000) price is used as a factor impacting competitiveness. The example implies that price at the destination level would be a measure of the effective real exchange rate and unit labor cost. This would then imply that an appreciation of a destination's currency or an increase in labor cost would lead to a decline in the destination competitiveness. Consider the countries in the top ten receiving destinations (as ranked according to the World Tourism Organization.) Would it be theoretically possible to explain high prices and high labor costs in developed countries or more mature tourist destinations while at the same time registering a high tourism performance? Logically, a rise in labor costs should lead to a decline in the competitiveness level of a destination, and thus a lower market share.

However, empirical evidence indicates that over the long-term, market share for exports (tourism) and relative unit costs (or prices) tend to move together, (the so-called Kaldor paradox.) As pointed out by Ritchie and Crouch (2003), trade in tourism services has special characteristics and, due to the nature of the trade, price seems to lose its informative power. Ritchie and Crouch (2003) seem to suggest a hidden assumption of cause and effect relationship in terms that competitiveness is an antecedent for the quality of life of citizens. They seem to imply that satisfaction generates increasing arrivals and that well-being of the residents is an outcome of profitability. There is therefore a dearth in empirical testing of propositions.

Another important aspect related to competitiveness is the role of government in tourism development. The definitions refer to the ability to outperform the competitor implying policies that increase the economy's potential of a destination; but they remain silent in terms of the theoretical underpinnings for justifying government intervention in tourism development. As there seems to be systematic price and quality differences among destinations, competitiveness outcomes may be the result of policies rather than just random results. Thus, destinations' policies are potentially important because they apply key inputs (e.g. climate, beaches, beautiful sights, infrastructure, safety and security, and cleanliness) that contribute to the production of tourism services. This may explain why some destinations are successful in promoting tourism, and why others seem to fail. But as we noted previously, tourism markets are riddled with distortions impeding the optimal allocation of resources. This condition makes intervention theoretically justifiable and takes the

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[5] Some other examples of a list of large number of indicators are Enright & Newton (2004) and Chen (2008) suggesting 52 and 122 items respectively. Except for the attempt of Hong (2008), little is known about the relative importance of the factors and attributes identified in the models.

concept of competitiveness beyond its initial intuitive appeal and into the realm of studying the ability of destinations to compete with each other.

The models appear to be suited for large developed countries that are in a position to offer tourism experiences for several market segments. But this makes no sense for particularly smaller countries, which must be selective in their targeted marketing. For example, the 2008 Global Competitiveness Report and the Travel and Tourism Competitiveness Report which rank 138 countries, only mention and rank 12 small countries as defined by the 1.5 million population threshold. The reason for this lack of coverage is unclear, but it seems that these indices might not shed light on the specific issues and challenges confronting these countries, in that many of these variables take no notice of the destination's market size, the degree of dependence on tourism, the current state of economic development, or the vulnerabilities inherent in small size.

