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## **TOURISM, NATURAL ENVIRONMENTS AND PUBLIC POLICY**

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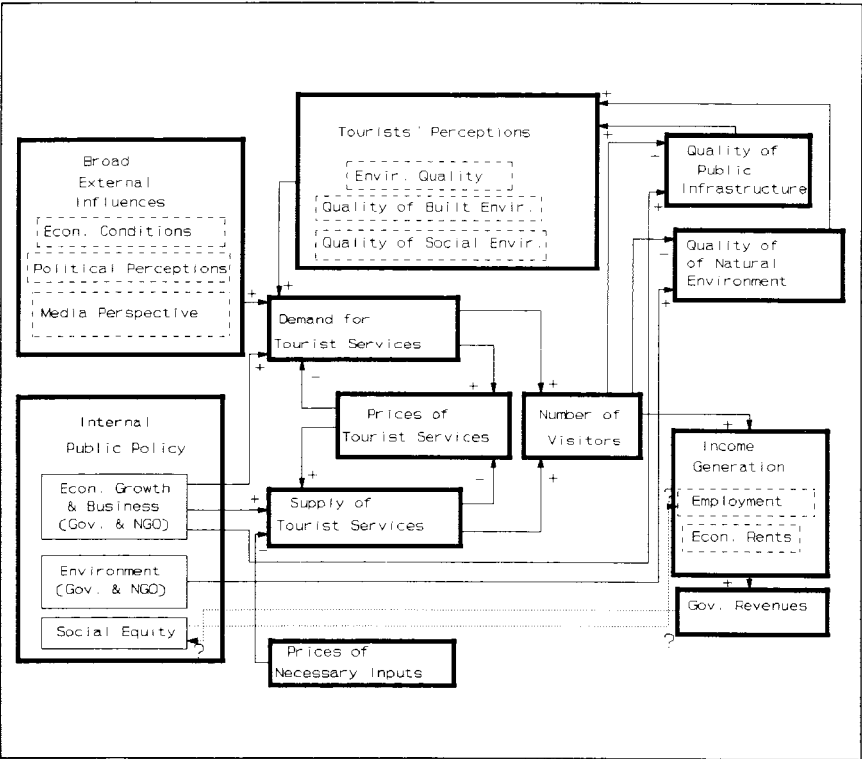
World-wide, tourism has become a major economic sector. In Florida, for example, it is the largest economic sector, dealing with more than 40 million visitors annually. Caribbean countries, with which countries the authors are acquainted, have seen the majority of their economic growth stemming from this sector (Deere, et al., p. 19). Jamaica, for example, saw a 17 percent growth in visits in 1990 (Planning Institute of Jamaica, p. 13-1). The World Bank, in fact, claims tourism is the world's largest economic sector. Yet, little specific information is available on tourism, either in aggregate terms or for specific locations. For example, even in Florida and Jamaica the reporting of macroeconomic data (Bureau of Economic and Business Research; Planning Institute of Jamaica) there are not clear listings for tourism as an economic sector. Little is known about the relationship between tourism and the local setting, a component that appears important in attracting tourists. Further, little public policy has been focused directly on the tourism sector and its relationship to natural resources. Essentially, economists and policy analysts have visited little attention on this broad and diverse economic sector.

In our brief comments we will consider tourism as it relates to economic growth, public infrastructure and natural environment. Florida and the Caribbean will be used as examples. The presentation will be broad with a number of generalizations. Please bear with us in this general approach. We find that when people begin to identify issues of concern, often issues with little concrete information, it is helpful to deal with them at an "appropriate level of vagueness." The approach allows all interested parties to have an opinion and to contribute to the clarification of critical issues. We will be working at a "vague level" and hope that it will be "appropriate."

The major tool to be used is a schematic (Figure 1). The idea for this representation derives from work being done with digraphs and "fuzzy cognitive maps" (Kosko, 1992, pp. 152-158; Kosko, 1993, pp. 222-235). While we recognize many components and influences are not illustrated, use of the digraph allows us to focus on specific concepts (the rectangles) and their interactions (arrows with associated signs).

