

SCALE ISSUES IN TOURISM DEVELOPMENT

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Abstract: Proponents of Alternative Tourism overwhelmingly believe that alternative forms of tourism development need to be small in scale. Inasmuch as tourists' demand has great power to shape the market, the issues surrounding the tourism development scale deserve further consideration. This paper discusses the implications and effects of the tourism development scale on natural resources and the environment from the perspective of externalities, strategic business behaviors, energy and resource efficiency, and the pollution detecting and monitoring abilities of environmental administrators. It concludes that small scale development is not necessarily more sustainable or environmentally sound than larger scale development. It is a fallacy that alternative forms of tourism development need to be in small scale. To be sustainable, scale considerations should be subject to the efficiency principle and the carrying capacity of the environment. If efficiency and carrying capacity are ignored, small scale development as well as large scale development will equally lead to environmental deterioration.

Introduction

After several years of mass tourism development that has led to environmental, cultural and societal degradation, researchers have suggested that excess numbers of tourists are one of the major sources of the problem. Alternative Tourism or the alternative to the negative side of mass tourism has recently emerged as another form of tourism resource development and operation. To date, there is no consensus on the definition of Alternative Tourism, nor are there proponents of it; however, there is an overwhelming majority who believe that alternative forms need to be small in scale, as well as culturally and environmentally sound (de Kadt, 1992; Pearce, 1992). Since the publication of the "Limits to Growth" in 1972 by a group of researchers and scholars affiliating themselves with the

Club of Rome, researchers and scholars in both natural and social sciences have seriously argued and discussed environmental and natural resource problems relating to population and economic growth of the world. In the 1980s, some scholars, opposing the dismal argument of the Club of Rome, advocated "Sustainable Development" to resolve problems caused by mismanaged economic growth and development. Since then, the emergence of the concept has induced many thoughts and suggestions relating to environmental and natural resources management. In the field of tourism, Alternative Tourism is considered an analogous concept to Sustainable Development (Butler, 1992; and Lanfant and Graburn, 1992).

Alternative Tourism is an idealistic term which "has been academically discarded but the demand for small scale tourism persists" (Smith, 1992). Greater consideration of the development scale in Alternative Tourism is needed, for the small scale development argument is both vague and misleading. When put to practice, problems of small scale development may be revealed. Smith's (1992) case study on Boracay Island, Philippines, has provided such an example of uncontrolled and mismanaged small scale development causing environmental degradation. Under a global energy and resource conservation consideration, the question remains: Is small scale development more favorable than mass development? Is the development scale an important issue at all? This paper focuses on issues concerning the development scale of tourism and its association with the environmental problems. Discussions follow under the headings of human desire, the implication of externalities, the implication of operational efficiency, and the implication of the Environmental Protection Agency's pollution detecting/monitoring ability on development scales.

Human Desire

In contrast to manufacturing, tourists as a whole consist of a major polluting power. In aggregate, their numbers and consumptive activities form a devastatingly degrading power. Over the last decade, the tourism industry has become the largest industry in the world (WTTC Report, 1993). Facing such an unprecedented demand, one may question that if the tourists' demand is not restricted, how will alternative forms of tourism development be able to accommodate such huge numbers of demand and how can environmental problems be relieved from its degrading power?

One of the thoughts involved in sustainable development is that the earth may be sustained if people start to become aware of the delicacy of the natural environment and the possible chain reactions and inter-linkages between their daily activities and the ecosystems around them. However, some scholars have argued that there is an inherent dilemma in the concept of sustainable development: How can people carry out preservation and economic development at the same time? Their thought is that almost every consumption and production activity creates pollution either in visible or in invisible forms. Researchers with strong doubts of sustainable development proposed a

steady-state-economy approach. This approach maintains an input and output flow of the economy in a steady-state equilibrium in accordance with the earth's carrying capacity. In this economy, the rate of economic growth is zero and people devote themselves to spiritual growth.

Daly, a proponent of steady-state economic development, pointed out that "since matter and energy cannot be created, production inputs must be taken from the environment, which leads to depletion. Since matter and energy cannot be destroyed, an equal amount of matter and energy in form of waste must be returned to the environment, leading to pollution"(1993). Therefore, Daly proposed that economic growth should be in non-physical goods such as service and leisure. Nonetheless, Daly recognized that "services are included in GNP and are not in themselves physical outputs. However, increasing service outputs often requires increases in physical inputs to the service sector, so that there is an indirect physical component" associated with the service industry. Thus, while tourism demand swells, not only more physical material, such as transportation vehicles, gasoline, food, and other consumer goods will result from tourism industry, but also more environmental amenities will be explored. Thus, growth will finally transform into garbage and waste energy which deteriorate the natural environment.