Figure 3. Shortcomings in the Tourism Competitiveness Frameworks
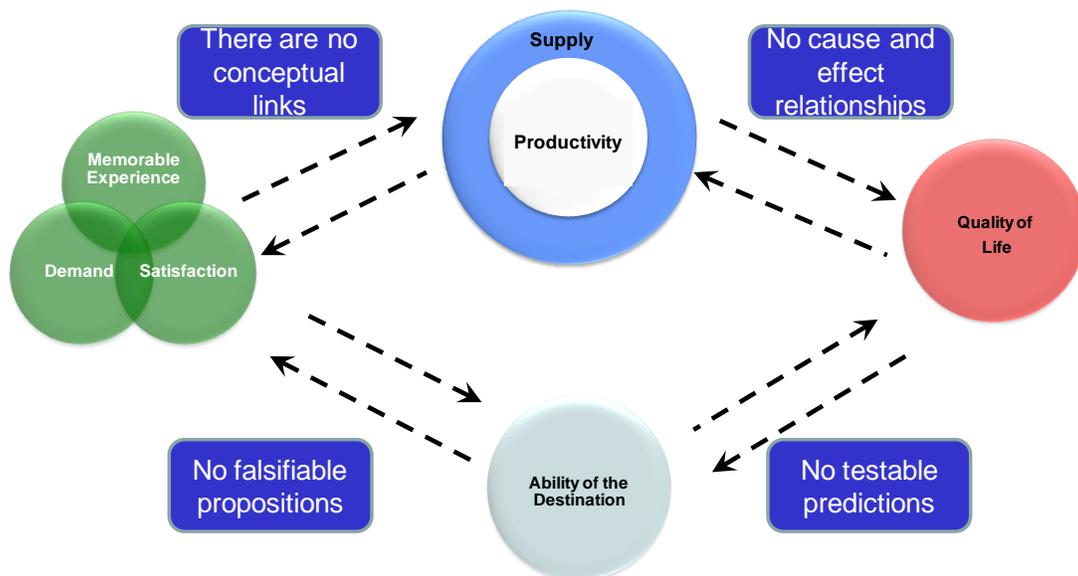
The only study that examines tourism competitiveness in the context of small destinations is that of Craigwell (2007). Craigwell uses the WTTC index to measure tourism competitiveness among Caribbean destinations. This index consists of eight separate indicators: price, human tourism, infrastructure, environment, technology, human resources, openness, and social aspects. Price factor is considered the most important ndicator of competitiveness according to this study.[6] The main shortcoming of this index is similar to the shortcoming of other indices. Namely, it lacks a clear understanding of a cause-effect relationship. For example, in the ranking of Caribbean countries based on the WTCC index, the countries with the highest ranking seem to reveal the least price competitiveness in terms of their tourism product.

From richness to simplicity: The small island Tourism Competitiveness Index

The previous review discusses the efforts in the literature to provide a better understanding of competitiveness, its meaning and measurement in a tourism context. It is clear that measurement efforts beneficial to small island destinations have been lacking in the discussion. In this second part of our lecture we will try to empirically apply the concept of competitiveness to the context of small island destinations. We have designed a procedure consisting of four steps: (i) what is the nature of competition among small island destinations in the Caribbean; (ii) can we provide a more simplistic snapshot useful for small island destinations; (iii) what are the conditions driving competitiveness among small island destinations; and finally, (iv) can competitiveness achieve the goal of enhancing the quality of life of small island destinations?

The first step in our procedure is to define the nature of tourism competition in the Caribbean. For this purpose, we applied the Hirschman-Herfindahl Index (HHI) to measure the relative distribution of international receipts of all destinations over a period of time.[7] The HHI is calculated by taking the square of export shares of all export categories in the market. This index gives greater weight to the larger export categories and reaches the value of unity when the country exports only one commodity or service. In the graph below, a perfectly competitive environment will have a value of 100 with a decline in the degree of competition reflected in higher index estimates. The graphs below (Figure 3) plot the trend of the Caribbean experience. When assessing the competition among small island destinations within the region, there seems to be a higher degree of competition among the destinations as displayed by the lower estimates in HHI.

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[6] Two precursors of the Craigwell study is the WES Report of 1993 which was commissioned by the IADB to assess the competitive position of a number of Caribbean countries; and the study of Keyser and Vanhove (1994). The report found that price was the most relevant factor of competitiveness.

[7] HHI=$\sum(\sigma_i^2)$, where σ_i is the market share of the ith destination. In other words, HHI is measured by taking the square of a destination's share of the tourism receipts of the whole region.

