

Crete: Endowed by Nature, Privileged by Geography, Threatened by Tourism?

Helen Briassoulis

Department of Geography, University of the Aegean, Lesvos, Greece

Crete, the fifth largest island in the Mediterranean and the largest Greek island, is a highly heterogeneous region which has experienced rapid tourism development since the mid- to late 1960s when the growth in international tourism and broader socio-economic changes disturbed past equilibrium patterns. Tourism has become a leading economic sector but has also caused several unwanted economic, environmental and sociocultural impacts and, currently, it appears to threaten the island's sustainability. The principal goal of official development plans is the achievement of sustainable development and the promotion of tourism in the island. To make realistic suggestions for the transition to sustainability it is essential, however, to identify the two-way relationship between tourism and the context within which it develops. The paper offers a broad-brush, integrated analysis of tourism and local development in Crete in three time periods since the late 1960s. It presents its impacts, evaluates them with a consistent set of sustainability criteria and probes into the essential requirements for securing the sustainability of development of the island and of its tourist sector. It concludes with a brief account of theoretical issues related to tourism development in heterogeneous destinations.

Introduction

Crete, the fifth largest island in the Mediterranean and the largest Greek island, has experienced rapid tourism development since the mid- to late-1960s. Tourism has become a leading economic sector and its promotion features prominently in recent official development plans for the island whose overarching goal is the achievement of sustainable development (Regional Operational Plan (ROP), 2001). At the same time, tourism is blamed as one of the culprits of the recent serious environmental and socioeconomic problems that threaten the island's sustainability. Advocates of tourism development in Crete do not usually question whether this is congruent with the goal of sustainability, perceiving tourism as a development option that is easy to achieve (while this is not always the case) and assuming that development will occur as conceived. Frequently, particular interest groups promote such claims that are rarely (if at all) based on integrated analyses of local/regional and tourism development or employ a comprehensive set of sustainability criteria to evaluate future development options.

Crete represents an interesting case of a large, heterogeneous island tourist destination, located at the periphery of a country that is at an intermediate level of development. It has a historically strong and regionally diverse economic base, a strategic position, abundant natural and cultural resources, a spatio-temporally differentiated pattern of tourism development and a unique value system. The highs of tourism growth between mid-1980s and mid-1990s coincided with

broader socioeconomic developments that boosted its economy and tourism – migration and the influx of European Union (EU) funds to the island being central among them. The challenge in the analysis of tourism development in Crete is to single out, from among a myriad of other factors, the influence of tourism on the island's past, present and future development as well as to assess the influence of these other factors on tourism; in other words, to identify the two-way relationship between tourism and the context within which it develops. Towards this purpose, it is necessary to adopt an integrated methodological framework and to employ a comprehensive set of sustainability criteria. The present paper makes a modest attempt towards this aim as well as suggesting some essential requirements for securing the sustainability of development of the island and its tourist sector.

The next section briefly reviews the literature, while the third outlines the methodological framework adopted. The fourth section presents tourism development in Crete, its impacts and an appraisal of the sustainability of local and tourism development in three time periods. The fifth section suggests critical requirements to secure the sustainable development of the island and its tourist sector. A brief account of the theoretical issues related to tourism development in heterogeneous destinations concludes the paper.

Brief Review of the Literature

Several theoretical models of tourism development exist, most of which employ the notion of stages in the lifecycle of destinations (Butler, 1980; Forster, 1964; Greenwood, 1972; Miossec, 1977; Noronha, 1979). Butler's (1980) remains the most influential and universal descriptive conceptual device among them, although its applications have revealed several limitations. Reviews of lifecycle models, in general, and Butler's model, in particular, suggest that, although most areas develop in a cyclic and stage-related manner (van den Berg, 1987; van der Borg, 1991), a general lifecycle theory cannot apply to all areas and spatial scales (Loukissas, 1982; Nash, 1977). Tourism development may skip certain stages in some areas (de Kadt, 1979), while elements of several stages may exist at a destination in any given period of time (Hovinen, 2002). More generally, instead of being linear, ordered and deterministic, tourism development is a non-linear, complex and non-deterministic process (McKercher, 1999; Russell & Faulkner, 1999). Because the tourist product is 'an amalgam of different activities' (Lundtorp & Wanhill, 2001: 962), most destinations have multidimensional products each exhibiting their own lifecycle (Agarwal, 1994, cited in Hovinen, 2002); particularly, heterogeneous and special destinations such as heritage cities (Russo, 2002). Moreover, planning regulations, public investment, partnerships and financial incentives are important influences on local and tourism development (Stough & Feldman, 1982, cited in Lundtorp & Wanhill, 2001: 949).

Lifecycle models are supply-oriented, focusing on the tourist product, whereas tourist demand is also critical particularly because it is not uniform and fixed (Lundtorp & Wanhill, 2001). Demand fluctuates with changes in tourist profiles, market evolution, political and business decisions, the interests of international oligopolies and tourism entrepreneurs, competition from other destinations and in the spatial organisation of production (Debbage, 1990;

Haywood, 1991, both cited in Lundtorp & Wanhill, 2001:949; Russell & Faulkner, 1999; van der Borg, 1991).

The identification of lifecycle stages and their turning points using the number of tourists and available infrastructure only is not unambiguous especially in heterogeneous destinations. The broader geographical context, unit of analysis, tourism policy of the host country, local socioeconomic structure, quantity and quality of environmental and cultural resources, informal activities, migration and long-term structural change also influence the balance between tourist demand and supply and, consequently, the turning points between stages (Agarwal, 1997, 2002; Cooper & Jackson, 1989; McKercher, 1999; Russell & Faulkner, 1999; Tsartas *et al.*, 1995). Because most of these internal and external factors remain unspecified and are revealed *post facto* (Agarwal, 2002; Lundtorp & Wanhill, 2001), the usefulness of lifecycle models for analysis, explanation and forecasting in real world situations is limited (Hovinen, 2002).

Finally, most such models are tourism-centric, focusing on tourism and disregarding the possibility that other development options and functional shifts away from tourism are not necessarily bad; instead, they may be more suitable for the sustainable development of a destination (Agarwal, 2002: 27; Collins, 1999; Hunter, 1995). In fact, the quest for sustainable tourism development, that has become a dominant theme in the tourism literature since the early 1990s necessitates a holistic view of a destination within its broader socioeconomic, political and cultural context.