Pearce (1992) reminded us that tourism demands will continue to expand if taking holidays is accepted as a legitimate right of all human beings. Thus, in societies with anthropocentric and materialistic thoughts, tourism will continue to be a cause of environmental deterioration. A steady-state economy seems to be an impossible solution in these economies, because in a steady-state economy both the supply and demand have to be curbed.

One thought suggests that technological progress can save people from this dilemma. However, technology is like the water in oceans; it can carry vessels and it can also capsize them. Human beings haven't realized the possibility of disasters that technology can create. Also, technology is not completely environmentally sound. Historically, technological progresses have foraged natural environments for centuries, significantly since the Industrial Revolution. Though technology has given human beings a better material life, technological progresses have always lagged behind the growth of human's wants. It is difficult that technology can win the race with human's desire. If human needs are not restricted, they could grow endlessly. This might be the reason why most great philosophers searched for spiritual satisfaction instead of material ones. Spiritual satisfaction can be obtained without extensive material support and its enjoyment is satisfactory. Ancient Chinese philosophers satisfied themselves by "spiritual/mind travels"; in modern terms, it is thought of as "day dreaming." Navigation in the "outer space" of human minds is pollution free.

With formidable human desire, the subsequent questions of sustainable development/tourism may be asked: How long can the world be sustained if human demand and population are not curbed?

Implication of Externalities and Strategic Behavior on Scale Size

Externalities are always an on-going topic among economists' discussions. Tourism researchers also recognize that tourism development and tourists' mindless behaviors can create externalities to the host community. Among economists, one of the preferable solutions to externalities is to internalize victims into action-taking or decision-making units (Bromley, 1986). Bromley pointed out that there are three categories of externalities; producer to producer, producer to consumer, and consumer to consumer. When producer to producer externalities are considered, an implication on the tourism development scale can be derived.

In order to make fair comparisons between small and large scale tourism development, a commensurate capacity assumption has to be made. The assumption states that a number of small scale development are needed to be commensurate in capacity with one large scale development; otherwise the comparison is not on the same base. To develop a certain capacity, there will be less tourism service providers in a large scale development approach than in a small scale development one. In situations where providers create externalities to each other, for example, accommodation providers' sewage cause water pollution to marinas, or the loud noise of a disco bar affects the business of nearby hotels. Then, the solution of internalizing externalities would have these different service providers combined as one decision-making unit (i.e., a coalition). So, the negative externalities can be considered by the coalition. If service providers realize that their common benefits are greater when they cooperate, then the producer to producer externalities can be solved. However, in a strategic business world, cooperation among providers is hard to maintain especially when there are many small providers whose services are similar. Also, the incentive to compete and to defect from the coalition can lessen the common benefits. Researchers have used the Prisoners' Dilemma model from the Theory of Games to describe this situation (Pearce and Warford, 1993). The prisoners' dilemma occurs when the payoff structure is such that, if everyone cooperates, then each gets a greater profit than if everyone defects. If one person defects when the others cooperate, then the defector gets a much higher payoff than if he cooperates. For those who cooperate, their payoffs are lower than if everyone cooperates. When this situation happens in the field of natural resource management, it is referred to as "the tragedy of commons" (Hardin, 1968). It always causes greater depletion to the natural environment. Therefore, in a strategic arena, a bundle of small tourism service providers in aggregate may perform worse in preserving the environment than a couple of large tourism providers. It may be easier for a few large providers to form a tourism development coalition than for many small providers to cooperate passively.

When discussing market failure caused by transaction costs, Kahn (1995) pointed out that difficulty of communication between parties are positively related to the number of participants, and the costs of communication can

be growing at an increasing rate. This implies that communication and integration among many firms are more difficult to achieve than among a few firms. The above reasoning may imply that the integrated large scale development approach may be easier to achieve and may be more environmentally sound when compared to many independent small scale developments of commensurate capacity. In the extreme, a local monopolist of tourism services can eliminate producer to producer externalities if the provider understands that its externalities can be its own cost. Farrell's (1992) study of Maui, Hawaii described a case of successful sustainable tourism development by a local monopolist--the Hana Ranch, owned by Rosewood Corporation of Dallas, Texas. Monopolistic tourism developments may not be desired by the general public as well as economists with an obsession for free competition; however, in terms of energy and resource conservation and integrative development, monopoly has merits of its own. Despite its elitist implication, monopoly, supplying less but charging more, is a way to restrict demand and preserve resources from over use. Although there are risks of changing natural environments caused by the decisions of a single firm, the monopolist's philosophy about sustainability, government's regulations on monopoly and locals' participation can reduce the misdoing of this kind of tourism development.