When considering tourism as illustrated in the schematic, it is helpful to think in terms of interacting processes: demand processes,

**Figure 1. Diagram of Tourism Sector.**



supply processes, public policy processes and natural processes. In essence, outside forces increase demand, expanding demand triggers supply responses, the number of visitors increases rapidly, the region's aggregate income grows, government revenues increase, etc. Of course, in reality, these processes are highly nonlinear and intertwined.

**Demand and Supply**

Demand for travel is growing. Media acquaint people with a wide range of locations and cultures. People have active interest in travel and develop perceptions of locations long before they visit specific sites. Their interests are varied. For some, the idea that Florida and the Caribbean are sunny and warm in February and March is enough, while increasingly others are taking interest in cultures and unique environments. Advertising by private and government organizations—we have all seen Jamaica's and Florida's ads—aid people in envisioning themselves having a wonderful time in a location. As a result, people travel to these locations in increasing numbers. We economists say demand is growing rapidly.

The supply response derives from actions by both private and public entities. The private sector provides hotels, restaurants, shops, attractions, etc. as part of normal commerce, while government provides airports, roads, parks, etc. as part of a broad set of public services. In cases in which the number of visitors that come to a location is as large as it is in Florida and the Caribbean, the levels of business and government activities necessary are of huge magnitude. These activities tend to dominate commerce and government and create large numbers of jobs. Populations grow as people move to take advantage of job opportunities.

Components not always recognized as important in generating tourist services are the natural and cultural settings. Often it is the environmental and cultural contexts that are the basis of the tourism potential. Unique natural settings provide service flows essential to the actual tourist services the consumers value. Florida's sunny beaches and the Caribbean's colorful Creole culture and lush tropical ecosystems are examples. These components, in many ways, have characteristics of public goods and, to a considerable degree, are seen as open access resources. The substantial economic rents generated by the settings and the relative open access to these resources lie behind their apparent over-development.

### **Public Policy**

Public policy related to tourism has been, and remains, an integral part of overall economic growth policy. The focus has been largely on expanding the potential for capturing economic rents resulting from development of local natural resources. In Florida, the state government sold wetlands and allowed these to be dredged and filled; it built highways through other fragile ecosystems and bridges to barrier islands; it allowed hotels and time-share condominiums to be built just feet from the shoreline. In the Caribbean, governments built airports (often on filled coastal wetlands) to handle the largest airliners, port facilities for cruise ships, and hotels. In both Florida and the Caribbean, public funds are used for advertising and promotion. Often nongovernment entities and government agencies work in accord to foster additional tourism enterprises. Such activities are supported politically, since increased employment is seen as a primary outcome. Overall, growth in tourism is seen as good, and a major goal of public policy is to aid the growth.

Additional considerations are being added to public policy discussions relating to tourism. First, those gaining from tourism are seeing threats originating in other sectors of the economy. Differing public policy positions are being heard and conflict is increasing. In Florida, offshore oil drilling is being fought, sports fishers are attempting to have commercial net fishing banned, and agriculture's release of

drainage water into the Everglades National Park is being challenged. Similarly, in the Caribbean, oil facilities, mining and agriculture are seen as threats to reefs and coastal resources. Economic interests are seeing billions of dollars of potential loss and gain—and public policy debates are heating up.

Expanding tourism also is being seen as a threat to itself. It is being recognized that any given location has an upper limit to the amount of activity it can absorb without deterioration of natural processes. While the upper limit is not known, people are beginning to think that limit is being approached. Growth in the Florida Keys threatens the ecosystem of Florida Bay and offshore reefs and has led to a controversial designation of the Keys as an "Area of Critical State Concern." Proposals by the Florida Turnpike Authority would extend the turnpike through critically important wetlands. Demand for beachfront land for hotels and tourist facilities threatens the planned Archie Carr National Wildlife Refuge which would provide habitat for several endangered species. Likewise, the Caribbean has many cases. In Jamaica the government has allowed hotels to continue to be built in Negril even though present tourist loads are causing identifiable damage to fresh water wetlands and marine systems (Tolisano and Kiker). Again, the outcomes mean gains for some and losses for others. For many tourist destinations, whether in warm locations like Florida and the Caribbean, Third World wildlife parks or winter sports areas, similar problems are arising accompanied by increasing hostilities among rent-seeking interest groups.