Figure 5. Level of Competition within the Caribbean Region, 1998 -2008
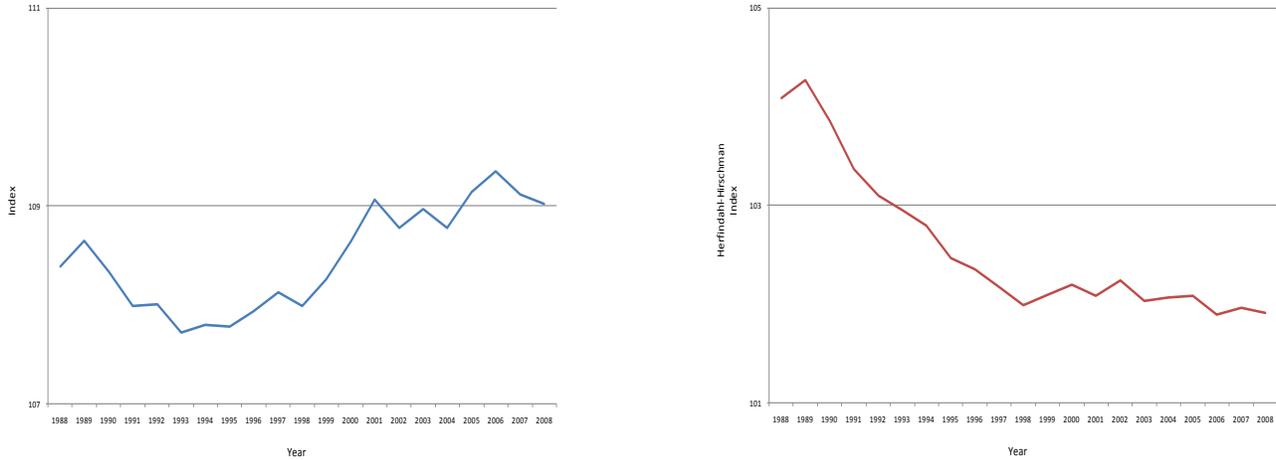
The above finding corroborates the wide held assumption about the nature of tourism competition in the Caribbean. But, how is each destination positioned in this competition? The answer to this question led to the second step of the procedure in discerning competitiveness aspects in the context of small island destinations. In answering this question, we proceed to create a tourism competitiveness index suited to small island destinations. The building of this index is premised on the need to satisfy certain important criteria: (i) being theoretically sound; (ii) entertaining simplicity; (iii) entertaining affordability; (iv) being suitable for comparing small island destinations; and, (v) stressing transparency.

The definition of competitiveness is borrowed from the Ritchie and Crouch's study (2003), and focuses on two variables: satisfaction as the driver for demand and productivity as the creation of value in the use of resources. The assumptions of the index are derived from the optimizing models, i.e., destinations attempt to maximize tourism receipts. From this optimizing perspective, growth in output should exceed the contribution of the inputs. In this context, productivity refers to the efficient use of resources and factors of production and the capacity of an economy to raise (or at least keep) the standard of living of the population. The index, therefore, will not only be determined by factor conditions (added value) as they impact attractiveness (Ritchie & Crouch, 2003), but the index will also include the examination of productivity growth proxied by the growth in receipts per capita. Finally, the index will include scale effects to reflect the size of the destinations.

The Tourism Competitiveness Index (TCI) is thus composed of three outputs, each capturing a different aspect of the industry's productivity as it relates to small island destinations. Also, when combined, the outputs create a quick snapshot of where a destination stands in terms of competitiveness. The three outputs are as follows:

1) current performance in the global tourism market scaled by size
2) dynamism of performance over time (growth rates)
3) size of the industrial base in the economic structure

The first factor depicts the actual record of a destination to compete in the global market rather than simply alluding to the ability to compete. The second factor refers to how dynamic this performance is and will provide an idea about the trend in performance; while the third will assess the structural realities of the specific industry. Specifically, the three outputs will use the following variables: real tourism receipts per capita in 2006 (US$); average tourism receipts growth rates from 1986 to 2006; and tourism added value as a percent of the GDP in 2006.

An index value will be estimated for each variable based on the following formula:

$$X_{ci} = \frac{X_{ci} - X_{c\,min\,i}}{X_{c\,max\,i} - X_{c\,min\,i}}$$

Where c represents country and i indicates the variables.