As for other kinds of externalities, local governments can use regulation and Pigovian taxes to correct producer to consumer, and consumer to consumer externality behaviors. Randall (1983) considered that "externality is ... and can be replaced by the more general term inefficiency with no loss of content." This argument stems from the Coase Theory which generally states that indefinite property rights can cause the market to operate inefficiently; and externalities are a type of market failure, which is that the market mechanism fails to operate properly to exhaust all possible transactions between negative externalities creators and their victims. The following section inspects inefficiency within the realm of the business operation. However, inefficiency in the following section is not of market mechanism but of energy and resource use inefficiency.

Implication of Operational Efficiency on Scale Size

In the search for alternative forms of tourism which expect to be benevolent to host communities, some scholars superficially believe that the small scale development approach can avoid the degradation which is caused by the masses. Pearce (1992) cited that Deroi's (1988) local community-based tourism is Alternative Tourism. Lillywhite and Lillywhite (1991) quoted that "small is beautiful." This belief, if it is true, can only be circumstantial. Marginally or locally, this argument may be acceptable; however, cumulatively or globally, the belief that smaller is less harmful is arguable. In aggregate, small scale tourism development and operation can be less efficient; thus, it is less energy and resources conservative than mass tourism development.

Environmental and natural resource economists generally agree that the efficiency principle should be added to the

previous biological/ecological oriented consideration of environmental and natural resources conservation. The aforementioned conflict between preservation and development needs to be resolved according to the energy and resource use efficiency principle. By acting efficiently, the world we live in may be sustained longer. Thus, recycling used material is more efficient than extracting the needed raw material from the natural environment.

Considering energy use, transporting 50 visitors to a recreational site by one bus will consume less fossil energy than if each person drives his or her own vehicle. Considering land use and preserving green, a 500-bed high-rise hotel will occupy less land than 50 farmer homes or cottages; thus, it might be that there are less trees removed for the high-rise large scale hotel development. If tourism development is trying to cater to the mass demand of tourists, then a large scale development may be more energy and resource conservative than many small scale developments with a commensurate capacity.

In aggregate, the damaging power accumulated from a number of small scale developments could be greater than that of a few large scale developments. A large tourism development may have the advantage of economies of scale, since less resources and land are directed to the development as compared to many small scale developments of commensurate capacity. Small businesses do not always have the advantage of economies of scale. If a firm has the economies of scale, it operates at a lower average cost. It is naturally more energy and resource conservative. Inefficient operations can accumulate to become a significant polluting and degrading power. However, this small pollution and degradation by small firms or individuals is too easily ignored. Households' polluting power, in aggregate, can be as great as manufacturers' degrading power. Most of the natural resources extracted from nature and produced for consumption will finally become waste in the form of heat, liquid, or solid and return to the nature environment (Pearce and Turner, 1990). Consequently, the environmental preservation agencies and governments' abilities to detect and monitor pollution and degradation of both small and large tourism providers should also be considered.

Implication of Pollution Detecting/Monitoring Ability on Development Scale

Ideally, Alternative Tourism is proposed to be environmentally friendly along with social and cultural soundness.

In practice, however, there is doubt that both the host and the guest can behave accordingly. In addition, small scale tourism development is frequently located closer to natural wilderness and remote sites. Thus, if the hosts and guests fail to abide by the environmental preservation rules, then it is likely that the small development can deteriorate a natural amenity right from its core. Long and Bandy (1994) pointed out that, although regulations exist, the authorities often do not have enforcement mechanisms for non-compliance. Like other businesses operators, tourism providers have incentive to externalize their operation costs. Researchers have frequently pointed out that

administrators have failed to manage tourism. Problems have been created by uncontrolled and mismanaged tourism developments. For example, instead of processing their waste water properly, they may use natural environment as their waste sink or porch fuelwoods to save energy bills. Butler (1992) believed that local governments and planners fall short in their ability to control and manage tourism development on a large scale as well as on a small one.

For environmental protection agencies with limited pollution detecting technology and monitoring ability, monitoring a few large scale service providers' performances rather than detecting many small scale providers' polluting movements may be preferred. If the volume of pollution is positively related to the volume of production, then the probability of detecting pollution among large scale providers is relatively higher because their production volume is relatively larger. It is easier for small scale providers to take advantage of the natural environment because their small amount of pollution is relatively hard to detect. Administrators may spend more manpower, time and resources on monitoring a number of small businesses than on a couple of large firms. The small scale approach to tourism development can increase administrators' pollution detecting and monitoring costs.

