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**Tourism Economics and its Application
To Regional Development**

by

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TOURISM ECONOMICS AND ITS APPLICATION TO REGIONAL DEVELOPMENT

1. Introduction

There is now a substantial body of literature on tourism economics and a new journal entitled *Tourism Economics*. This is not surprising because the tourist industry is, from a number of different viewpoints, the largest in the world and shows a very rapid rate of growth. While tourism economics is offered as a subject in most courses on tourism management, it is rarely offered in economics courses *per se* or even as a part of industry economics courses. This is regrettable given the significance of the tourism sector. In fact, most courses in industry economics give little attention to industries in the service sector even though it is by far the largest sector in high income countries both in terms of its contribution to GDP and employment. Even in a low income country such as India, the service sector accounted for 42 per cent of its GDP in 1994, agriculture for 30 per cent and industry for 28 per cent (World Bank, 1996, p.210).

As mentioned above, tourism worldwide is expanding at a very rapid rate. The demand for tourism is quite income elastic. It is also responsive to increasing leisure time. Furthermore, technological changes in transport have resulted in speedier and more comfortable travel and in many cases a reduction in its real cost. In addition, using rising populations helps to increase the pool of travellers.

2. The Tourism Industry

There has been much controversy about what constitutes the tourism industry. In some cases, individuals do not recognise it as an industry *per se*. However, there is broad debate about how most industries are to be delineated in practice. Sometimes demand characteristics are used to determine the extent of an industry and on other occasions supply characteristics may be used. While some services are supplied almost exclusively for tourists, for example, hotel accommodation, many services provided to tourists are also supplied to non-tourists. Restaurants, for example, often cater for tourists and locals. Even hotels may provide some office space for businesses and cater for functions demanded by locals, such as dinners or day conferences. Nevertheless, it is clear that many components of industry are heavily or even completely dependent on tourism such as hotels, tour agencies, tour operators, restaurants in major tourist destinations, souvenir shops and so on. The population of tourists can be identified and they have considerable economic and other effects. It is, therefore, worthwhile

undertaking studies of the tourism sector and the components of it. A substantial body of economics has been developed in this basis. Let us discuss the literature.

The literature on tourism economics covers a wide spectrum. Topics include problems involved in defining and delineating the tourist industry; problems in managerial economics at the enterprise level, for example, of hotel, airline, and tour operation; factors influencing the demand for tourism and trends in tourism; influences on the supply of facilities for tourism; regional effects of tourism development; international tourism versus domestic tourism and international investment in tourism; impacts of technological change on the development of tourism and the changing industrial structure of the tourism industry, tourism development and the environment and public finance and public economic dimensions of tourism, for example, the role of government in the provision of tourist services and facilities and the contribution of tourism to public finances.

3. The Economic Literature: Demand for Tourism, Supply of Tourism Facilities and Services, and Industry Analysis

Analysis of the demand for tourism and forecasting of demand for tourism have received much more attention in the literature than the supply-side of tourism. This may be because the tourism industry is very heterogeneous from a supply point of view. Furthermore, it might be noted that contributions to estimating and predicting the demand for tourism have not been restricted to those by economists. They include contributions by sociologists, psychologists, geographers and others not drawing on conventional economic analysis. The focus here, however, will be on models developed by economists.

Sinclair (1991) divides economic studies of the demand for tourism into two sets: (a) those relying on a system of multiple equations and (b) those using a single equation approach. The first approach requires simultaneous estimation of the equations involved. The second type of approach is less complicated and involves partial economic analysis, but can allow for a degree of economic interdependence between alternative tourist destinations such as different regions or countries.

The most frequently used system for estimating tourist demand by means of multiple equations is the Almost Ideal Demand System (AIDS) developed by Deaton and Muellbauer (1980a, and 1980b). It is based on conventional economic demand analysis, but is specified in a way which gives greater generality than earlier specifications of demand equations used for empirical estimation.

Stage budgeting is used in this approach. Consumers are assumed to allocate their income initially between major categories of commodities, of which tourism could be one.

Having determined, for example, their tourism budget, the next stage for consumers is how to allocate this budget between alternative tourist commodities.

In the literature, different countries or regions are sometimes treated as involving different tourist commodities. The demand of tourists from a particular country to spend their tourism budget in a possible destination country is seen as depending on price levels in this country and the real value of their tourism budget, that is, their tourism budget deflated by prices in the alternative destination areas.