The maximum and minimum values were derived from the sample of countries and the three variables were weighted 40:30:30 in order to reflect the relevance of the size issue, following Wignaraja et al., (2004). This index should provide the study with a ranking of destinations. Once the ranking has been established and analyzed, the study will proceed to explain the variance in ranking through the concept of economic value.

The results are indicated in Table 2 below. The table provides the ranking for the 16 destinations with their component indices, the ranking in each individual variable, and the underlying data estimates. It is interesting to note that there are considerable differences in the ranking across the three variables - top destination performers in one variable are not necessarily the top performers according to the other two variables.

Table 2. The Tourism Competitiveness Index

Country	Tourism Competitiveness Index	Rank	Tourism Receipts per capita	Rank	Growth Rate of Tourism Receipts	Rank	Tourism Value Added Ratio of GDP	Rank of VA
Aruba	0.752	1	$10,960	3	0.087	3	0.680	2
British Virgin Islands	0.751	2	$19,864	1	0.067	8	0.441	8
Anguilla	0.639	3	$6,308	7	0.084	5	0.671	3
US Virgin Islands	0.623	4	$13,573	2	0.055	11	0.559	4
Antigua and Barbuda	0.442	5	$4,088	8	0.035	15	0.789	1
Cayman Islands	0.428	6	$7,060	4	0.073	7	0.253	13
Bahamas	0.395	7	$6,466	6	0.038	14	0.531	5
Guadeloupe	0.394	8	$553	16	0.091	1	0.317	11
Saint Lucia	0.392	9	$2,225	10	0.059	10	0.529	6
Grenada	0.357	10	$645	15	0.086	4	0.276	12
Dominica	0.329	11	$800	13	0.082	6	0.243	14
Saint Kitts and Nevis	0.318	12	$2,140	11	0.053	12	0.421	9
Barbados	0.316	13	$2,638	9	0.046	13	0.457	7
St. Vincent &Grenadines	0.309	14	$842	12	0.065	9	0.350	10
Martinique	0.298	15	$675	14	0.09	2	0.103	16
Bermuda	0.136	16	$6,550	5	0.017	16	0.130	15

For example, Martinique displays a commendable performance in growth rates of the past 20 years (rank number 2), but underperformed in the other two variables (ranking 14 and 16 in spending per capita and the share of the industry base in the wider economy, respectively). On the other hand, Aruba shows consistency among all three criteria (ranking 3, 3, and 2, respectively). St Kitts and Nevis also display consistency in the three rankings albeit close to the bottom end. Some destinations, such as Barbados and Bermuda, did not perform as well as might be expected.

What seems to distinguish the top five performers from the five laggards is their rank with regard to spending per tourist and tourism value added. Aruba, British Virgin Islands, Anguilla, US Virgin Islands and Antigua and Barbuda scored fairly high in those rubrics whilst St. Kitts and Nevis, Barbados, St. Vincent and the Grenadines, Martinique, and Bermuda underperformed, indicating an erosion of their comparative competitiveness over the last two decades. The study indicates that destinations seem systematically different from each other in terms of performance.

What are the conditions that influence positioning in the ranking?

To answer this question, we built a model based on a utility function embedded in rational choice theory. The main assumption presupposes that a consumed good provides greater utility than a good that has not been consumed. Thus, for example, consuming Barbados rather than Antigua

means that the Barbados product provides greater utility to the consumer than the Antigua product. The utility function in tourism could be U (X,R), where X represents goods purchased in the market combined with a non-market resource, R. Let p be the vector of market prices corresponding to X. By making the usual assumptions about the properties of utility functions and considering R to be a conventional good, we may define an expenditure (cost) function in terms of:

C(p,R,u)* = min{xp|U(X,R) = u*}, where u * is a reference level of utility.

