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Tourism as a means of developing isolated regions: Defining the Image of a tourism destination from the demand and supply side

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Tourism as a Means of Developing Isolated Regions: Defining the Image of a Tourism Destination from the Demand and the Supply Side

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ABSTRACT

The development of a region is subject to its ability to attract business activities and the right blend of people to run them. This ability depends on a number of factors and previous research as well as historical evidence show that the region's location is a key factor among them. Hence, isolated regions are at a disadvantage in attracting business activities adversely affected by geographical discontinuity and they should focus on specific activities. Tourism is such an activity for which geographical discontinuity is not a barrier, but on the contrary it may be an advantage. Hence, tourism may act as a driving force for the development of isolated regions. On the basis of the above, a region may become a competitive tourism destination, provided of course that it possesses a number of characteristics. An overview of the literature reveals that most of the studies referring to tourism destinations focus on the attraction of tourists, i.e. the demand side and very few on the attraction of tourism industry, i.e. the supply side. Our objective in this paper is to identify the factors (both supply and demand) affecting a tourism destination, suggest ways of measuring them and define the Image of the tourism destination, i.e. a measure of its attractiveness, as a function of those factors. Finally, the theoretical findings will be applied to a number of tourism destinations.

Key Words: Regional development, isolated regions, tourism, tourism destination, Image of a tourism destination

1. Introduction

The majority of studies of regional development seem to agree that the development of a region depends mainly on its ability to attract sustainable business activities. The power that a region has to attract and retain successful business activities depends on what in bibliography has been called the Image of a Region (Angelis, 1990; Angelis and Dimopoulou,

1991; Angelis and Dimaki, 2011). The Image of a region is therefore a function of various factors (Ashworth and Voogd, 1988; Boschma and Lambooy, 1999; Bristow, 2005), which could be divided in three main categories: economic, social and environmental.

The term **Image** has been bibliographically used with a variety of meanings. For some, Image is a sum of beliefs, ideas and impressions. It is the total impression an entity makes on the minds of people and has great influence on the way people perceive and treat things (Dichter, 1985; Dowling, 1998). Marketing literature agrees that Image is important in this process and suggests different types, including projected and received region Images (Kotler et al.,1993). Projected place Images are defined as the sum of ideas and impressions of a place that is available for people's consideration. Those Images are being received by individuals and influence them during the process of creating their personal Image of a region, according to their own needs, motivations, previous experience, preferences and other personal characteristics (Ashworth and Voogd, 1990; Gartner, 1993; Bramwell and Rawding, 1996).

Research studies on the attractiveness of a region have focused mainly on industrial investments and as a result, they emphasized on the location of a region, which has proved to be crucial for a region's development (Bighman and Roberts, 1952; Fromm, 1965; Morlok, 1978; Blonk, 1979; Stubbs, Tyson and Dalvi, 1984). Moreover, the quantitative studies that have been conducted for the Image of several regions (Angelis, 1994; Gaki, 2005), came to the conclusion that isolated regions with geographical discontinuity present low business activity attractiveness. Due to the fact that this low investment attractiveness is being caused by geographical factors, which are fixed and cannot easily change, previous studies have suggested that isolated region's investment attractiveness can be enhanced by focusing on alternative activities for which location is not of great importance. Competition among places involves the improvement of the features that make it possible to attract and retain investment and people that is to become "sticky places" (Markunsen, 1996; Malecki, 2004).

The present paper attempts to fill that gap, by suggesting a research of tourism activity as a means of development of isolated areas, since for tourism, geographical discontinuity is not considered a disadvantage but on the contrary, it can be a competitive advantage for a Tourism Destination. International studies about the incentives that make someone travel have clearly proven that geographical isolation could be an attractive factor for tourism demand. For example, Crompton (1979) mentions that one of the main incentives of tourists is the escape from an ordinary environment for them, in order to feel different than in their everyday life. Moreover, one of the first listings of the factors affecting the tourism demand, which was published by the World Tourism Organization in 1985, includes factors relevant to geographical isolation, such as the need of getting closer to the nature and looking for adventure. Most recent studies also confirm that factors related to isolation can prove to be highly motivating for the choice of a tourism destination. Tourists declare that some of their main motivations to visit a destination are the sense of being "anywhere away from home" and "just the nature and themselves" (Fodness, 1994). Bansal and Eiselt (2004) have also proved that "the search for adventure" is one of the main incentives during decision process of a tourism destination.