The discourse on sustainable tourism development has moved gradually from a narrow focus on tourism to a broader view of a destination's state of development, where tourism is one of the sectors making up its economic structure. Despite diverse conceptions and interpretations by different stakeholder groups, a general consensus seems to exist on what constitutes sustainable tourism development and what are the essential requirements to achieve it. These include the economic welfare of host communities, conservative use of natural and human resources, intra- and intergenerational equity, local self-reliance (low dependence on external inputs and assistance), local control and participation in development and tourism decision-making, sectoral coordination and integration, tourist satisfaction and balanced achievement of social, economic and environmental goals (Ahn *et al.*, 2002; Bramwell & Lane, 1993; Butler, 1991; Eber, 1992; Hunter, 1995, 1997; Collins, 1999; Ko, 2001; Mowforth & Munt, 1998; WTO, 1996). These features should characterise all but the stagnation stage of tourism development; however, their achievement and maintenance is most critical for mature destinations.

The Methodological Framework of the Study

This study adopts a 'stages of development' framework to examine tourism in an integrated and holistic fashion within an area's particular and unique socioeconomic development trajectory (Massey, 1984; cf. Agarwal, 2002). It focuses on strategic issues related to sustainable development; namely, the interaction between demand and supply, internal and external factors impinging on development, the role of foreign and local, tourist and other, formal and informal actors, and the state, and the use of local natural and cultural resources.

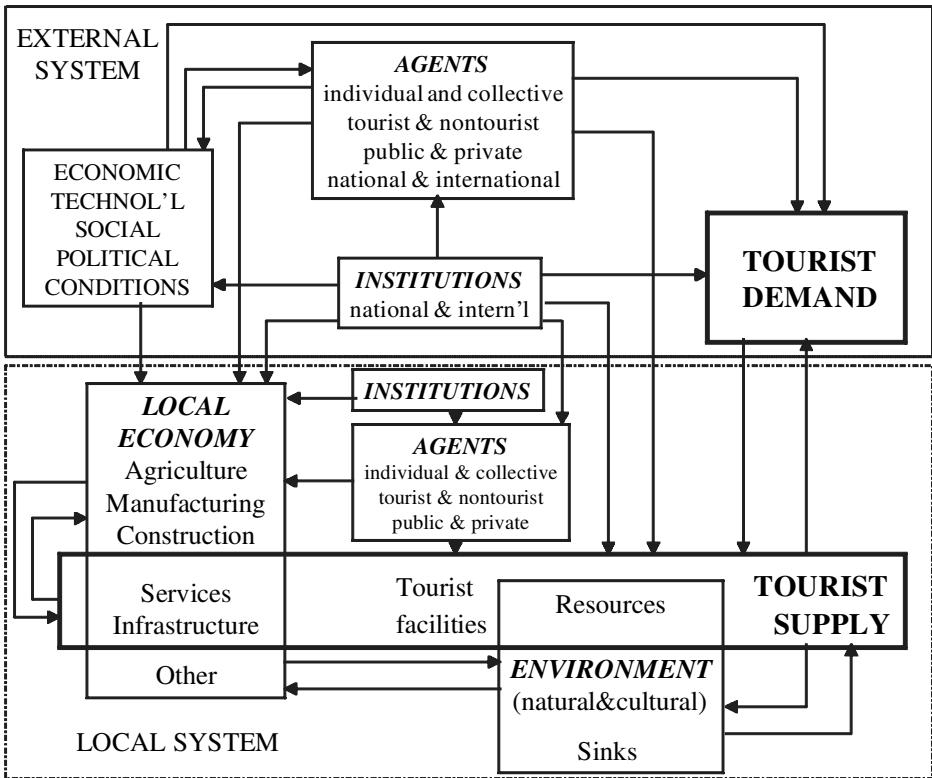


Figure 1 A scheme for the analysis of tourism development

Crete comprises the local system to be studied, and this is embedded within a broader spatial hierarchy – the external system, which includes Greece, the European Union and other countries. The study period – late 1960s to the present – is divided into time segments. Within each segment, the local and the external system and their interactions are analysed using the scheme shown in Figure 1, with the impacts being identified and the sustainability of the local system being evaluated using selected criteria.

Figure 1 is a simplified representation of the interaction between tourist demand and supply within the broader socio-spatial system, and it depicts only those components on which the present analysis focuses. The *local system* comprises tourist supply, the economy, the environment, institutions, and agents who are vectors of its sociocultural traits. *Tourist supply* intersects with the local economy and the environment because it comprises, in addition to tourist facilities, local facilities, infrastructure and the natural and manmade resources of host areas. The *local economy* comprises all economic sectors and activities. The *environment* comprises the natural, manmade and socio-cultural resources of the destination that provide inputs and sink services to tourism and the economy. The *agents* are individuals and public or private collective bodies engaging in tourist and non-tourist activities. Their decisions concerning the use of resources (capital, labour, land, natural resources), are influenced by formal and informal

Table 1 Criteria of sustainable local (and tourism) development

| <i>Criterion</i> | <i>Operational measure</i> |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Economic welfare | Economic conditions – GDP, employment, unemployment rate (total, by sector, tourism) |
| Sectoral coordination and integration | Integration among sectors Complementarities between sectors |
| Economic diversification | Relative shares of primary, secondary and tertiary sectors Economic monocultures |
| State of natural and human resources (conservative use) | Environmental conditions and impacts (pollution and resource shortages) Social and cultural conditions and impacts Infrastructure – availability and conditions |
| Intra- and intergenerational equity | Regional inequalities Changes in inequalities over time |
| Local self-reliance | Dependence on external inputs and assistance Local and non-local investment Public and private investment |
| Local control and participation in development and tourism decision making | Participation of local and foreign capital Participation of locals in decision making |
| Balance between tourism demand and supply – total and spatial | Degree to which tourism supply (accommodation) meets tourism demand (arrivals) Degree of spatial concentration |
| Tourist satisfaction | Assessment of tourist satisfaction (personal/ subjective, survey results, interviews) |
| Balanced achievement of economic, social and environmental objectives | Comparative and combined assessment of relative valuation of economic, social and environmental conditions |

local *institutions* (land tenure and ownership being particularly important), and they determine tourist supply, local economic structure and their relationships.

The *external system* comprises tourist demand, and the prevailing supra-local economic, technological, social and political conditions, institutions and agents. *Tourist demand* is influenced by all the other three components and it interacts with tourist supply. The *prevailing conditions* (nationally and internationally), with competition from other destinations figuring importantly among them, are influenced by national and international, and formal and informal *institutions* and they influence tourist demand, the local system and various types of *agents*. The latter are national and international, public and private, individual or collective entities – national and foreign investors and tour operators, national policy-makers, etc. – that control resources and, thus, influence the functioning of the local and external economic system as well as tourist supply and demand. The strength of the relationships within and between the components of the local

and the external systems varies by period and it influences accordingly the sustainability of local (including tourism) development.