In other words, C expresses some minimum level of costs in achieving utility based on some resource level, R. We further assumed that these costs are associated with the types of minimum required levels of investments in infrastructure, education, and safety, which would secure demand. Other tourism resources (e.g., land, water assets, and historic buildings) while of little value in other economic sectors are invaluable from a tourist perspective, as those resources do not conflict with other economic activities to which tourists subscribe (Zhang & Jensen, 2007). This low opportunity cost is especially salient in small island destinations where other economic alternatives seem scarce (Candela & Cellini, 1997).

Based on this utility model, a number of variables were identified. The dependent variable (DV) is defined as the log of tourist receipts per arrival in US$, and is considered the real value that the consumer attributes to the product. The price paid reflects very well how much a consumer values products. Price movement in this context (i.e., increase or decrease) should be interpreted as a change in the scarcity of products relative to other products. High value, therefore, is associated with high expenditure tourist performance and thus may have the potential for higher multipliers: while low value is associated with a low-spending tourist. Destinations entertaining low-spending tourists may have a higher externality cost in congested areas, substandard road conditions, and pollution, reducing the carrying capacity of the destination; thereby negatively affecting the value of the tourist product (the TALC factor) (Moore & Whitehall, 2005). The low-spending tourists in this context may cause the destination to enjoy less value. It is possible for a tourism destination to earn more with higher priced products rather than with more arrivals. Finally, greater value could be the result of higher income in the originating markets and/or some destination specific conditions, such as technological advantage, industrial organizational advantage and attractiveness (Bull, 1995; Sinclair & Stable, 1997; Mak, 2004; Vanhove, 2005).

The model is defined as follows:

$$\Delta\ln(\text{Value})_{it} = \beta_1\,\Delta\ln(\text{Value})_{i,t-1} + \beta_2\,\Delta\ln(\text{Arrival})_{it} + \beta_3\,\Delta\ln(\text{Price})_{it} + \beta_4\,\Delta\ln(\text{Development})_{it} +$$
$$\beta_5\,\Delta\ln(\text{Investment})_{it} + \Delta\,\varepsilon_{it}$$

where i=1, …, 9; t=1999, …, 2005. Because all the variables used are in double-logarithmic form, the parameters may be interpreted as elasticities. The estimated coefficients are short run elasticities and by dividing each of the coefficients by $(1-\beta_1)$ the long run elasticity is obtained. *A panel regression analysis* was used in order to explain the differences in performance output.[8]

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[8] A panel regression refers to an analysis of panel data consisting of observations on multiple phenomena and over multiple time periods. In our case study we generated data of 5 variables over 9 years for a total of 45 observations.

Table 3.

Definition of Variables	
Variable	**Definition**
Value (DV)	The growth rate of the actual value consumed by the tourist during its stay (changing rate of real spending per arrival)
Value lagged (IV)	Reputation and repeat visitation
Arrivals	Visitation level (is a proxy for cost)
Price	The relative price of destinations and is defined as the ratio of real receipts in destination i during year t to the total of the region during year t
Development	The level of development is defined as the local productivity levels, technology and amenities that are strongly correlated with the destination's economic development (Real GDP per capita is the proxy)
Investment	Investment and maintenance of the tourism industry and is defined as the hotel capacity in destination i during year t (cost)

Index i represents the island destination, while index t covers the year in question: α_i refers to the structural coefficients (see Table 2). In (Value)$_{it}$ is the log of the economic value generated by tourism in destination i during year t and is defined by the growth rate of the actual value consumed by the tourist during their stay (changing rate of real spending per arrival). The log of arrivals refers to the visitation level in year t of the destination and is a proxy for cost; the log Price captures the relative price of different destinations and is defined as the ratio of receipts in i during year t to the total of the region during year t. The log GDP per capita is a proxy for local productivity levels and hence locally available technology, and amenities that are known to be strongly correlated with the destination's economic development (e.g., security, transportation, and infrastructure). The log Cost captures the costs associated with investment and maintenance of the tourism industry and is defined as the hotel capacity in destination i during year t.