In this paper we attempt to redefine the concept of a Region's Image for the case of Tourism Destination. Consequently, we try to create a model based on those factors – other than location – that are the most important and determine the attractiveness of a Tourism Destination and which are common for both tourism demand (i.e. which would pull a tourist to visit a destination) and tourism supply (i.e. which would pull a tour operator or travel agent to sell or promote a destination). Every destination has to provide some basic standard features and services in order to attract and retain both, tourists and tour operators / travel agents. It is common sense that no uniform standards exist. As a result every destination, in order to remain attractive should determine the most suitable standards each time and try to meet them (Kotler et al., 1999). This model will measure the attractiveness of a Tourism Destination from both the demand and supply point of view. And that is the second gap that the present research attempts to fill. More precisely, in a review of 142 relevant research studies, which have been conducted from 1973 to 2000, regarding the Image of the Tourism Destination only two have examined the tourism demand and supply side at the same time (Pike, 2002).

2. The concept of the Image of a Tourism Destination

Tourism destinations have been defined in different ways throughout the extensive relevant literature. In a few words we could define a tourism destination "as an amalgam of products and services available in one location that can draw visitors from beyond its spatial confines" (Murphy, Pritchard and Smith, 2000) or "as a package of tourism facilities and services, which like any other consumer product, is composed of a number of multi-dimensional attributes (Ritchie, 1993).

In recent years tourism destination definitions have been enriched with the concept of sustainability. Sustainable tourism destination "is a complex term that has emerged from the need to develop tourism destinations in a sustainable manner, and therefore the need to recognize the efforts to develop destinations accordingly (Foh Lee, 2001). In general "the end result of the adoption of sustainability strategies must include measures for the conservation and protection of environment, as well as land use planning in general. If these strategies are to have a positive impact on the environment, they must incorporate a regulatory framework in relation to the environment" (Rodriguez et al, 2008).

Several studies on the Image of a tourism destination have tried to define that term. In early attempts of definition (Crompton, 1979) "the destination image is an attitudinal concept consisting of the sum of beliefs, ideas and impressions that a tourist holds of a destination". Later studies have proved that tourists' evaluation of a tourism destination image "comprised of cognitive, affective and personality dimensions" (Hosany et al., 2006).

Moreover, a critical mass of previous research studies has indicated the great importance of measuring the Image of a Tourism Destination in order to develop tourism. According to Selby and Morgan (1996) "the conceptualization and measurement of place image can create new opportunities for destinations seeking to develop tourism. Place image techniques can be used as a policy analysis tool, enabling strengths and weaknesses of the product and its naïve images to be assessed". With the same point of view, Bigné et al. (2001) stated that "image is a key factor in the hands of destination managers. It is a direct antecedent of perceived quality and satisfaction and of the intention to return and to recommend the destination. It is also a key factor in influencing the choice of holiday destination. Destination managers should therefore not delay in taking a serious approach to their image".

In this paper, **Tourism Destination Image** is defined as the power that a tourism destination has to attract and retain both tourists (tourism demand) and tour operators/travel agents (tourism supply). That Image can also be used as a policy making tool for every tourism destination, since it consists of a series of factors that reveal the advantages and disadvantages of the destination.

3. Factors Determining the Image of a Tourism Destination

A literature review has provided us with a great variety of suggested factors that seem to determine the Image of a Tourism Destination. Many researchers (Chon, 1991; Ritchie, 1993;

Baloglu and Brinberg, 1997; Murphy et. Al., 2000; Baloglu and Mangaloglu, 2001; Beerli and Martin, 2004; Echtner and Chi and Qu, 2008; Lin and Huang, 2009) during the past years have tried to define the most important factors that turn a region into an attractive Tourism Destination.

Economic factors	Social factors	Environmental factors
Economic development	Quality of life	Beauty of the scenery and landscape
Cost / Prices	Gastronomy	Nature
Value for money	Social interaction (language barriers)	Unspoiled environment
Quality of services	Hospitality of local residents	Hygiene and cleanliness
Tax regime	Customs / Local way of life	Atmosphere of the place
Regulatory framework	Political Stability	Traffic
Advance of technology	Safety	Climate
Currency	Religion	Overcrowding
Intense promotion of the destination		Beaches
Accessibility (i.e. availability of flights, ferries, trains etc to the destination)		Richness of the scenery
Geographical Location		The feeling of isolation
Information availability		The feeling of escaping from your ordinary environment
 Accommodation facilities Food and beverage facilities Sports facilities Other outdoor activities Shopping facilities Nightlife / Entertainment (Recreational Activities) Theme parks Transportation (i.e. metro facilities, buses etc) Cultural attractions (i.e. Historical attractions (i.e. museums, historical buildings, monuments e.tc.) General infrastructure: Health services (i.e. hospitals, doctors etc) Telecommunications (i.e. fast internet connections etc) Proximity to the place of your residence Proximity to any big city 		
destination		
		1

Table 1: Factors determining the Image of a Tourism Destination

As it has already been mentioned the vast majority of previous studies have indicated factors that determine the Image of a Tourism Destination, only from the tourist point of view and totally ignored the tourist product's supplier's point of view. Due to the fact that this study suggests the creation of a joined Image of a Tourism Destination, the most common bibliographically referred factors (regardless whether they came from the demand or the supply point of view) have been collected in an extensive list. The next step was the grouping of those factors in three main categories: economic, social and environmental factors. The final list with the categorized factors has been used for the research design.