Several of the variables use to describe the local and the external system and the impacts of development serve also as operational expressions of the (aggregate) sustainability criteria adopted (Table 1). These draw on the features of sustainable local (and tourism) development presented previously.

The present application of the methodological framework was constrained by data availability, especially for past time periods. Official, published data were used where possible (Katochianou *et al.*, 1997; (National Statistical Service of Greece (NSSG)), 2001; Regional Institute on Tourism, 1998; Regional Operational Plan, 2001; Tourism and Economy, 2001, 2002). However, the most crucial information needed for a thorough, informed analysis was obtained from interviews with key informants, participant observation and the author's personal knowledge and experience.

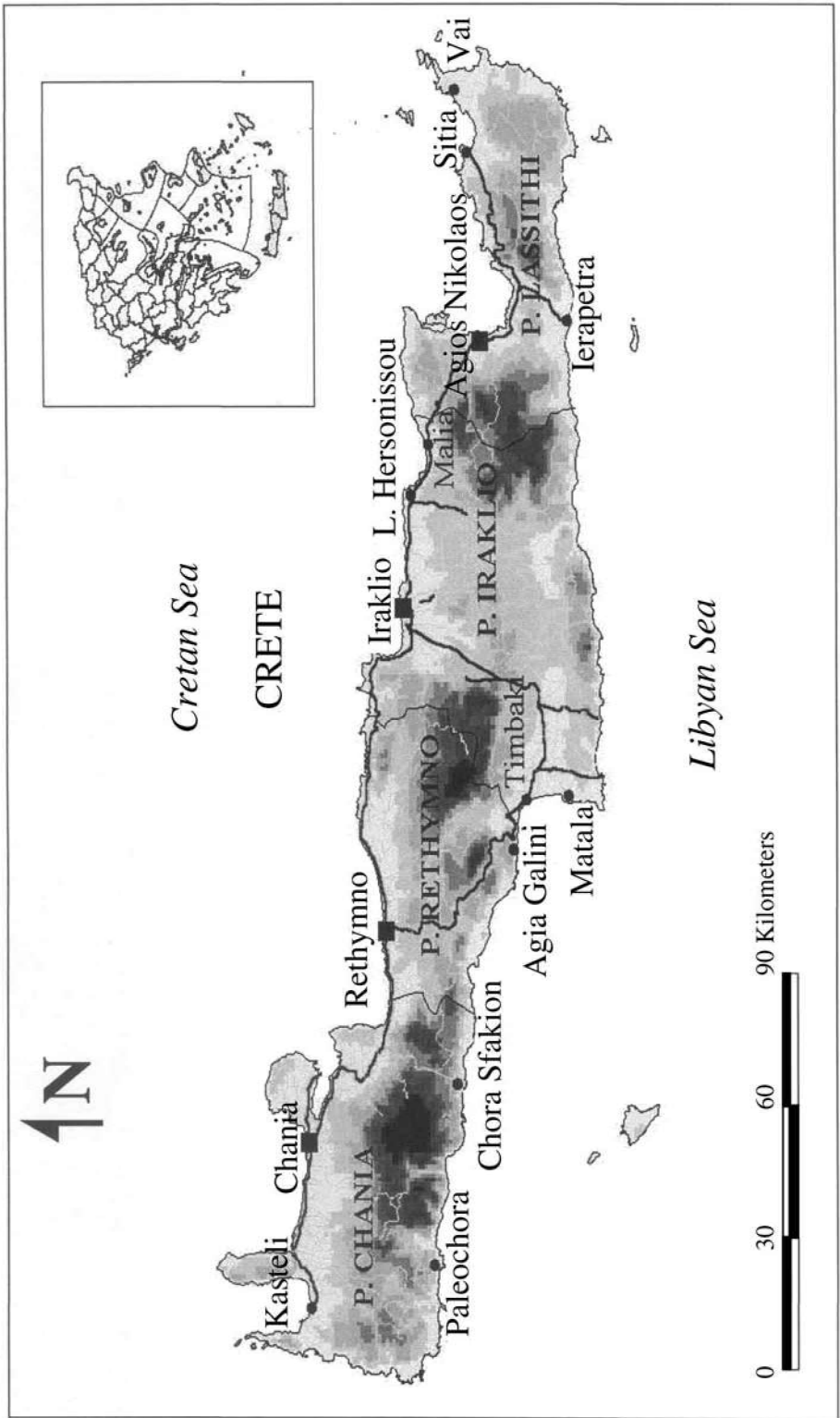
Tourism Development in Crete Since the Late 1960s

Crete, the southernmost island of Greece, has an area of 8335 km². It is predominantly mountainous, three-fifths of its area lying 200m above sea level. A mountain range extends from east to west with peaks above 2000m. Crete is divided into four administrative departments (prefectures) (Figure 2). Its population grew by 31.65% between 1971 and 2001. The prefectures of Irakleion and Rethymnon exhibited the highest growth rates, 40.36% and 34.12% respectively. Population change resulted from natural increase and the reversal of outmigration trends that occurred in the 1950s and 1960s. Internal migration contributed to urbanisation of its major towns. Migrants from the Middle East, Balkan and Eastern European countries have also settled in the island.

The urban-rural composition of its population changed from 55.76% rural and 44.24% semi-urban and urban in 1971 to 46.2% rural and 53.8% semi-urban and urban in 1991. The prefecture of Rethymnon remained the most rural of all four prefectures throughout the period (70.23% in 1971, 52.17% in 1991). By the end of the 1990s, inequalities in the urban-rural composition among the four prefectures had diminished.

Crete is renowned for its fabulous natural beauty, diversity of landscape, 1040km-long coastline, mild climate and numerous cultural resources (Minoan palaces and other archaeological and historical monuments and sites) that constitute its principal tourist resources.

The study period is divided into three time segments: (a) mid/late-1960s to mid-1970s, (b) mid-1970s to mid-1980s and (c) mid-1980s to late 1990s/2002 (present) for the following reasons. Tourism development proper started in the mid- to late-1960s in Crete, while the mid-1970s mark a period of accelerating tourism growth and, at the same time, a period of important political changes in Greece. In the mid-1980s, as a result of Greece's accession to the European Union in 1981, significant amounts of funds started flowing to the island that pushed its economy forward. The late 1990s to the present mark a period of mounting problems in tourism (and more generally) and the generation of several initiatives to check the negative repercussions of these trends. The following sections analyse



local and tourism development in Crete at an aggregate and selective level of detail due to space and data limitations.