The theoretical expectations for the proposed model are: (i) arrivals are nonlinear functions with positive initial effects; but eventually may indicate a negative relationship with Value – therefore, it may be positive or negative; (ii) Value increases as Price increases; and (iii) Value increases with attractiveness.

In order to address endogeneity bias created by the unobservable destinations' differences in correlation with the regressors of interest, we selected a fixed effects specification, where the destinations' fixed effects are denoted by c_i.[9] This step is intended as a control for the average

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[9] Endogeneity in regression analysis refers to, for example, omitted variables, and consequently are part of the unobservables. Another example is when an independent variable is actually a function of Y (as opposed to being a cause of Y). Consider sales and advertising. If a firm changes its level of advertising in anticipation of changes in demand, then sales causes advertising and advertising is therefore *endogenous*.

differences in the unobservable predictors, such as differences in quality, policies, and attractiveness of the destination. In addition, the study included year fixed effects d_t to address weather changes and macro economic characteristics of tourism demand over time. Finally, ε_{it} covers the unexplained shocks. The study assumes these shocks to have constant variance and to be serially uncorrelated to the predictors.

The study used annual data and the estimation covered the period 1999 to 2005. Data for this study were collected from the World Tourism Organization (WTO), the Caribbean Tourism Organization (CTO), the World Travel and Tourism Council (WTTC), and the International Financial Statistics of the International Monetary Fund (IMF). The data covers a time span from 1986 to 2006.

We performed a number of diagnostic tests. We found that we could pool the data (F= 85.47 (p<.0000), thereby rejecting the null hypothesis that all dummy parameters except one are zero: $H_0 : \mu_1 = \dots = \mu_{n-1} = 0$). Next, we performed a Hausman test to distinguish between fixed and random effects models. The Hausman test was 36.59, suggesting that the fixed effects model is appropriate. Finally, we performed the Levin, Lin and Chu unit root test to discern whether our data set was stationary or not. The data was then transformed to the first difference in order to remove the destination effects (see Table 4). We then proceed with the panel regression analysis.

Table 4. Panel Unit Root Test

	Levin-Lin-Chu test			
	Sample	Levels	First Difference	Degree of Integration
Value	1999-2005	4.287	-7.534*	I (1)
Arrival	1999-2005	-0.793	-211.803*	I (1)
Price	1999-2005	-6.542*	*25.107*	I (0) or I (1)
Level Development	1999-2005	-1.490**	-38.241*	I (0) or I (1)
Investment	1999-2005	-3.978*	-70.142*	I (0) or I (1)

Notes: The panel comprised of nine destinations in the Caribbean. The table reports the adjusted statistic (*t-star*) for the Levin-Lin-Chu (2002) test at the 1% and 10% significance level. An *, (**) indicates rejection of the null hypothesis at the 1% and 10% significance level. The test was carried out using STATA 9.

Table 4 gives the estimation results for the fixed effect models. All the variables, i.e., arrivals, technology, price, and investment are significant and demonstrate the expected direction of the relationship. The income per capita regressor is positive and significant meaning that created assets and technology are an important determinant of competition. Similarly, investment in infrastructure is disclosed as positive and significant. In addition, the price factor appears important in determining the competitive level of a destination. More expensive destinations seem more able to obtain larger shares of regional spending of tourism, thereby indicating evidence of the Kaldor paradox in the tourism industry for these destinations. This result disconfirms the findings from previous studies (Dwyer et al., 2000; 2002). The arrival factor, as expected, turned out negative and statistically significant thereby indicating that increased numbers of tourists could jeopardize the value of the destination. It appears that arrivals are closely related to the carrying capacity of small island destinations and decreasing marginal utility thereby affecting the willingness of tourists to pay.