Table 1 summarizes the main factors that are mentioned in literature as determining the Image of a Tourism Destination and have been used as a guideline for the questionnaire's design. Every factor of this table is a variable of the quantitative research. All the variables are going to be tested for their level of significance for both the demand and supply side. The most important factors for both sides and from each category are going to be included respectively in the formation of the appropriate indicators, in order to define the revised and joined Basic Image of a Tourism Destination.

4. A Pilot Research with a Greek Sample

In the previous sections, it is clearly shown that in order to create a quantitative model to measure the Image of a Tourism Destination both from the tourism demand and supply side, further research is necessary. The research needs to focus mainly on two issues. First, on the most important factors which determine the Image of a Tourism Destination, in order to decide about the variables that the revised Image function will consist of. Second, on the most important common factors that attract tourists and tour operators / travel agents in a region, which can therefore become a successful Tourism Destination.

This paper presents a quantitative primary study that determines the most important common factors influencing the Image of a Tourism Destination for both tourists and tour operators / travel agents in Greece. For the needs of the present paper a pilot research has been conducted in 100 sampling units only in Greece. The sampling units have been approached by personal contact. More precisely a questionnaire has been used in order to collect data from 70 tourists and 30 tour operators/travel agents, about the importance of the factors mentioned on the previous section during the choice of a tourism destination as a place of visiting or as a place of promotion. The participants of the survey were asked to answer the questions trying to recall what attracts them to visit a destination (in the case of tourists) and

what attracts them to promote a destination and offer packages to that destination (in the case of tour operators/travel agents).

The questionnaire consists of seven units and tests the importance of 47 variables, each of which represents a potential characteristic of a tourism destination. All the factors examined have been mentioned in Table 1 of the previous section. The first part of the questionnaire uses closed questions to collect demographic data for tourists and the second part has the same role but for tour operators/travel agents. The remaining sections are uniform for both sample groups. The third part includes characteristics of a destination that are related to the general development of a region, such as the economic development, the price levels, the currency, the accessibility, the health infrastructure etc. The fourth part tests features related to the destination's tourism infrastructure, such as accommodation, historical attractions etc. The fifth part examines social factors, such as political stability, security, religion etc. The sixth part checks the importance of environmental features, such as the beauty of the scenery, the unpolluted environment, the overcrowding etc. All parts from three to six use a 7-degree Likert scale to measure the importance of each factor, where 1=Factor of no importance and 7= Factor of great importance. In the seventh part one open question permits the spontaneous reference of any other important factor for the Tourism Destination Image formation not included in the rest sections of the questionnaire. Finally, another open question calls the participants to spontaneously mention up to three reasons that would push them visit or promote a destination, despite the fact that it is geographically isolated.

The data collected through the pilot study have been analyzed and average weights of importance have been calculated for each factor. From this process the most important factors for both tourists and tour operators/travel agents have been identified. Table 2 summarizes the most important factors that affect the Image of a Tourism Destination for both Greek tourists and tour operators/travel agents with their average weights. The factors have been further divided into two groups according to their context: built environmental / reachability and natural environmental. It is worth mentioning that total average weights for each group of factors have also been calculated. Natural environmental factors seem to be clearly the most important for the formation of the Image of a Tourism Destination (5.61), followed by built environmental and reachability factors (4.68).

In the next section the factors of Table 2 are going to be used in order to reconstruct the Region's Image function for the case of a Tourism Destination.

Most important factors per type	Weights
Built Environmental and Reachability Factors	4.68
Services Quality	6.50
Accessibility	6.17
Accomodation Infrastructure	6.17
Prices	6.00
Health Infrastructure	6.00
Historical Attractions	5.83
Natural Environmental factors	5.61
Overcrowded destination	6.50
Beauty of scenery	6.33
Nature	5.67
Unpolluted Environment	5.50

 Table 2: Most Important factors with weighted average

5. Modeling the Basic Image of a tourism destination

5.1 Modeling a region's Image

The growth or decline of a region depends on its power to «pull» both industries and the right blend of people to run them; this pulling power depends on what we call the **Image of a region**. Business units and people move into or out of a given region on the basis of their perception of the region's relative attractiveness (i.e. of its relative advantages or disadvantages). Their mobility is therefore a function of a multitude of factors physical, economic, social and environmental. At each time instant the region «sends out» its Image and depending on its impact on the people (both employers and employees) the region may be considered attractive or non attractive. One may also argue that since people "receiving" the image of the region belong to various distinct groups (i.e. employers, unskilled workers, skilled workers etc.) and are sensitive to different factors; the impact of the region's Image on the members of each particular group will be different (Kotler et al., 1999).