Mid/late-1960s to mid-1970s period

Tourist demand and the external system

This first period coincides with a period of dictatorship (1967–74) in Greece and the gradual emergence of the country as a popular tourist destination, mostly for upper-income tourists. Tourists were attracted to Greek destinations renowned for their natural and cultural attractions (Athens, Delphi, Kerkyra, Rodos) that possessed adequate and developed tourist facilities, with Greek tourism policy mostly targeting traditional destinations and providing strong economic incentives for private investment. In 1972, international tourist arrivals by charter to Crete were only 4.1% of the national total. In 1975, overnight stays were 7.95% of the national total, 81.1% of which were in the prefectures of Irakleion and Lassithi that possessed developed tourist accommodation and infrastructure. Upper- to middle-income tourists prevailed.

Tourism development and the local system

Tourism development in Crete started from the east, as reflected in the 1971 distribution of hotel beds and hotel beds per 1000 inhabitants among the four prefectures. It was based on local capital that took advantage of state-provided economic incentives and was invested in large, luxury hotels in Agios Nikolaos and Irakleion, the capitals of the respective prefectures (Papadaki-Tzedaki, 1999). These localities were basically at the involvement stage and they formed the nuclei of future, mostly mass, tourism development along the northern coast. The rest of the island was entering the involvement stage.

In 1970, Crete's Gross Domestic Product (GDP) was 10.550 million Drs (1970 prices), 4.09% of the national GDP and unemployment was only 1.86% (3.135% in Greece). Most of the 182,644 persons employed in 1971 were concentrated in the primary sector, especially in the prefectures of Rethymnon and Lassithi. The main agricultural products of the island were olive oil, grapes and dairy products. In the 1970s, greenhouse cultivation was introduced in southeast Crete (Ierapetra), and this gradually became very competitive. Trade was well developed and large, locally owned shipping and sea transport companies controlled a large share of the market. The hinterland was relatively undeveloped.

Direct employment in tourism totalled 4206 persons in 1971, 5% of the national total and 10.7% of Crete's tertiary sector employment (national average 8.2%). The island's development was based on local (and national) capital. The most important economic actors of this period were hotel, trade and shipping company owners.

In this first period, Crete did not experience serious environmental problems such as pollution and resource shortages. Culturally, it remained, overall, a traditional society. In sum, economic welfare was high and the economy was relatively well integrated and diverse. Social and environmental conditions were satisfactory and below their critical thresholds. Available infrastructure needed improvement. Regional inequalities did exist, with most development concentrated in the three urban centres of the island. Self-reliance and local control of development were significant and satisfactory. Tourism development was low,

highly concentrated spatially and supply was meeting demand satisfactorily. Overall, development was on a sustainable trajectory as economic, social and environmental conditions were in relative balance.

Mid-1970s to mid-1980s period

Tourist demand and the external system

In 1974 democracy was restored and in 1981 Greece acceded to the EU. A period of significant financial flows for development purposes commenced. In the meantime, Greece had become a popular tourist destination in the Mediterranean. Although tourism continued to develop in traditional destinations, new ones emerged including Crete. Foreign tour operators substantially influenced tourist demand. In 1981, 452,375 international tourists arrived by charter in Crete, representing 20.7% of the national total. Their average annual growth rate was 32.5% between 1972 and 1982. Total tourist arrivals reached 953,898. Overnight stays in 1981 increased three-fold over 1975 reaching 6,042,583, 14.72% of the country's total. Their highest concentrations were still in Irakleion and Lassithi but their growth was highest in Rethymnon (517.3% between 1975 and 1981!). Middle- to lower-income tourists prevailed.

Tourism development and the local system

Tourist accommodation units attained their highest growth during this period. By 1981 the number of hotel beds and hotel beds per 1000 inhabitants had almost tripled in the island. Tourism development spread to the west. The most dramatic increase occurred in the prefecture of Rethymnon, based significantly on local capital¹ (Papadaki-Tzedaki, 1999), where hotel beds increased more than six-fold and hotel beds per 1000 inhabitants grew ten-fold. In the prefecture of Irakleion hotel beds more than tripled and hotel beds per 1000 inhabitants grew five-fold. The number of unregistered rented rooms also increased considerably. Mass tourism prevailed – mainly along the northern axis and spreading around the major towns of the island – and this was operated primarily by small- and medium-sized family enterprises. Miscellaneous tourist services also developed markedly (car rentals, travel agencies, etc.). Overall, eastern Crete was at the development stage, while western Crete was at the involvement and development stages.

The Cretan economy kept growing. In 1981 the island's GDP was 17,510 million Drs (1970 prices), 4.30% of the national GDP, and unemployment 2.389% (4.382% national average). Employment grew by 3.23% over 1971 to 188,560 persons. Primary sector employment decreased while tertiary sector employment increased. The island retained its rural character, however, especially in the prefectures of Rethymnon and Lassithi, continuing to produce its traditional agricultural products. Greenhouse cultivation spread further, becoming an important export sector. Agriculture benefited from EU subsidies but these were frequently diverted to other uses, such as the construction of tourist facilities and purchase of urban apartments. Trade continued to grow and local shipping and sea transport companies continued to control a large share of the market. The integration of tourism with other economic sectors was very weak and place-dependent.

Direct employment in tourism totalled 9607 persons in 1981 – 7.67% of the national total and 16.1% of Crete's tertiary sector employment (9.2% national average). The tourist product amounted to 8844 million Drs (current prices). The employment opportunities in tourism contributed to the reversal of outmigration trends, especially from the rural hinterland, and to the repatriation of locals. New economic and political migrants augmented the informal labour pool, and they were employed primarily in tourism, agriculture and construction.

In 1980 gross fixed private and public capital investment in the island were 4.47% and 3.61% of the national total respectively. Generous EU funding² contributed crucially to the provision of physical and social infrastructure (ports, marinas, highways, health centres, business support, training, etc.).

In the 1980s the University of Crete (in Irakleion and Rethymnon), the Technical University of Chania and research centres of national and international standing were established. Together with tourism, they induced residential development to meet the housing needs of students and new employees. Informally, student housing was rented to tourists in the summer, thereby securing year-round revenues for the owners.

In addition to EU funding, national urban, regional and tourism policy developments – from the early 1980s onwards – greatly influenced the distribution, quantity and quality of local and tourism development. Regional development laws, especially Law 1262/82, provided economic incentives for the establishment of businesses, prioritising peripheral and underdeveloped regions of the country. New tourist units were created very fast. Crete received 21.8% of tourism-related investment and this generated 30,499 beds (23.2% of the national total).