Using such an approach, tourism expenditure elasticities in relation to the real size of the tourism budget and tourism price sensitivities for different regions or countries can be estimated. For example, it is possible that Japanese tourism expenditure in Australia is elastic in relation to Japanese tourism budgets and it may show a high degree of price substitution with expenditure in the United States (for example, Hawaii). Consequently, any factor that reduces Japanese tourism budgets will mean a relatively high induction in their tourism expenditure in Australia and a rise in Australian tourism prices relative to those in the US (Hawaii) would see a major shift of Japanese tourism expenditure from Australia to the US.

Such models concentrate on incomes or budgets and prices as determinants of tourist expenditure in different regions. If the income or budget elasticity of tourism to an area is greater than unity, tourism to the area is described in the literature as being a luxury, as an inferior commodity if it is less than zero and as a necessity if it falls in between these two values. Since international tourism to India has fallen in recent years at a time when tourism budgets have grown, it is possible that international travellers regard tourism in India as an inferior good compared to that of alternative available destinations.

Both own price elasticities and cross price elasticities can be estimated from this type of modelling. A low own price elasticity with respect to tourism would indicate that tourists resident in a particular country show a relatively low response to rises in the price of tourism services in their country; they continue to maintain their tourism expenditure at home and do not substitute overseas destinations to any great extent. As mentioned earlier, tourism regions may be substitutes or complements. For example, Hawaii can be considered a substitute for northern Queensland destinations, but New Zealand may be a complement to tourism in Australia, or central Northern Territory (Ayer's Rock) to tourism on the Great Barrier Reef.

This type of demand analysis can be of value in predicting tourism trends for countries and regions even though it is subject to several limitations. It does not, for instance, allow adequately for the time-factor and variables other than those included in the basic economic analysis of demand.

The single equation approach to specifying tourist demand is more tractable and explanatory variables in the demand equations can be varied by regions if this is believed to be relevant.

Sinclair (1991, p.4) states that:

“it is generally accepted in the literature that tourism demand is a function of income, relative prices and/or exchange rates, the last two variables taking account of the fact that tourism destinations may be competitors. Destination countries can again be classified as *luxuries*, *necessities*, or *inferior* according to the estimated income elasticity values and the price and exchange rate elasticities can be used to classify destinations according to those for which demand is sensitive or insensitive to price or exchange rate changes”

Other economic variables which may also be taken into account in demand analysis include transport costs and marketing expenditure promoting tourism. The level of tourist expenditure in any region is liable to be affected by all of these factors.

Nevertheless, while all of these variables may be important influences on tourist demand in a region, they should not blind us to the possibility of other factors of importance. For example, the above economic analyses make no allowance for impacts on tourism demand of the quality or nature of tourism services, for example, the range of such services and tourism assets available, the reliability and availability of transport, the presence and quality of telecommunications, local familiarity with the language and culture of the tourist (Tisdell and Tisdell, 1997) and so on. Regions which are comparatively deficient in relation to these factors are liable to be at a competitive disadvantage in attracting foreign tourists.

Industry structure and supply of tourist facilities

As mentioned previously, studies of the supply of tourist facilities and of the structure of the tourism industry appear to have been given less attention by economists than the demand for tourism. Nevertheless, there are some interesting findings which do have regional implications and there is scope for further developing the analysis of the supply of tourist facilities.

It has sometimes been suggested (for example, Dwyer, 1986) that the tourism industry is one of low capital-intensity but there is little or no empirical evidence to support this. Especially during the development phase of tourism in a country, capital to output ratios are relatively high in tourism and some studies suggest that they are higher than in other sectors of the economy. Sinclair (1991, p.10) summarises the findings of a number of empirical studies on this subject and I have arranged these in Table 1.

Table 1. Capital-Output Ratios for Tourism and Other Sectors as Set out by Sinclair (1991)

Country	Period	Capital-Output Ratio		
		Tourism	Agriculture	Manufacturing
Turkey	1967	4.0	2.3	2.1
Kenya	1964-7	2.4-3.0	2.7	4.4
Mauritius	1980	2.5	3.3	3.9
Yugoslavia	1962-7	4.0 ^(a)	3.4	3.4 ^(b)

Notes: (a) Hotel and catering sector

(b) Industry (mining and manufacturing)

From Table 1 it can be seen that in two countries, capital to output ratios in tourism were higher than in all other sectors. In the case of Mauritius, however, they are significantly lower. It is not clear why this should be.

One of the reasons why capital to output ratios in tourism tend to be relatively high as tourism expands is the considerable investment required in supporting infrastructure such as roads and transport facilities.

Poor regions in developing countries are mostly very short of capital. Therefore, development of the tourism industry can impose a considerable economic burden on them. It is true that some types of tourism are less capital-intensive than other types, but in general considerable capital investment is required for the development of a tourist industry. This is one of the reasons why many countries (even developing countries such as China) welcome foreign investment in this industry.