Whilst this argument is plausible literature and evidence suggest that all groups of potential movers react similarly to a basic set of factors; more precisely, a set of minimum standards, largely common to all groups, must be satisfied if the region is to be considered as a potential choice by any of them. Every community must provide some basic standards of services to attract and retain people, business and visitors. Admittedly, no uniform standards exist. Hence, every region, in order to be/remain attractive, should determine the standards pertaining each time and try to meet them (Kotler et al., 1999).

To reconcile these two views we refine the concept of a region's Image by introducing the following two concepts: the Basic Image and the Specific Image.

The **Basic Image** of a given region measures the degree to which the region satisfies a set of basic criteria, common for all movers. A region satisfying those criteria is considered by all potential movers as worth a closer examination and as a potential final choice.

The **Specific Image** of a given region, as perceived by a particular group of potential movers, measures the degree to which movers belonging to that particular group consider the region as their best final choice. This Specific Image, however, although a function of specific factors appealing mainly to members of that group, is primarily a function of the Basic Image.

The remainder of this paper will focus on the definition and study of a region's Basic Image. This is a rather abstract concept which expresses the actual state of the region; a physically realizable measure for the Basic image is difficult to find. What may be measured more easily is the net change of a region's population due to migration during each time period. Such a change, however, is of very little importance as a measure of the real state of the region. The perception and reaction times to any change in the state of a region's Basic Image are different for the various groups of potential movers and are particularly long for certain vulnerable minorities, who lack real choice in place to live and work. Hence, the measurable changes of the region's population due to migration may be generally considered as the delayed and considerably smoothed consequence of changes in the Basic Image.

The study of the mechanisms governing the shaping and the changes of a region's Basic Image is a task of imperative importance. Apart from simplifying the analysis of a region's behaviour, the Basic Image, as an overall measure of its attractiveness and performance, has the following two advantages:

- i. It gives an early warning of any potential danger of decline.
- ii. It gives the "true" picture of the region and helps decision makes to detect the causes and not only the symptoms of any existing problems.

An early and correct diagnosis of a problem is perhaps the biggest step towards its solution. In the case of regional development, however, the seeds of decay are usually planted during a period of prosperity and no action is taken against them until it is too late. Ironically, the very state of being an attractive place may unleash forces that ultimately unravel the attractiveness of a place. Many places experience a period of growth, followed by a period of decline, and the fluctuations may be repeated several times. Therefore, a monitoring device, which will alert us at the first sight of danger, is a tool of great importance (Kotler et al., 1999). The expression of the Basic Image as a function of those two Indicators is not accidental; on the contrary, it is consistent with the concept of a region as a socio-economic unit. The main advantage of such an expression is that it may be used to underline and, eventually, describe the potential conflict between the economic and social functions of a region in the course of development (Llewellyn, 1996; Lovering, 2001; Bristow, 2005).

The concept of Basic Image has been defined and discussed in full detail in some earlier papers (Angelis, 1981,1990; Angelis & Dimopoulou, 1991; Angelis & Dimaki, 2011). Summarising their findings we could say that the Basic Image of an area may be expressed as a function of two conflicting Indicators, the Economic and the Social. Hence,

Basic Image = φ (Economic Indicator, Social Indicator)

The **Economic Indicator**, which gives a measure of the industrial potential of the area, is a function of three sub indicators. The first sub indicator expresses the region's accessibility to centers of influence and it is referred to as the Location Sub indicator. The second sub indicator expresses the area's land availability and it is referred to as Land Availability Sub indicator. Fnally, the third expresses the region's financial conditions and it is referred to as the Financial Conditions Sub indicator.

The **Social Indicator**, which gives a measure of the social conditions in the area, is a function of three sub indicators. The first sub indicator expresses the region's housing conditions and it is referred to as the Housing Conditions Sub indicator. The second sub indicator expresses the area's environmental conditions and it is referred to as the Environmental Conditions Sub indicator and finally the third expresses the region's social conditions and it is referred to as the Social Conditions Sub indicator.

All the above mentioned sub indicators have been defined and discussed in full detail in some earlier papers (Angelis and Dimaki, 2011). Those sub indicators and their conversion into the respective indicators are given in Table 3.

At this point, it should be mentioned that the growth of a region may be expressed both in absolute or relative terms. In the latter and most interesting case, the development pattern of a given region is compared to that of a hypothetical region, which is referred to as the "typical" region and expresses, as far as possible, an average of the main regions of a similar type to that under study. In this paper, we shall be looking at the relative development patterns of a region. Hence, all the factors affecting its images (Basic and Specific) should be expressed in relative terms, as compared to the corresponding values of the "typical" region.