Table 5. Results of the Fixed Effect Model
Determinants of Competitiveness in Small Island Destinations

Dependent Variable = Rate difference in real spending per tourist (=value)					
Variable	Short-term Coefficient	Std. Error	t	p>/t/	Long-term Coefficient
Arrivals	-.375	-.125	-3.00	0.005	-.503
Price	.455	.105	4.30	0.000	.611
Level of Development (technology)	.639	.262	2.43	0.020	.857
Level of Investment	.264	.143	1.84	0.074	.354
Value lagged	-.254	.119	-2.13	0.039	-.341

The results also indicate that dynamic effects take place in two different modes; i.e., through changing reputation levels which are captured by the influence of the previous time period on the spending behavior of the current period; and second, by making a distinction between a long run equilibrium towards which competitiveness appears to be moving from its current position. The spending per tourist as measured in the prior period tends to have a negative effect on the current spending behavior of the tourists. Thus, it seems that tourists were not entirely satisfied by the tourist services they received in the destination. Alternatively, repeat visitation may be prominent in these destinations and these repeat visitors are known for reducing the search cost at a destination for less expensive tourist services. [10]

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[10] This finding implies that the Cabbean product is confronting some serious problems in terms of competitiveness, which confirms my previous finding reflected in the following: "The reality of the Caribbean, on the other hand, indicates a product being consumed by relatively more buyers who are spending less ... Thus it appears that more resources are being allocated for product manufacturing of tourism goods in the Caribbean, thereby increasing their opportunity costs. (Croes, 2005)

Table 6. Implications of the Results

Implication Results	
Variable	**Implications**
Arrivals	Increased number of tourists could jeopardize the value of the product (decreasing marginal utility)
Price	More expensive destinations are more likely to obtain larger share of revenues to the region
Investment	Investment in infrastructure (physical and human) important factor in competitiveness
Level of development	Created assets and technology are important determinants of competition
Value lagged	Tourism services are not entirely satisfactory over time

Finally, we found an adjusted R-square of 0.619. This means that the reviewed variables explain slightly more than 62 percent of the change in real spending per arrival (value). The remainder of the variance should be explained by the ability of the destination to deploy its available resources in responding to the tourists' preferences.

Does being more competitive entail a better quality of life?

As we discussed previously, the literature on competitiveness suggests that an important main goal of competitiveness is to enhance the quality of life of citizens. Therefore, we decided to empirically test this proposition. Before proceeding, I should say that the variable of size used for this test is not exactly the same as the one used in our previous empirical endeavors. All countries included in previous data sets had a population threshold of 1.5 million. In answering the last question, we will deviate from this threshold, as we will use Puerto Rico as the example. Puerto Rico has close to four million inhabitants, which is still considered *small* by the literature (threshold is 5 million).

Manuel Rivera and I (Croes & Rivera, 2010) performed a cointegration and causality analyses to answer this question. Using the information provided by the cointegration test, an error correction model (ECM) was constructed to obtain the long and short-term elasticities. Modeling the short run dynamics provides information concerning how adjustments take place between the two variables, to restore long run equilibrium. The long run relationship is captured by the error correction term. The coefficient of this term will indicate the speed of adjustment; namely, how quickly the system returns to equilibrium after a random shock. It is expected to be negative to ensure convergence.

The results of the ECM are as follows:

$$\Delta logComp_t = -0.007 + 0.92 \; \Delta logTour_t + 0.56 \; (logComp_{t-1} + 0.15 logTour_{t-1}) + \mu_t$$
$$\quad\quad\quad (-1.76)* \quad\quad (2.47)** \quad\quad\quad (14.24)*** \quad\quad\quad\quad (1.78)*$$

Note: Adj.R-square=0.862   F=81.31∗∗∗   DW=1.77   Breusch-Godfrey LM test=10.105 (p=0.0029)   Breusch-Pagan test=7.10 (p=0.0077). *t*-values are shown in parentheses; (∗) denotes significance at the 10 per cent level; (∗∗) denotes significance at the 5 per cent level; (∗∗∗) denotes significance at the 1 per cent level.