Conclusion

Tourism development scale considerations need to be concerned with the carrying capacity of an attraction and its host communities. Ryan pointed out that the management of tourist areas is not simply to promote tourism, the consideration of carrying capacity is also needed (1991). If the demand of tourism is growing and the carrying capacity of tourist resorts are ignored, small scale development as well as large scale development will equally lead to deterioration, despite that small scale development might be more socially and culturally friendly to local host communities. With depleted natural resource and degraded environment, social and cultural entities have no place to grow, regardless of their scale. The choice of a development scale should yield to the consideration of the carrying capacity of an attraction. Based on the carrying capacity of the site, choosing an efficient scale along with integrated planning and management in developing tourism facilities is desperately needed. Environmentally sound tourism development is a collaborate and elaborative work. The size of scale needs not be the major variable in the consideration of Alternative Tourism development. Large scale is not necessarily less preferable if its planning and management is well done. It is a fallacy that alternative forms of tourism development should be in small scale. Small scale development does not guarantee sustainability. Efficiency, carrying capacity, and integrated planning and management are the keys to sustainable tourism development.

Literature Cited

Boulding, K. E. (1966). The Economics of the Coming Spaceship Earth. In Jarett, H. (Ed.), Environmental Quality in a Growing Economy. Baltimore, MD: Johns Hopkins University Press.

Bromley, D. W. (1986) Natural Resource Economics: Policy Problems and Contemporary Analysis. Hingham, MA: Kluwer Nijhoff. pp. 37-39.

Butler, R. (1992). Alternative Tourism: The Thin Edge of the Wedge. In Smith, V. L., and Eadington, W. R. (Eds.), Tourism Alternatives. Philadelphia, PA: University of Pennsylvania Press. pp. 31-46.

Coase, R. H. (1960). The Problem of Social Cost. Journal of Law and Economics, 3: 1-44.

Daly, H. E. (1993). Introduction to Essays toward a Steady-State Economy. In Daly, H. E., and Townsend K. N. (Eds.), Valuing the Earth. Cambridge, MA: MIT Press. pp. 11-47.

de Kadt, E. (1992). Making the Alternative Tourism Sustainable: Lessons from Development for Tourism. In Smith, V. L., and Eadington, W. R. (Eds.), Tourism Alternatives. Philadelphia, PA: University of Pennsylvania Press. pp. 47-75.

Eadington, W. R., and Smith, V. L. (1992). Introduction: The Emergence of Alternative Forms of Tourism. In Smith, V. L., and Eadington, W. R. (Eds.), Tourism Alternatives. Philadelphia, PA: University of Pennsylvania Press. pp. 1-12.

Farrell, B. (1992). Tourism as an Element in Sustainable Development: Hana, Maui. In Smith, V. L., and Eadington, W. R. (Eds.), Tourism Alternatives. Philadelphia, PA: University of Pennsylvania Press. pp. 115-134.

Hardin, G. (1968). The Tragedy of Commons. Science 162: 1243-48.

Kahn, J. R. (1995). The Economic Approach to Environmental and Natural Resources. New York: Dryden Press. pp. 42-48.

Lanfant, M. F., and Graburn, N. H. H (1992) International Tourism Reconsidered: The Principle of the Alternative. In Smith, V. L., and Eadington, W. R. (Eds.), Tourism Alternatives. Philadelphia, PA: University of Pennsylvania Press. pp. 89-112.

Lillywhite, M., and Lillywhite, L. (1991) Low Impact Tourism. In Hawkins, D. E. and Ritchie, B. J. R. (Eds.), World Travel and Tourism Review: Indicators, Trends and Forecasts. Vol. 1. Wallingford Oxon, UK: C.A.B. International.

Meadows, D. H., and others. (1972). Limits to Growth. London: Earth Island.

Pearce, D. G. (1992). Alternative Tourism: Concepts, Classifications, and Questions. In Smith, V. L., and Eadington, W. R. (Eds.), Tourism Alternatives. Philadelphia, PA: University of Pennsylvania Press. pp. 13-30.

Pearce, D. W., and Turner, R. K. (1990) Economics of Natural Resources and Environment, Baltimore, ML: Johns Hopkins University Press. pp. 37.

Pearce, D. W., and Warford, J. J. (1993) World Without End, New York, NY: Oxford University Press.

Randall, A. (1983). The Problem of Market Failure. Natural Resource Journal, 23 (1). pp. 131-148.

Ryan, C. (1991). Recreation Tourism: A Social Science Perspective. New York, NY: Routledge.

Smith, V. L. (1992). Boracay, Philippines: A Case Study in "Alternative" Tourism. In Smith, V. L., and Eadington, W. R. (Eds.), Tourism Alternatives. Philadelphia, PA: University of Pennsylvania Press. pp. 135-157.

World Travel and Tourism Council. (1993). The WTTC Report. Brussels: WTTC.