	$IND_i^1 = \sqrt[3]{\prod_{j=1}^3 SbI_{ij}^1}, \ i = 1, 2,, n$	$IND_i^2 = \sqrt[3]{\prod_{j=1}^3 SbI_{ij}^2}, \ i = 1, 2,, n$			
	whe	ere			
IND_i^1 :	The Economic Indicator of region <i>i</i>	IND_i^2 :	The Social Indicator of region <i>i</i>		
SbI_{i1}^{1} :	The Location Sub indicator of region <i>i</i>	SbI_{i1}^{2} :	The Housing Conditions Sub indicator of region <i>i</i>		
SbI_{i2}^{1} :	The Land Availability Sub indicator of region <i>i</i>	SbI_{i2}^{2} :	The Social Conditions Sub indicator of region <i>i</i>		
SbI_{i3}^{1} :	The Financial Conditions Sub indicator of region <i>i</i>	SbI_{i3}^{2} :	The Environmental Conditions Sub indicator of region <i>i</i>		

Ta	able	3:	The	Economic	: In	dicator	&	the	Social	In	dicator	of	region	i
_		-							~~~~			~-		•

Evidence suggests (Angelis & Dimaki, 2011) that the Basic Image function is nonlinear and that its graph is discontinuous. The general mathematical theory of discontinuous and divergent behaviour from continuous underlying forces is called Catastrophe Theory (Thom, 1975; Zeeman, 1973). The theory is derived from Topology and is based upon some new theorems in the geometry of many dimensions, which classify the ways in which discontinuities may occur, in terns of a few archetypal forms called elementary catastrophes (Poston and Stewart, 1996). Although the underlying mathematics are difficult and the proofs of the theorems involved complicated, the elementary catastrophes themselves are relatively easy to understand and can be used effectively, even by non-experts in the subject (Angelis and Dimopoulou, 1991). Catastrophe theory was developed and popularized in the early 1970's. After a period of criticism, it is now well established and widely applied (Rosser, 2007). Today, the theory is very much alive and numerous nonlinear phenomena that exhibit discontinuous jumps in behavior have been modeled by using the theory, for instance in chemistry (e.g Wales, 2001), in physics (e.g. Aerts, 2003), in psychology (e.g. Van der Mass et al., 2003) in clinical studies (e.g. Smerz and Guastello, 2008) and in the social sciences (e.g. Smith et al., 2005; Dou and Ghose, 2006; Huang, 2008).

Table 4 summarizes the elementary catastrophes in the case where a process is expressed through one behaviour variable depending on one up to four control variables.

In the case of a process, for example, whose behaviour depends on two control variables it is sufficient to know that a theorem exists giving the qualitative shape of a 3-dimensional surface, which shows all possible ways in which a discontinuity in the behaviour may occur. The two control variables are usually referred to as normal and splitting factor respectively and the three dimensional graph as the Cusp Catastrophe Surface.

Number of Behavior Variables	Number of Control Variables	Type of Catastrophe
1	1	Fold
1	2	Cusp
1	3	Swallowtail
1	4	Butterfly

Table 4: Some Elementary Catastrophes

Returning to the present case, it is reminded that the Basic Image of an area has been defined as a function of two conflicting indicators. Hence, according to Catastrophe Theory, the value x, of a region's Basic Image, at each point in time, is given as a solution of the equation:

$$x^3 - bx - a = 0 \tag{1}$$

with,

$$\begin{cases} a = m(\alpha - \alpha_0) + (\beta - \beta_0) \\ b = (\alpha - \alpha_0) - m(\beta - \beta_0) \end{cases} \text{ if } m \le 1 \left(i.e. \ \theta \le \frac{\pi}{2} \right) \qquad \text{and}$$

$$\begin{cases} a = (\alpha - \alpha_0) + (1/m)(\beta - \beta_0) \\ b = (1/m)(\alpha - \alpha_0) - (\beta - \beta_0) \end{cases} \text{ if } m > 1 \left(i.e. \ \theta > \frac{\pi}{2} \right)$$

Equation (1) is referred to as the **Basic Image Equation** and its graph is qualitatively equivalent to the **Cusp Catastrophe Graph** (Figure 1). The variables α , β express the values of the two Indicators, while α_0 , β_0 , express the values of those two Indicators for the "typical" region. The point (α_0 , β_0) corresponds to the vertex of the cusp, while $m = \tan \theta$ represents the slope of the cusp axis and expresses the relative weights attached to each one of the two indicators in defining the Basic Image. For the purposes of this work, the values of all Indicators lie in the interval [0,1], whereas the value of its Basic Image lies in the interval [-1,1]. The value of the "typical" region's Basic Image is 0. Hence, positive Basic Image indicates an attractive region that may be considered as a potential final choice by the various groups of prospective movers. It should be noted that a and b of the Basic Image Equation (equation (1)) coincide with IND_i^1 , IND_i^2 of Table 3.