To control haphazard urban and ex-urban development, Law 1337/83, was passed that required master plans for all urban areas. Its special land-use planning instrument – Zones of Residential Control – was used to draft tourism development plans (Kalokardou-Krantonelli, 1995). However, local resistance and reaction postponed and blocked the ratification of most master plans and, in consequence, haphazard urban and tourism growth continued together with their negative side effects.

The combination of development laws, EU-funding, abuse, violation and lack of enforcement and implementation of land-use planning and environmental legislation opened many areas to (frequently illegal) unbridled urban, ex-urban, tourism and tourism-induced development. A host of negative impacts resulted, concentrated on the most developed northern axis. Environmental and physical impacts included sea, coastal and water pollution; water shortages during peak seasons; water conflicts for domestic, agricultural and tourist uses; electricity shortages; uncontrolled solid waste disposal; ecosystem destruction; urban and rural landscape degradation; congestion; noise; land fragmentation; development of the rural–urban fringe; high building densities; congestion and overuse of infrastructure; and proliferation of small tourist units.

Socioeconomic impacts included the development of illegal hotellerie; the loss of high productivity agricultural land, the growth of a tourism monoculture (and, consequently, an increasing dependence on volatile tourist markets) and the ineffectiveness of official, rational development efforts. Tourism intensified regional inequalities, notably those between north and south, coast and

hinterland, urban centres and the rest of the island, because tourism was concentrated in places where it developed strong complementarities with agriculture, universities and infrastructure. Serious changes in traditional values and attitudes also made their way into local society, in particular, the unquestioning acceptance of tourism and development as panaceas for economic ills.

In summary, in this second period, there was further growth in economic welfare. Although the island's economy remained relatively well integrated and sectoral complementarities developed, tourism was weakly integrated in the local economy. The environmental condition of coastal areas deteriorated and the sociocultural situation generally changed for the worse. The availability of infrastructure and its conditions improved. Regional inequalities diminished, although not considerably. Tourism and non-tourism development depended significantly on non-local resources and influences, and this weakened self-reliance and local control of development. While tourism development intensified, its degree of spatial concentration diminished but it was still significant. A rising tourist demand was being met satisfactorily by a rapidly growing supply. Tourist satisfaction dropped. Overall, development started to deviate from its sustainable trajectory as there was an emerging relative imbalance between the improved economic conditions, and the deteriorating environmental and sociocultural conditions.

Mid-1980s to late 1990s/2002 (present) period

Tourist demand and the external system

After the mid-1980s, Crete had become an established tourist destination. Foreign tour operators controlled the largest part of tourist demand. Competition from other Mediterranean destinations frequently threatened tourist flows to Greece and to Crete. Tourism in Greece spread over more destinations. Between 1981 and 2001, international tourist arrivals by charter to Crete grew by 9.08 % annually, reaching 2,575,010 in 2001, this being about 30% of the national total. By 1994 total tourist arrivals were 50% above their 1981 levels, reaching 1,423,987. Overnight stays by 1990 had increased almost five-fold over 1975, reaching 9,709,937, which was 19.86% of the country's total. In 2001 they rose by 30% to 12,579,897. In Irakleion they equalled the sum of stays in the other three prefectures. However, the highest growth between 1981 and 2001 occurred in the prefectures of Chania and Rethymnon. The occupancy rate of the registered tourist accommodation units in late 1990s/2002 was 75–80 % (Tourism and Economy 2001, 2002), a high figure as many tourists stayed in unregistered units.

Tourism development and the local system

The supply of tourist accommodation units kept growing, although at a slower rate. By the late 1990s, the number of hotel beds and hotel beds per 1000 inhabitants had almost doubled over 1981. Tourism development intensified in the west with the prefectures of Rethymnon and Chania experiencing the most dramatic increase as hotel beds and hotel beds per 1000 inhabitants grew three-fold. In the prefecture of Irakleion the corresponding magnitudes doubled. Mass tourism still prevailed, although alternative and more diverse types and quality classes of accommodation units were being offered to satisfy shifting tourist preferences toward individual and/or family-based holidays.

Greek and foreign entrepreneurs erected luxurious tourist complexes and now control significant proportions of the tourist accommodation and services. The behaviour of local tourism-related capital has become more variegated. In terms of number of firms, family-based businesses dominate but some of them have been transformed into corporate-based businesses that have extended their operations beyond the island. Several others have succumbed to globalisation and competition and have transferred their management to foreign multinationals. It is unofficially estimated that foreign tour operators control 70% of the available tourist beds through various arrangements. Unregistered tourist accommodation has increased considerably. Diverse recreation facilities, such as golf courses, marinas, ports, water parks and miscellaneous tourist services are now available.

The island as a whole is approaching the consolidation stage but individual localities are at different stages of development. The northern axis is in the growth (west) and consolidation (east) stages, with pockets at the stagnation stage in the overdeveloped areas. The northern axis is congested, concentrating four-fifths of total tourist activity and most hotel and transport infrastructure, producing 79% of the island's tourism-related GDP and serving 74% of the population of the region (ROP, 2001). By contrast, the southern axis is in the involvement and development stages, with the acceleration of tourism development there being facilitated by the construction of new infrastructure. The hinterland remains largely undeveloped touristically.

The Cretan economy has kept growing. The 1991 GDP was 3.48% up from 1981 at 23,610 million Drs (1970 prices), 4.77% of the national GDP and unemployment was 5.545% (8.085% national average). In 1997 unemployment dropped to 4.6%, well below the national average (10.3%). In 1996 Crete produced 5.7% of the national GDP, with 31% in the primary sector (15% country), 13% in the secondary sector (25% country) and 56% in the tertiary sector (60% country). Irakleion produced 51.1% of the island's GDP, Chania 23.4%, Lassithi 13.7% and Rethymno 11.8% (ROP, 2001).

Employment grew by 5.79% to 199,475 persons between 1981 and 1991. Primary sector employment decreased. Lassithi and Rethymnon retained the highest shares of agricultural sector employment. Tertiary sector employment increased dramatically due to tourism and public sector growth (local and regional administration, universities, army, etc.) and the sector took the lead in the economy (50% of total employment).

Direct (official) employment in tourism totalled 17,068 persons in 1991 – 9.49% of the national total. Its contribution to the island's tertiary sector employment in 1990 further improved (17.1%) while the national average remained at its 1981 level (9.2%). The 1991 tourist product was 13,863 million Drs, rising to 15,933 million Drs in 1994 (ROP, 2001). Economic and political migrants continued to flow to the island, thus augmenting the informal labour pool. Informal labour is conservatively estimated at 50% of the officially reported employment.