The results, therefore, show that there is a long-run relationship between real GDP per capita and tourism share of the GDP and that they have the correct sign. The estimated long run response coefficient for LogTour is 0.56. This means that a one per cent increase in real tourism spending share of the GDP will increase the real GDP per capita in the case of Puerto Rico by a little more than a half per cent. The error correction term is significant and it implies that the system will adjust itself towards equilibrium almost immediately by removing 0.92 (adjustment coefficient is 0.64 with a *t*-statistic of 14.24) of a unit from the error made in the previous period.

While evidence of cointegration suggests that our variables of interest are moving together over time, it remains open to question whether tourism spending actually drives competitiveness or the other way around. According to Granger (1988), cointegration implies causality in at least one direction. The results suggest that changes in GDP per capita are dependent on and determined by changes in tourism spending, supporting the contention that demand-side factors positively effect productivity increases, thereby affecting increases in GDP per capita (see Table 6).

Table 6.
Granger Causality Test

Null Hypothesis	Wald Test	
	F Statistic	P Value
Δ LogTour does not cause $\Delta LogComp$	6.0940	0.014
$\Delta LogComp$ does not cause $\Delta LogTour$	1.6185	0.203

Note: Tests for causality have been carried out for the two variables of the model each time with one degree of freedom at the 5% significance level using STATA version 9.

What does it all boils down to?

Our lecture of tonight indicates five important implications regarding competitiveness.

- Competitiveness is a useful concept and tool both from theoretical and practical perspectives. It enables the focus on productivity (efficient allocation of resources) and the satisfaction of consumers' preferences, stressing the latter as the main source of wealth. It also points out the role of the government in enhancing the ability of a destination to

overcome distortions, thereby enabling price to send true signals to the market. In other words, restoring price informative power.

- Our analysis also suggests that non-price competition is a smart strategy for destinations. More expensive destinations are likely to obtain a larger share of the regional tourism revenues because they are able to make their product more attractive ('upgrading') by considering the tastes and preferences of tourists in a creative and consistent way and the manipulation of service approaches and strategies to adjust to those tastes and preferences. Their tourists' goods seem to be increasingly valued in international markets thereby offsetting the purported increase in cost production.

- Tourist goods should therefore be the result of the ability of a destination to connect supply-side activities (e.g. attractions, services, infrastructures) with demand-side value creation in order to satisfy the customers (marginal utility) through fulfilling "memorable experiences" which may affect the quality of life for the population. This strategy eschews the conventional wisdom of competitiveness that devaluation could improve the competitiveness of a destination through a cost advantage vis-à-vis competitors.

- Small island destinations are well served in using performance indicators because they provide guidelines, they correct for inefficient management directions, and they promote positive effects of competition amongst destinations. The study discusses the importance of using the proper performance indicators. It also provides an approach to produce simple indicators that summarize the elements that distinguish destination abilities and conditions that are crucial to the policy mechanisms in order to improve the ability to compete. These distinguishing abilities and conditions reveal that it may be necessary to control for arrivals of tourists. In addition, consideration for the right combinations of the levels of investment in the infrastructure and creative technological assets may be necessary in order to forge a high quality product. In spite of the controls, the study implies that the more expensive destinations are likely to obtain a larger share of the regional tourism revenues.

- The previous suggestion implies that we should shift our management attention away from indicators such as arrivals, revenues and market share to real spending per arrival as our performance indicator. Otherwise, those destinations that base their measurement of competitiveness on prudent choice rather than on growth rates could be described as idle; the outcome of which could be a negative image and thus negative market appeal. Policy makers are often sensitive to the results of rankings based on conventional metrics that they be misled to pursue undesirable policies. This possibility is indeed unfortunate as, in actuality, a policy of sustainable tourism inevitably slows growth rates because it purports that unlimited growth will generate negative externalities and eventually lead to the industry's own destruction (Butler's life cycle hypothesis).

- In conclusion, the main argument of our lecture is that national wealth is not created by factor endowments, but is created by a destination's choices.

Thank you.

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