Figure 1: The Cusp Catastrophe graph in the case of Basic Image

5.2 The case of islands and isolated regions

The Basic Image model as defined in the previous section when applied to islands and isolated regions gives very low values. The reason for that is the low value of the islands' Location Multiplier as a result of their geographic discontinuity. Geographical discontinuity is the basic problem for all islands and there have been many attempts in trying to overcome it by "reducing" geographic discontinuity through the improvement of transportation infrastructure and means, but the problem still remains. Since the measures aiming at "reducing" geographic discontinuity don't seem to have the expected results, another set of measures aiming at "bypassing" geographic discontinuity may be introduced.

The first measure is to develop local business activities, not requiring extensive transportation of physical entities. The effectiveness of this measure, however, is

questionable, especially in the case of small islands where the potential markets for the local products are usually very limited.

A second measure is to move from geographic discontinuity by establishing a communication network where no discontinuity occurs. In this way the regions will be able to attract or develop economic activities involving the production of intangible goods (financial services, computer software) locally, which then may be communicated to customers located elsewhere. The rapid development of Information and Communication Technologies (ICT) over the last years has made this solution possible. ICT networks seem to be able to improve the access to remote regions and reduce the importance of physical distance and proximity. As a result, businesses would have much more freedom in selecting their location (De Castro and Jensen-Butler, 2003). On the other hand, the lack of access to ICT can make existing inequalities even worse. Therefore, one could say that ICT have the ability, if not to eliminate geographical discontinuity, at least to reduce it drastically, by establishing communication continuity.

Finally, a third measure is to develop business activities for which unfavourable location is not necessarily a handicap. Tourism is such an activity, where geographical discontinuity may not be a problem but on the contrary, in certain cases, a strong comparative advantage (Koufodontis *et* al., 2007). However, in order for a region to be able to develop tourism activities, it should have a number of characteristic related to its accessibility, natural attractions, built environment and facilities and services for the visitors. Furthermore, the exclusive dependence of the region's development on a single activity, such as tourism, is vulnerable to external factors and therefore risky (Laws, 1995; Middleton et al., 1998; Hall, 1999; Gunn, 2002).

In the following section we will focus on tourism development prospects as a means of facilitating an island's development.

5.3 Redefining a region's Image for a tourism destination

Based on the analysis we presented so far, the Basic Image for a tourism destination may be redefined and presented as a function of two indicators: *Built Environment and Reachability Indicator* and *Natural Environment Indicator*.

Table 5: Conversion of the variables affecting the Basic Image of a Tourism Destination i

INDICATORS, INDICES AND VARIABLES CONCERNING A TOURISM DESTINATION i								
Indicators of destination <i>i</i>	Sub indicators of destination <i>i</i>	Relative Indices of destination <i>i</i>	Relative Sub indices of destination <i>i</i>	Sub indices of destination <i>i</i>	Variables			
		Relative Tourism Infrastructure Index $\left(RI_n^{I}\right)$	Relative Prices Sub index $\left(RSI_{il_{1}}^{1}\right)$	Prices Sub index $\left(SI_{il_1}^1\right)$	Last Year's Same Period Average Room Rate Current Average Room Rate			
			Relative Quality Sub index	Quality Sub index	Luxury Hotels			
	Tourism Infrastructure		$\left(RSI_{i1_{2}}^{1}\right)$	$\left(SI_{i1_2}^1\right)$	Area			
	(SbI_{i1}^1)		Relative Historical Attractions Sub Index	Historical Attractions Sub	Historic Interest Sites			
			$\left(RSI_{il_{3}}^{1}\right)$	$\left(SI_{il_3}^1\right)$	Area			
			Relative Accommodation Infrastructure Sub Index	Accommodation Infrastructure Sub Index	Tourism Accommodation Establishments			
			$\left(RSI_{i1_{4}}^{1}\right)$	$\left(SI_{i1_{4}}^{1}\right)$	Area			
Built Environment and					Airport Passengers			
Reachability Indicator		Relative General Infrastructure Index (RI_{i2}^{1})		Accessibility Sub Index $\left(SI_{i2_i}^1\right)$	Area			
$\left(IND_{i}^{1}\right)$			Relative Accessibility Sub Index $\left(RSI_{i_{2_{i}}}^{1}\right)$		Maritime Passengers			
	General Infrastructure Sub indicator (SbI_{i2}^{1})				Area			
					Airports			
					Area			
					Ports			
					Area			
					Marines			
					Area			
			Relative Health Infrastructure Sub Index	Health Infrastructure Sub Index $\left(SI_{12}^{1}\right)$	Hospitals			
					Area			
			$\left(RSI_{i2_{2}}^{1}\right)$		Doctors			
					Population			
			Relative Overcrowded Destination Sub Index	Overcrowded Destination Sub	Tourists			
Natural Environment Indicator	Pollution Sub Indicator (SbI_{i1}^2)	Relative Pollution Index	$\left(RSI_{il_{1}}^{2}\right)$	Index $\left(SI_{il_1}^2\right)$	Area			
		$\left(RI_{i1}^2\right)$	Relative Unpolluted	Unpolluted Environment	Blue Flags			
			Environment Sub Index $\left(RSI_{il_2}^2\right)$	Sub Index $\left(SI_{il_2}^2\right)$	Coastline Length			
$\left(IND_i^2\right)$			Relative Nature Sub Index	Nature Sub Index	Protected Area for Biodiversity			
	Natural Scenery Sub Indicator (SbI^2)	Relative Natural Scenery Index	$\left(RSI_{i2_{1}}^{2}\right)$	$\left(SI_{i2_1}^2\right)$	Area			
			Relative Beauty of	Beauty of Scenery	Coastline Length			
	(~~~~i2)	(RI_{i2}^2)	$\frac{\text{Sub Index}}{\left(RSI_{i2_2}^2\right)}$	$\frac{\text{Sub Index}}{\left(SI_{i2_2}^2\right)}$	Area			