The underlying causes are far too numerous for us to deal with here. We can, however, say that, in most cases, explicit forums are missing in which to consider a broad range of goals for the tourism sector. This may be because the tourism sector in many locations is so young it has yet to be recognized as an important segment of the local economy. Whereas agriculture, mining and manufacturing have been recognized and supported as major components of the local economy for some time, tourism is just now being viewed this way. In many locations it has been viewed like a frontier with economic rents to be captured by both private and public entities. There has been little or no recognition that deterioration of the natural setting of tourism could ultimately lead to reduction in demand in the region. Where attention is given, it is generally only after a major problem has become apparent to all, for example, traffic congestion, inadequate sewage and waste disposal, shortage of shorelines in a natural state, collapse of an ecosystem, and by then remediating action is complex and expensive (Dixon and Sherman, pp. 197-199).

### **Public Policy Education**

It seems to us there are two roles public policy education can play. First, in areas in which tourism is related to natural resources and environments, but is not viewed as the major economic sector, the

best approach would be to focus on the ongoing economic and natural resource issues being identified by community residents. These may or may not be identified with area tourism. Educational approaches dealing with the broad set of public policy issues will help develop knowledge and capability within the community. When specific issues concerning tourism and natural resources arise, community knowledge and capabilities can be brought to bear. In making this suggestion, we realize that most of you are already using this approach and understand it far better than we do.

The second suggested approach applies to areas such as Florida and the Caribbean in which tourism is recognized as a dominant economic sector. In such areas there is a need to develop public policy forums for dealing with community and natural resource issues directly related to tourism. In these areas, economic conditions will induce even greater tourism activities, and it will be important that the entire community recognize that, ultimately, overuse and deterioration of facilities and natural environments will result if balancing actions are not taken. Natural processes in specific locations have maximum capabilities for absorbing human activities without dramatic change. Unfortunately, for most locations the natural processes are so poorly understood it is not possible to say exactly what the limit is. By working in a public forum in which the many interests concerned about the economic potential of tourism are represented, there is an opportunity for balancing the rent-seeking behavior before the rents begin to decline. While the approach will be messy, as all public policy processes are, it will provide a forum in which to learn about the relationship between tourism and its setting as specific actions are taken. As the tourism sector matures, knowledge about it will be available for resolving problems.

Additionally, we believe there is an opportunity for creative research here. The basic premise is that progress toward solution of complex problems can be made, even when associated issues are poorly defined, if the many actors can at least agree upon a broad set of goals. What we have in mind stems from a developing body of literature that focuses on the evolution of complex systems, systems with so many components and interactions they cannot be represented by usual approaches. We find the work on "fuzzy" adaptive systems by Bart Kosko (1992, 1993) most interesting. The approach is essentially model free and builds linguistically. Actions to be taken are inferred from qualitative appraisal by actors as to whether previous actions moved the system toward or away from agreed upon goals. Subsequent actions are implemented to the degree that similar previous actions moved the system toward or away from the goals.

To us this approach is the essence of what public policy and institutional development is really about. Following the concepts of fuzzy adaptive systems allows a more explicit linkage of actors' qual-

itative judgments of previous outcomes and future potential actions. We think it would be interesting to take on a public policy education effort dealing with tourism and environment using this structured approach. Of course, a location in Florida or the Caribbean would be ideal. Both provide interesting economic, social and environmental conditions for such an analysis. The analysis could provide clarification of the interactive roles of tourism, other sectors and environmental conditions with the local economy, and allow academics to study the details of public policy evolution. Given the growth of tourism, the effort could lay the groundwork for applied research in other locations. Plus it would be a lot of fun to do.

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