The primary sector continued to receive EU financial support, contributing significantly to the island's GDP despite structural problems hindering its full development. In addition to traditional products, Crete is a leader in the dynamic sector of greenhouse cultivation, possessing around 50% of the country's greenhouses. Strong complementarities between tourism and agriculture

have developed in several places. Farmers are involved as owners or workers in tourist enterprises (Tsartas *et al.*, 1995). Informal complementarities have also developed as in the previous period. However, tourism still remains weakly integrated in the local economy.

The physical and social infrastructure improved further through generous EU funding (IMP, Regional Development Programs and other EU initiatives) and national funding. In the 1994–99 period, investment in infrastructure amounted to 56 billion Drs on the northern axis, 13 billion Drs on North–South roads, and 2.8 bill. Drs on the southern axis. Funds for tourism are allocated under EU programmes for ‘competitiveness’ and ‘culture’.

Business activity increased due to considerable private investment and financing provided through development Laws. Cooperation between businesses and local universities and research institutes intensified and helped to boost the economy further. Tourism has benefited from the use of innovative, tourist product-enhancing technologies, such as electronic commerce, advertising, tele-working, medical tourism and sea parks. Local shipping and transport companies maintain their strong position in the economy, producing 7.6% of the island’s GDP as well as investing in tourist facilities. Various business associations have been formed together with public–private sector partnerships related to local and tourism development, banking and shipping. However, public sector bodies, and notably the Local Government Organisations, are frequently captive of local interests (Regional Institute on Tourism, 1998), thus blocking the achievement of more equitable, long-term local development.

The mounting problems of environmental degradation caused by unplanned and haphazard tourism and tourism-induced development have led to the reorientation of national tourism policy towards discouraging or even barring further development of ‘congested’ tourist destinations (Kalokardou-Krantonelli, 1995). Urban and regional development legislation of the 1980s was used for this purpose, in combination with economic instruments. Special Regional Plans – a new instrument emphasising environmental protection – were and are prepared for many municipalities and regions in Crete. However, political pressures by both formal groups (such as local development corporations) and informal groups (such as the ‘Union of small landowners and small investors’) have blocked the completion of these plans and also their practical implementation (Vogiatzakis, 1995).

The mode of, mostly unplanned, haphazard, and frequently illegal, development of the previous period has intensified in the current period causing similar or more serious negative impacts. Environmental protection and management has progressed but has succeeded in practice in only a few sectors (biological sewage treatment and solid waste disposal). The problems exhibit a strong regional differentiation, with most of them occurring on the northern coast. Spatial and aesthetic conflicts are frequent in the most highly developed areas. Incompatible land uses are mixed together, thus generating economic and environmental externalities (mixtures of greenhouses, hotels, bars, industrial installations, university premises, airport, landfills, biological treatment plants, quarries, fuel storage tanks, monasteries, army fields, etc.). Pockets where there are serious degradations of the tourist resources face problems with their image. In the south, the construction of roads and other infrastructure has led to the invasion,

fragmentation and alteration of ecologically sensitive areas by agriculture and tourism. In the hinterland, fires, overgrazing and rural abandonment degrade the natural environment (ROP, 2001). The level of cultural and architectural heritage preservation is generally moderate.

Despite the significant contribution of local capital to vital economic sectors, foreign capital (private and EU) now plays an important role in the island's development. Foreign control of tourist flows, accommodation and services has intensified the unequal distribution of tourism benefits and the loss of self-reliance. This is more serious in areas where tourism is the only viable development alternative. Where tourism develops complementarities with other activities, then the related economic diversification offers brighter prospects, although this still exacerbates regional inequalities. Land value appreciation in tourist areas frequently prohibits the locals from acquiring land for development. Lastly, cultural alteration, such as the loss of traditional values and authenticity, the commercialisation of culture, and attitudes that are pro-development whatever the costs, has become deeper and widespread.

In this most recent period, economic welfare in Crete has remained high, with particular improvements in the rural hinterland, and with a growing economic convergence within the country. Although its economy is still diverse and there are significant sectoral complementarities, economic simplification seems to have set in as the island relies heavily on tourism and it specialises in agricultural products subsidised by the EU. There is growing environmental degradation and simplification, as well as spatial conflicts and cultural alterations. Infrastructure is adequate and keeps improving. Regional inequalities have diminished further. Dependence on external sources of funds is higher than in the past and local participation in decision-making is problematic. Tourist supply may also be exceeding demand. Territorial specialisation in tourism is observed, although the degree of tourism's spatial concentration has dropped. Tourist satisfaction is generally high but fluctuating. The imbalance among the objectives of sustainable development that started in the previous period has grown further and this trend will continue if Crete's limits to development are not respected.

The Role of Tourism in a Sustainable Future for Crete

Crete is currently in a high growth period, its growth frequently occurring outside of the formal system owing to a tradition of informal sector activity. Its development trajectory exhibits a departure from sustainability as a booming economy coexists with serious environmental and sociocultural problems, dependence on external sources and weakening self-reliance. If the forces underlying this imbalance are left unchecked and those that may counteract it are not encouraged to intervene, then the time may be approaching when Crete's sustainability will be seriously threatened and its irreplaceable natural and cultural resources and valuable tourist resources will be irreversibly damaged.

Regional authorities and business circles are deeply concerned about the sustainability prospects of the island and about the particular role of tourism in this. It is generally agreed that the period of extensive tourism development is over and that little space has been left for development to accommodate the 3.5–4.5 million tourists that are projected for 2010 (ROP, 2001). To secure a

sustainable income from tourism and Crete's niche in the tourist market, product transformation and product reorganisation (see Agarwal, 2002) are proposed in order to reduce seasonality and to increase the length of the tourist season, the length of stay and tourist spending by 40%. Proposals include: the development of new facilities; new poles of tourist attraction (e.g. mountainous areas); integrated tourist packages and alternative forms of tourism; alliances among tourist and non-tourist businesses, local government bodies, corporations and associations; the modernisation and improvement of tourist facilities and businesses; improved education and training of personnel; the provision of consulting services for small- and medium-sized tourist enterprises; infrastructure improvement; the protection and enhancement of natural and cultural resources; and a focused promotion of the island for particular types of tourists (ROP, 2001; *Tourism and Economy*, 2001).

These are supply-side solutions, however, that disregard the critical role of tourist demand and of the broader socioeconomic context. Moreover, they mostly address the supply-side symptoms of unsustainability rather than the essential causes and mechanisms at work (cf. Agarwal, 2002). Drawing on the preceding analysis, two groups of essential requirements to secure sustainability in the development of the island and of its tourist sector are outlined here: (a) decoupling development from the factors causing its current imbalance; and (b) capitalising on factors favouring long-term sustainable development. Both external and internal factors are involved here that, on the one hand, shape demand for the island's products, services and resources and, on the other, provide the necessary financial, human and other resources for development. Internal factors obtain a particular, deeper importance as sustainability is determined crucially by local choices about the preferred development patterns and courses of action.