The first sub-indicator expresses the quality of destination's infrastructure, both general and tourism, as well as the prices and the value for money of the servicers offered. The second sub-indicator expresses the quality of natural environment scenery and the level of pollution at a destination.

A clear overview of the variables affecting a tourism destination's Basic Image and their conversion through sub indices, relative sub indices, relative indices and sub indicators into indicators and finally into the tourism destination Basic Image, is given in Table 5. All the subindicators presented in Table 5 are defined below:

- Tourism Infrastructure Sub-indicator: this sub-indicator is a non linear transformation of the relative Tourism Infrastructure Index, which covers accommodation availability (number of hotels, rooms, hostels per km²) and quality (number of luxurious hotels, i.e. 4* and 5* per km²), a number of sites with historical interests (number of museums, archeological sites and monuments per km²) and the prices charged (last year's average room rate compared to current average room rate) for the services offered.
- General Infrastructure Sub-indicator: this sub-indicator is a non linear transformation of the relative General Infrastructure Index, which encompasses the accessibility conditions (number of airport and maritime passengers and number of airports, ports and marines per km²) and the level of the destination's health infrastructure (number of hospitals per km² and doctors per habitant).
- Pollution Sub-indicator: this sub-indicator is a non linear transformation of the relative General Infrastructure Index, which quantifies the level of tourism overcrowding (number of tourists per km²) and the proportion of areas left unpolluted (number of blue flags in beaches per km of coastline).
- Natural Scenery sub-indicator: thIs sub-indicator is a non linear transformation of the relative General Infrastructure Index, which measures the proximity to the nature (protected areas of biodiversity per km²) combined with the natural beauty of the scenery (the proportion of coastline to total geographical area).

The Tourism Destination Basic Image function, as already defined, may prove a very useful managerial tool for both local authorities and business firms. The local authorities may use the Basic Image in order to monitor the development of the various destinations, get an early warning of any potential problems they may face and take the necessary measures to prevent them. The business firms on the other hand, may use the Tourism Destination Basic Image in

order to follow the development of various destinations, assess their potential for future growth and take the proper location and investment decisions.

6. Application of the Proposed Model

The methodology presented in the previous section is now used for the estimation of the Basic Image of two tourism destinations. Canary Islands in Spain and Crete in Greece.

Canary Islands are a Spanish archipelago located just off the northwest coast of mainland Africa. The Canary Islands constitute a Spanish autonomous community comprising seven islands (Gran Canaria, Tenerife, Fuerteventura, Lanzarote, La Palma, La Gomera, El Hierro) and six small islets. They cover a total geographical area of 7.446 square kilometers and their coastline length equals to 1.491 kilometers. Canary Islands' capital is shared by the cities of Santa Cruz de Tenerife and Las Palmas de Gran Canaria. Their climate is tropical with high temperatures and heavy rain falls. Their economy is mainly based on 32% of GDP tourism. which equals almost (available online to at http://www.turismodecanarias.com/islas-canarias-españa).

Crete is a Greek island of the Aegean Sea located almost 160 km south of Greek mainland and is divided in four prefectures: Heraklion, Chania, Lasithi and Rethymno. The city of Heraklion is the capital of the island. With a geographical area of 8.261 square km and 1.046 km of coastline, Crete is the biggest island in Greece and the fifth biggest in the whole Mediterranean Sea. The climate is considered to be Mediterranean, but with higher temperatures and humidity levels due to Crete's proximity to South Africa. The island's economy is primarily based on agriculture, despite its intense tourism sector development (available online at http://www.visitgreece.gr/portal/site/eot/).