Income earned and conditions of work in the tourism industry seem to follow a bimodal distribution. A small group of employees enjoys high wages and excellent conditions of work, but the majority in the industry are low paid, part-time, or casual workers. As in other service industries, new technology has increased labour productivity in the tourism industry and this is reducing labour-intensities.

Within the tourism industry there has been a considerable increase in market concentration since the 1960s. Both horizontal and vertical integration occurs within the industry. Major airlines, for instance, often have important hotel linkages.

In most developed countries, the hotel sector is now dominated by large hotel chains. Go (1989) estimated that over 60 per cent of US hotels belonged to chains in 1988 and that they have a very large market share in Europe and Canada. They can achieve economies of scale and standardization and can reduce the uncertainty of tourists as to product quality. McVey (1986) found that such hotels tend to be concentrated in major cities. Therefore, smaller cities and remoter regions may be disadvantaged in their development of tourism because of their failure to attract members of hotel chains, especially transnational chains. As Dunning and McQueen (1982) point out, transnationals are very important in the hotel sector and they enable the advantages of chains to be obtained on an international scale.

Along with increasing concentration in the tourism industry, oligopolistic markets are emerging in segments of it. Gratton and Taylor (1988) argue that this is so in the UK hotel market and Stabler (1990) suggests that this has also become the case for large UK tour operators.

Growing market concentration in the tourism industry in developed countries is flowing on to developing countries as multinational chains and hotel groups expand. Their market penetration is being aided by the development of information technology which has been a major facilitator of the so called borderless world. Foreign tourists very often use hotel chains abroad which are well known in their country of origin; and this can disadvantage local hotels in relation to their share of foreign tourists. The preference of foreign tourists for the familiar is partly a result of the importance of asymmetry of information in this market. Consequently, foreign hotel chains or groups in the country from which foreign tourists come can dominate the hotel market for this group of tourists in their host country. This is often said to be so in relation to Japanese tourists travelling abroad, but is not limited to the Japanese. Naturally, it raises dilemmas for the host country because it tends to increase revenue leakages from the host country.

4. Public Economics and Environmental Aspects of Tourism

Tourism inevitably involves aspects of public economics and also environmental economics. Public economics is involved because of market failures in tourism and most tourism depends heavily on natural or man-made environments.

In practice, most governments provide a large part of the infrastructure required for tourism and this raises the matter of financing its supply. In some countries or regions, special tourism taxes have been imposed (Fish, 1982; Hughes, 1981; Weston, 1983; Fuji *et al*, 1987) to raise government revenue, for example, bed taxes or levies on hotel accounts. In some countries, for example Bhutan, very high visa charges are imposed on tourists and many countries charge departure and airport taxes. Tourists also contribute directly towards

government revenue via value added taxes in those countries which impose these and through sales or indirect taxes. Furthermore, in so far as tourism increases incomes of those in the tourist industry, this may add to income and company tax collections.

In relation to foreign tourism, the nature of competition for alternative tourist destinations and the elasticity of demand for tourism to the host country influence the extent to which the host country can increase public revenue by taxing foreign tourists. If demand is very elastic, the imposition of such taxes will result in a major fall in foreign visitors and little government revenue being collected. This may be a reason for some governments allowing a refund of VAT to foreign visitors on some items purchased by them.

When governments in regions or provinces have the possibility of imposing taxes or charges on tourists, or facilities used by them, they will also need to take account of economic factors such as the elasticity of demand for visits to the region. This will affect public revenue from such charges.

Issues are also liable to be raised about the extent to which regional governments should pay for tourism infrastructures as compared to central government. Local governments sometimes complain that central governments cream off revenue from tourism in their region without making a comparable contribution to the development of infrastructures for tourism in region. Thus they argue that local governments are burdened by providing infrastructure for tourists and are denied their reasonable share of public revenue from tourism.

Another aspect of importance is the extent to which governments should finance the provision of tourism facilities and how they should supply these institutionally. Given the structural adjustment policies favoured by the World Bank and the IMF, these bodies would favour minimal financing of such facilities by government. Furthermore, in cases where governments do finance the provision of tourism facilities, these bodies can be expected to favour competitive contracting out of the actual provision of these facilities. It is believed that this will increase economic efficiency.

This policy is now having consequences for the tourism industry in India. Divestiture of some government-owned tourist properties has occurred, for example, hotels in Calcutta, and greater competition has been introduced into the Indian airline industry.