Development should be decoupled from external factors that are uncertain, volatile or beyond effective local control, although these always remain critical for the viability of any development option. These include EU and national funding, foreign private investment, in-migration, tourist demand, tour operators and other tourism intermediaries. Development should be decoupled also from internal factors that hamper the enforcement and implementation of urban, regional and environmental planning and legislation. These include strong political pressures associated with particular local cultural traits,³ the unquestioning adoption of short-term, high-revenue (e.g. tourism) development opportunities, weak or non-existent environmental awareness, a diffuse perception of powerlessness (e.g. against tour operators) and risk aversion. Under such conditions, the prescription of the sustainable development literature for formal local participation in decision-making should be viewed with scepticism.

Instead, development should capitalise on such external factors as Crete's mild climate and strategic position and, more selectively, on EU and national funding, foreign private investment, in-migration and favourable future socioeconomic developments. It should also capitalise on internal factors that have been instrumental in its past and recent growth. Its inherent potential, due to its physiographic and economic diversity and heterogeneity, for forms of development other than tourism should be protected against current overexploitation. Development should be managed so as to integrate the economy and the tourist

sector and to differentiate the tourist product, thereby providing long-term safety valves against the uncertainty of such external factors as competition from other destinations and unfavourable future socioeconomic developments.

Entrepreneurship, local capital and extant collaborations and partnerships – especially between businesses and educational institutes – are crucial, locally controlled assets that should be oriented towards long-run development options in order to increase the island's self-reliance, bargaining power and resilience to future stress. Finally, the tradition of informality, if handled properly, could be turned into a valuable tourist resource and a promising mechanism for flexibility and adaptation to changing socioeconomic circumstances.

The aggregate level of the analysis in this paper permits only broad suggestions how to satisfy these requirements. An absolute priority is the activation – implementation and enforcement – of integrated spatial planning⁴ to guide and orchestrate the rational and effective use of Crete's natural and human resources and to provide for foreseeable contingencies; with fluctuations in tourism demand being important among them. Ideally, spatial development plans should be adapted to the island's environmental and sociocultural traits and should involve local actors in the development process. Institutionalising informal tourist and other arrangements and developments is a parallel action to contain the current 'tyranny of small decisions' (Khan, 1966) and to ensure minimum implementation. Lastly, education remains always the longer-term mechanism for the value change needed to support sustainable development choices where tourism develops harmoniously with the other sectors of the Cretan economy.

Concluding Remarks

The case of Crete demonstrates that the particular model of tourism development of large and heterogeneous destinations results from the historic coincidence of *combinations* of diverse factors rather than from changes in the balance between tourism demand and supply only. Lifecycle models do apply in this case, in general, but description and explanation of a destination's lifecycle cannot be dissociated from its inherent diversity and broader context. Scale (relative size of the area analysed) and degree of heterogeneity influence the relative contribution of internal and external, tourism-related and other socioeconomic and cultural factors that determine the particular features of each stage, rate of tourism development and timing of the lifecycle turning points (Agarwal, 1997, 2002; Cooper & Jackson, 1989).

When a heterogeneous destination enters the involvement stage, the degree of spatial concentration of tourism is high. Development starts in those localities where capital (local in the case of Crete) chooses to invest in tourism for place-, time- and person-dependent reasons. The rest of the destination is essentially intact. As tourism spreads to other localities, again where capital finds it profitable to invest, the destination as a whole moves to the development and subsequent stages and the degree of spatial concentration diminishes. But, within any destination-wide stage, different localities are at various stages of development as the case of Crete illustrates. At more advanced destination-wide

stages (e.g. development, consolidation) the diversity of stages of development of individual localities seems to increase.

Crete entered the development stage when growth in international tourist demand coincided with the decline of older, traditional destinations in Greece, the accession of Greece to the EU, the influx of generous development funds – that reinforced its economic structure – and place-specific developments. Moreover, this development would not have occurred in the absence of a valuable stock of active local financial and social capital (entrepreneurship) and this was mobilised to invest in tourism while developing complementarities with agriculture, trade and local educational institutions. The combination of available local capital and favourable national tourism and regional policy shaped the island's tourism supply and stimulated foreign investment and international tourism demand.

At the consolidation stage, heterogeneous destinations exhibit more complex patterns of development than less heterogeneous ones (Hovinen, 2002). The causes and impacts of this development are similarly complex and the role of tourism becomes less clear unless thorough and informed analyses throw light on its complex interactions with other sectors as well as the internal and external factors at work. In Crete, tourism supply keeps on growing – frequently autonomously, without consideration of active demand (and its fluctuations), haphazardly and mostly informally (not officially planned). The behaviour of local tourism-related capital is more variable. In comparison to earlier periods, local capital has less power but still remains instrumental for future tourism development.

The island's self-reliance has weakened overall, pressures from tour operators and competition from other destinations have increased, and national and EU policy developments may become more stringent in the near future. Its overall spatial development pattern follows no formal plan. These and many other socioeconomic developments raise the question as to whether tourism, from a development motor, will become a source of unsustainability if it continues developing unchecked in such a broader context. The complexity of the consolidation stage hinders the specification of solutions that will assist the area to avoid the stagnation stage and to stay on the sustainable development path.

The broader theoretical issues that emerge from the present analysis are the path dependent and contingent nature of tourism development in heterogeneous destinations and the importance of external factors in this process (Agarwal, 2002; McKercher, 1999). From the perspective of integrated analysis there is a need to couple destination lifecycle models with more holistic accounts of the destination's complex development history in order to provide a more meaningful and useful basis for tourism planning and decision-making.

Acknowledgements

The author acknowledges the assistance of George Chamakos, Association of Greek Tourist Enterprises (SETE), and Aris Stratakis, Directorate of Tourism, Region of Crete (Irakleion), who provided relevant information, and of Panagiotis Stratakis, researcher, Department of Geography, University of the Aegean, who prepared the map.

Correspondence

Any correspondence should be directed to Professor Helen Briassoulis, Department of Geography, University of Aegean, University Hill, Mytilene 81100, Lesvos, Greece (e.briassouli@aegean.gr).