For those two destinations, secondary data had been collected concerning the components of the variables (such as area, population, hotels, luxury hotels etc) and they have been used in order to measure their Basic Images (available online at http://www.ine.es/en/inebmenu/mnu_hosteleria_en.htm, http://www.statistics.gr/portal/page/portal/ESYE) and http://www.statistics/search_database.

The value of their Basic Images for the year 2008, are presented in the Table 6. In the same table, the values of two indicators, from which the Basic Image is derived, are also shown.

As it can be seen, Crete and Canary Islands are two very attractive destinations both for tourists and tour operators/travel agents, since their Basic Image value is very close to 1. Moreover, both destinations show high scores in both Indicators, i.e. the Built Environment and Reachability Indicator and the Natural Environment Indicator. The slightly higher Image of Crete derives mainly from the fact that Crete has a much better Natural Environment Indicator that Canary Islands, as a result of its advantage in coastline length respective to total area and its superiority in biodiversity. This could mean that tourists and tour operators would choose Crete primarily for its unique natural environment.

	BUILT ENVIRONMENT AND REACHABILITY INDICATOR	NATURAL ENVIRONMENT INDICATOR	IMAGE OF THE TOURISM DESTINATION
CRETE	0.97157	0.70009	0.97
CANARY ISLANDS	0.93341	0.50491	0.94

Table 6: The Image of Crete and Canary Islands

By taking a closer look at the results and comparing the other Indicator of Basic Image, i.e. Built Environment and Reachability Indicator, for the two destinations, we can see that the difference between the two destinations is smaller than in the case of Natural Environment. More precisely, Crete has better Tourism Infrastructure Index, while Canary Islands have better General Infrastructure Index. This indicates that Crete is more attractive as a tourism destination for its hotels and tourist services, while Canary Islands are more attractive referring to their general infrastructure, such as the health system and the availability of hospitals.

Finally, the implementation of Tourism Destination Image on Crete and Canary Islands has indicated that both destinations are very attractive as a place of visit (for tourists) and as a product of promotion (tour operators/travel agents). Going one step further, Crete's main advantages are its beautiful nature and its well developed accommodation infrastructure. On the other hand, Canary Islands' main advantage is their higher accessibility.

7. Conclusions and Suggestions for Further Research

In earlier studies the concept of a region's Basic Image has been defined as the function of those common factors that attract both business units and the suitable workforce in this region. In those studies - that have been held in the industry field - location was considered one of the most crucial factors of a region's attractiveness and therefore of its growth and decline. A solution for the development of isolated regions would be the development of

alternative activities, such as tourism, which are not seriously influenced by geographical discontinuity.

At the same time, other research studies in the field of tourism have tried to define the Image of a Tourism Destination as the sum of beliefs, ideas and impressions that a tourist holds of a destination. The majority of those researches has focused on the factors attracting tourist on a tourism destination and almost have ignored the factors that would pull a tour operator/travel agent to promote a tourism destination.

This paper has presented a pilot research in order to bridge the gap between the demand and the supply side in the concept of the Image of a Tourism Destination. More precisely, the present pilot research proposed the Basic Image function for a Tourism Destination, in order to quantify its attractiveness by testing the most suitable determinants with a primary quantitative research in a pilot Greek sample. Furthermore, it suggested a Basic Image function of Tourism Destination as it derived from the Greek pilot sample and which could be generalized to population given the fact that a larger and multinational sample will be used. At the last section the paper implemented the Basic Image function in two island destinations, Crete in Greece and Canary Islands in Spain, quantified the Images of those destinations and compared the results.

Its main scientific contribution is the fact that it manages to revise and to quantify the concept of the **Image of a Tourism Destination**, taking into account both the tourism demand (i.e. tourists) and the supply (i.e. travel agents/tour operators) view and creating a function defined by the common most important factors for both sides. This joined model could be very useful for every region that wishes to become a successful Tourism Destination, since it can be a way of tracking its advantages and disadvantages in an effort to attract the interest of both tourists and tour operators/travel agents. If used correctly and proactively, the proposed revised Image of Tourism Destination could be the future path to development for every isolated region.

An area of further research could be to test the factors affecting the Image of the Tourism Destination for both demand and supply side, by selecting a larger and representative sample or by using different methodology i.e. focus groups instead of questionnaire. Comparing the results of the two approaches will be interesting. Another area of further research would be to revise the Image of a Tourism Destination for alternative types of tourism such as conference tourism, medical tourism, agricultural tourism etc.

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