Pigovian economists support government involvement in economic allocation when market failure occurs *provided* it can be shown that the net economic benefits of the intervention will outweigh the costs involved. Since market failures can be serious in relation to the environment and since the demand for tourism in a region depends heavily on its environment, government environmental management is frequently needed to support tourism.

Controls may be required on the tourism sector as well as on other users of the environment. These can include taxes or charges for environmental use and permits for environmental use. In some cases, the latter may be tradeable. Tourism itself can cause congestion, physical and biological damage to environments and can be a source of pollution, for example, noise pollution associated with aircraft landing at night. If tourism damages the environmental assets on which it relies, it can prove to be unsustainable.

Tourism assets are often managed at the regional level. Regional authorities need to be especially careful to take environmental conditions into account in tourism development.

While economists usually favour charging tourists and others for use of natural environments, this is not always practical nor economic (Tisdell, 1995). There can be circumstances in which other types of policy instruments, such as education, can be more effective (Forsyth *et al.* 1995). Ecotourism is a particular form of tourism which gives special attention to the environment, including environmental education (Tisdell, 1996). There has been considerable growth in demand for ecotourism and nature-based tourism amongst the middle-class and higher income groups in developed countries.

5. Tourism - Impact Analysis, International Aspects and Development Issues

Considerable attention has been given in the literature to the impact of tourism expenditure in a region or country on the local economy as far as income and employment generation is concerned. The earliest models adopted Keynesian-type multipliers to this purpose (Archer, 1982; Sinclair and Sutcliffe, 1988).

In peripheral regions and in small countries, leakages from expenditure on tourism tend to be quite high, particularly if the tourism services are supplied by multinationals and especially if the tourists involved are foreigners. Such leakages may very well be higher than for most other industries. Consequently, the regional or local multiplier for tourism expenditure may be lower than for most other industries. Nevertheless, it can still be substantial. Furthermore, in the region concerned, the other industries may have little growth potential. In addition, the development of tourism may involve little opportunity cost for other local industries. Thus, even though there may be a significant leakage from local tourism expenditure, growth in the regional tourism industry can boost regional economic activity considerably.

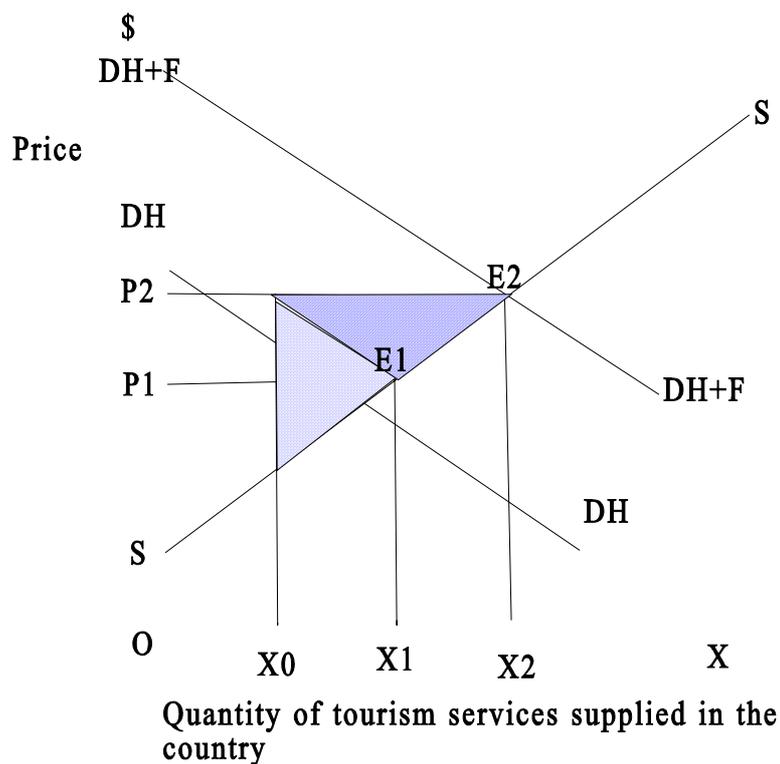
Keynesian multipliers are a relatively primitive way of assessing economic impact of tourist developments on a local economy. Local economic impacts can be more fully assessed by the use of input-output analysis, a form of interindustry analysis. This approach,

however, requires a greater amount of information. At an even more inclusive level, general equilibrium analysis can be used for interindustry analysis.

Assessment of economic impact should not be limited to consideration of the impact of tourism on the level of local employment and income. Other welfare aspects should be taken into account including the income distribution consequences of tourism. For example, foreign tourists to a country could ‘crowd out’ domestic tourists and make domestic tourism more expensive. Thus domestic tourists could be disadvantaged by a rise in inbound tourists such as has occurred in Australia.