Notes

1. The case of Rethymnon is particularly interesting because, in a period of local economic crisis, local businessmen invested in large hotel facilities in the area, extended their activities to the rest of the country, and have become supra-local tourism entrepreneurs.
2. The first EU Integrated Mediterranean Programme (IMP) was that of Crete. It commenced officially in 1985.
3. The non-cooperation of locals in formal plan preparation, their non-compliance with regulations and implementation and, consequently, their reliance on informal social networks results from the dominance of individualism, familism and political clientelism and the consequent mistrust in government. This has been termed the 'Mediterranean syndrome' (La Spina and Sciortino, 1993).
4. National legislation exists but remains inactive for the reasons mentioned above.

References

- Agarwal, S. (2002) Restructuring seaside tourism: The resort lifecycle. *Annals of Tourism Research* 29(1), 25–55.
- Agarwal, S. (1997) The resort cycle and seaside tourism: An assessment of its applicability and validity. *Tourism Management* 18(2), 65–73.
- Ahn, B.Y., Lee, B. and Shafer, C.S. (2002) Operationalising sustainability in regional tourism planning: An application of the limits of acceptable change framework. *Tourism Management* 23, 1–15.
- Bramwell, B. and Lane, B. (1993) Interpretation and sustainable tourism: The potentials and the pitfalls. *Journal of Sustainable Tourism* 1(2), 71–80.
- Butler, R.W. (1980) The concept of a tourist area cycle of evolution: Implications for management of resources. *Canadian Geographer* 24, 5–12.
- Butler, R.W. (1991) Tourism, environment and sustainable development. *Environmental Conservation* 18, 201–9
- Collins, A. (1999) Tourism development and natural capital. *Annals of Tourism Research* 26(1), 98–109.
- Cooper, C. and Jackson, S. (1989) Destination lifecycle: The Isle of Man case study. *Annals of Tourism Research* 16, 377–98.
- de Kadt, E. (1979) *Tourism: Passport to Development? Perspectives on the Social and Cultural Effects in Developing Countries*. New York: Oxford University Press.
- Eber, S. (1992) Beyond the green horizon: Principles for sustainable development. Discussion paper by Tourism Concern. WWF, UK.
- Forster, J. (1964) The sociological consequences of tourism. *International Journal of Comparative Sociology* 5, 217–27.
- Greenwood, D.J. (1972) Tourism as an agent of change: A Spanish Basque case. *Ethnology* 11, 80–91.
- Hovinen, G. (2002) Revisiting the destination lifecycle model. *Annals of Tourism Research* 29(1), 209–30.
- Hunter, C.J. (1995) On the need to reconceptualise sustainable tourism development. *Journal of Sustainable Tourism* 3, 155–65.
- Hunter, C.J. (1997) Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research* 24(4), 850–67.
- Kalokardou-Krantonelli, R. (1995) Tourism and spatial planning in the Prefectures of Kerkyra and Lassithi. In P. Tsartas, K. Theodoropoulos, R. Kalokardou, K. Maroundas, P. Pappos and N. Fakiolas (eds) *The Social Impacts of Tourism in the Prefectures of Kerkyra and Lassithi* (pp. 201–32) (in Greek). EKKE: Athens.

- Katochianou, D., Kavvadias, P. and Tonikidou, P. (1997) *Basic Data of Regional Socio-economic Development in Greece*. Athens: Centre of Planning and Economic Research.
- Khan, A.E. (1966) The tyranny of small decisions: Market failures, imperfections and the limits of economics. *Kyklos*, 19(1), 23–47.
- Ko, J.T.G. (2001) Assessing progress of tourism sustainability. *Annals of Tourism Research* 28(3), 817–20.
- La Spina A. and Sciortino, G. (1993) Common agenda, southern rules: European integration and environmental change in the Mediterranean states. In J.D. Liefferink, P.D. Lowe and A.P.J. Mol (eds) *European Integration and Environmental Policy* (pp. 217–36). London: Belhaven.
- Loukissas, P.J. (1982) Tourism's regional development impacts: A comparative analysis of the Greek islands. *Annals of Tourism Research* 9(4), 842–54.
- Lundtorp, S. and Wanhill, S. (2001) The resort lifecycle theory: Generating processes and estimation. *Annals of Tourism Research* 28(4), 947–64.
- Massey, D. (1984) *Spatial Divisions of Labour*. London: Macmillan.
- McKercher, B. (1999) A chaos approach to tourism. *Tourism Management* 20, 425–34.
- Miossec, J. (1977) Un modèle de l'espace touristique. *L'Espace Géographique* 6, 41–8.
- Mowforth, M. and Munt, I. (1998) *Tourism and Sustainability: New Tourism in the Third World*. London: Routledge.
- Nash, D. (1977) Tourism as a form of imperialism. In V. Smith (ed.) *Hosts and Guests: The Anthropology of Tourism*. Pittsburgh: University of Pennsylvania Press.
- Noronha, R. (1979) *Social and Cultural Dimensions of Tourism*. Working Paper No. 326. Washington, DC: World Bank.
- NSSG (2001) *Population Census 2001*. National Statistical Service of Greece.
- Papadaki-Tzedaki, S. (1999) *Endogenous Tourism Development: Structured or Disintegrated Local Development?* (in Greek) Athens: Papazissis.
- Research Institute of Tourism (1998) *Regional Development of Greece and of Tourism* (in Greek). Athens: Research Institute on Tourism.
- Regional Operational Plan (ROP) (2001) *Regional Operational Plan of Crete, 2000–2006* (in Greek). Irakleion: Region of Crete.
- Russell, R. and Faulkner, B. (1999) Movers and shakers: Chaos makers in tourism development. *Tourism Management* 20, 411–23.
- Russo, A.P. (2002) The 'vicious circle' of tourism development in heritage cities. *Annals of Tourism Research* 29(1), 165–82.
- Tourism and Economy (T&E)* (2001) Issue 263 (May) (in Greek).
- Tourism and Economy (T&E)* (2002) Issue 275 (May) (in Greek).
- Tsartas, P., Theodoropoulos, K., Kalokardou, R., Maroundas, K., Pappas P. and Fakiolas, N. (1995) *The Social Impacts of Tourism in the Prefectures of Kerkyra and Lassithi* (in Greek). Athens: EKKE.
- Van den Berg, L. (1991) *Urban Systems in a Dynamic Society*. Aldershot: Gower.
- Van der Borg, J. (1991) *Tourism and Urban Development*. Amsterdam: Thesis Publishers.
- Vogiatzakis, P.S. (1995) Experience with tourist development in Western Crete. *Proceedings of the Conference Tourism and the Environment in Island Regions* (in Greek). Technical Chamber of Greece, Eastern Crete Section, Irakleion, Crete, 17–19 March.
- WTO (1996) *What Tourism Managers Need to Know. A Practical Guide to the Development and Use of Indicators of Sustainable Tourism*. Madrid: World Tourism Organization.