Using neoclassical economic analysis, Clarke and Ng (1993) argue that while crowding out of domestic tourists may occur, increased foreign tourism brings a net social benefit to the host country. Assuming that all tourism services are supplied by local firms, the gain in their producers’ surplus from increased foreign tourism exceeds the loss in surplus enjoyed by domestic tourists as a result of crowding out.

Their argument can be illustrated by Figure 1. In Figure 1, the curve marked SS represents the supply curve of tourism services in a country and the line marked D_H D_H , the



demand for domestic tourism. In the absence of foreign tourism, E_1 is the equilibrium of the domestic tourism industry. A quantity X_1 of tourism services is supplied at a price per unit of P_1 . Suppose, however, that foreign tourism occurs so that the combined demand for tourism

in the country by domestic and foreign tourists is as indicated by the line marked D_{H+F} . The new equilibrium for the industry is now E_2 and the price per unit of tourism services rises from P_1 to P_2 and their volume goes up from X_1 to X_2 .

As a result of foreign tourism, domestic tourists must now pay more for tourism services and they are crowded out of the tourism market to some extent; their use of domestic tourism services falls from X_1 to X_0 and their consumers' surplus falls by the dotted area in Figure 1. On the other hand, suppliers of tourism services obtain greater income and their surplus rises by the area of the dotted triangle plus the area of the hatched triangle. If the Kaldor-Hicks principle is adopted, there is a net economic benefit to the domestic economy equivalent to the area of the hatched triangle. Those gaining in the host country from foreign tourism (suppliers of tourism services) *could* compensate domestic tourists for their loss and still be better off by an amount equivalent to the hatched area. Compensation, however, is unlikely to be paid.

Therefore, in practice, much depends politically on whether the income distribution change is socially acceptable. Crowding out of local people in developing countries by foreign visitors from high income countries may not always be politically acceptable, for example, in China. Furthermore, the above approach assumes that tourism gives rise to no adverse externalities. If greater tourism results in rising additional adverse externalities, this may offset, or more than offset, gains in returns to local suppliers of tourism services. Hence, a net domestic economic loss can occur. In addition, if it is believed that foreign tourists will have an adverse effect on local social values and culture, this will also have to be taken into account by politicians.

On the other hand, note that the income distribution conflict raised by the analysis of Clarke and Ng (1993) would not arise if the tourism industry enjoyed economies of scale. It would then be a decreasing cost *industry*. In this case expansion of the demand for tourism would reduce prices for tourism services. Undoubtedly there are segments of the tourism sector for which this is true, but there are other segments for which supply is relatively inelastic. Furthermore, the situation will, in accordance with Marshallian analysis, vary depending upon the length of time allowed for adjustment of the industry to changed demand conditions. The upshot of the above is that some tourism services will fall in price as a result of an influx of foreign tourists, but others will rise in price. Hence further analysis is required to assess the net welfare effect on domestic tourists.

Tourism can provide means for developing regions which have few other economic opportunities. However, the economic conditions for the development of tourism must be suitable. Tourism is not a Cinderella industry for developing all backward regions. Indeed, if the tourism assets and economic conditions of a region are not propitious for tourism development, resources can be wasted in promoting tourism development. There are some regions where tourism can play a major role in their development because of their natural and other advantages. The prospects need to be individually assessed for each region.

An interesting question is whether tourism development in a country leads to convergence or divergence in regional development. In China, regional disparity in foreign tourism has more than reinforced regional economic inequality (Wen and Tisdell, 1996). However, whereas regional economic inequality in China appears to be growing, regional inequality of tourism appears to be declining (Wen and Tisdell, 1997a). Furthermore, many low income regions in China have experienced tourism growth, and so it has been a growth sector for a variety of regions - both high income regions and low income ones. The role that tourism can play in assisting the economic growth of poor regions and the possibility of it acting as a key industry in the development of some economically backward regions is a matter worthy of considerable attention (Wen and Tisdell, 1997b).

6. Concluding Comments

Tourism economics is a very broad subject which has been neglected for too long by mainstream economists. Like environmental economics and development economics, it is a subject which calls for interdisciplinary understanding and ideally an interdisciplinary approach. Given the size of the tourism sector and its predicted continuing rapid growth, developing countries such as India and other regions must look carefully at strategies to ensure them of a greater share of this growth. Tourism economics can assist in this planning, but it needs to be supplemented by regional research in the areas wanting to expand tourism as a part of their development strategy. The scope for doing this in India is tremendous. India would benefit from similar tourism analyses to those being undertaken for China.

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